

-PM-AB10-928

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National Family Health Survey

(MCH and Family Planning)

Delhi
1993

Population Research Centre
Institute of Economic Growth
Delhi

International Institute for Population Sciences,
Bombay

June 1995

Suggested citation: Population Research Centre, Institute of Economic Growth, Delhi, (PRC, Delhi) and International Institute for Population Sciences (IIPS). 1995. *National Family Health Survey (MCH and Family Planning), Delhi 1993*. Bombay: PRC, Delhi and IIPS.

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PREFACE

The National Family Health Survey (NFHS) is an important component of the Project to Strengthen the Survey Research Capabilities of the Population Research Centres in India, launched by the Ministry of Health and Family Welfare (MOHFW), New Delhi, in 1991. It was undertaken with the principal objective of providing state-level and national-level estimates of fertility, infant and child mortality, the practice of family planning, maternal and child health care and the utilization of services provided for mothers and children. Another important objective of the NFHS was to provide high quality data to academicians and researchers for undertaking analytical research on various population and health topics.

The MOHFW designated the International Institute for Population Sciences (IIPS), Bombay, as the nodal agency for providing coordination and technical guidance to the NFHS. The data collection for the NFHS was undertaken by various Consulting Organizations (COs) in collaboration with the concerned Population Research Centres (PRCs) in each state. The East-West Center/Macro International provided technical assistance for all of the survey operations. Funding for the NFHS was provided by the United States Agency for International Development (USAID), New Delhi.

The NFHS covered 24 states and the National Capital Territory of Delhi (the erstwhile Union Territory of Delhi), which comprise 99 percent of the total population of India. In all, 89,777 ever-married women age 13-49 and 88,562 households were covered, using uniform questionnaires, sample designs and field procedures. The data collection was carried out on a state-by-state basis during April, 1992 to September, 1993. Preliminary reports with selected results were prepared for each state by the end of 1993 and presented to policymakers and programme administrators responsible for improving family welfare programmes in most states.

The final state-level reports are based on a tabulation plan discussed, finalized and approved at a workshop held at Vadodara, 5-7 December 1992. The workshop was attended by representatives of all of the participating agencies. IIPS finalized the tabulation plan and produced the tables and graphs for the final reports according to the recommendations of the workshop. The final state-level reports are being written by representatives from the concerned PRC for each state, with the assistance of faculty members from IIPS and demographers from the East-West Center/Macro International. Each report has been reviewed by an Indian expert in the field of population sciences and revised after taking into consideration the suggestions of the reviewer.

The final reports contain invaluable information on fertility and family planning practices, and the status of health and welfare of Indian mothers and their children. The descriptive text of each final report presents the findings in a clear and thorough manner for use by population and health experts, policymakers and administrators.

Never before in India has such a large population and health survey been undertaken and completed in the stipulated time period. We are, therefore, very happy to present the final NFHS report for the National Capital Territory of Delhi. We do hope that it will contribute to the knowledge of researchers and analysts in India and that programme administrators and policymakers will find it useful for policy development and implementation of the family welfare programme.

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ACKNOWLEDGEMENTS

The National Family Health Survey could not have been successfully completed without cooperation and support from innumerable sources at various stages of the project. Although it is not possible to individually acknowledge everyone involved in the survey, several persons and organizations deserve special mention.

The first and foremost organization whose help, timely guidance and strong support are gratefully acknowledged is the Ministry of Health and Family Welfare (MOHFW), New Delhi. Mr. K.K. Mathur and Mr. S.B. Mishra, the then-Secretary and Joint Secretary of the Department of Family Welfare, Government of India, New Delhi, initiated the Project to Strengthen the Survey Research Capabilities of the Population Research Centres (PRC Project), which incorporates the NFHS, and designated the International Institute for Population Sciences as the nodal agency for the project. They also formed the Steering Committee, the Administrative and Financial Management Committee and the Technical Advisory Committee for the smooth and efficient running of the project. Mrs. Usha Vohra, who later became the Secretary of the Department of Family Welfare, New Delhi, continued to take an intense interest in the NFHS. Her valuable help to the NFHS project is gratefully acknowledged. Special thanks are due to Mr. V.K. Shunglu, the former Secretary, and Mr. J.C. Pant, the current Secretary of the Department of Family Welfare, New Delhi, for their timely guidance and support to the project. The contributions of Mrs. A.P. Ahluwalia, Joint Secretary (F.A), and Mr. R.L. Narasimhan, Director (Marketing), Department of Family Welfare, are acknowledged with gratitude. The PRC Project and the NFHS could not have been successful without their active support, interest and valuable advice.

The NFHS has received immense help for carrying out the entire sampling design for all the states from the Office of the Registrar General, India, New Delhi. Grateful thanks are due to Mr. A.R. Nanda, former Registrar General of India, Mr. K.S. Natarajan, Deputy Registrar General of India and Mr. K.N. Unni, Joint Director (E.D.P.), Office of the Registrar General, India. Thanks are due to the National Sample Survey Organization for making available the urban sampling frames for the first phase of the NFHS. Special mention and thanks are due to Ms. Thanh Lê and Dr. Vijay K. Verma for their participation and help in preparing a very thorough sampling design for all the states.

The Family Welfare Departments of each state covered in the NFHS helped the Consulting Organizations in data collection by providing accommodations, vehicles and drivers to the interviewing teams. Thanks are also due to the village officials in all of the villages covered for facilitating the data collection.

Dr. K. Srinivasan was the Director of IIPS during the development of the project and through the first phase of data collection. His immense interest and great assistance to the NFHS are gratefully acknowledged.

UNICEF and Foster Parents Plan International, New Delhi, in keeping with their interest in the well-being of children, supplied the NFHS with 125 weighing scales, without any charge. Their timely help is gratefully acknowledged.

The United States Agency for International Development (USAID), Washington and New Delhi, provided generous funding for the NFHS and the entire PRC Project. Their contribution to the project is sincerely acknowledged. Special thanks are due to Mr. J.K. Raman, former Program Specialist, USAID/New Delhi, for his initiative, untiring efforts, and emotional involvement in the PRC Project. The data analysis and report writing for the NFHS received substantial funding from the East-West Center. Special thanks are due to Dr. Robert D. Retherford and Mr. Phil Estermann for their support at this stage of the NFHS project.

The overall content and format of the NFHS Questionnaires were determined in a workshop on Questionnaire Design. Thanks are due to the Gokhale Institute of Politics and Economics, Pune, for coordinating this workshop. Thanks are also due to the Population Research Centre, the Gandhigram Institute of Rural Health and Family Welfare Trust, Ambathurai R.S., for coordinating the sample Design Workshop held at Madurai. The help and cooperation rendered by the Population Research Centre, Directorate of Economics and Statistics, Government of Madhya Pradesh, Bhopal, in pretesting the NFHS questionnaires are gratefully acknowledged. Thanks are also due to the Population Research Centre, Faculty of Science, the M.S. University of Baroda, Vadodara which helped in organizing the workshop at Vadodara where the tabulation plan for the NFHS state-level reports was discussed and finalized.

Thanks are due to all the members of the Steering Committee, Administrative and Financial Management Committee and Technical Advisory Committee for participating in various meetings and providing valuable guidance to the conducting of the NFHS.

A post-survey check of 5 percent of the NFHS sample undertaken by the Institute for Research in Medical Statistics (IRMS) reconfirmed the high quality of the NFHS data. Special thanks are due to Dr. Padam Singh, Director, IRMS, New Delhi, for undertaking this tedious task of post-survey check.

The unflinching efforts, the interest and the initiative taken by Prof. Tara Kanitkar, Prof. T.K. Roy, Dr. B.M. Ramesh of IIPS and Dr. Fred Arnold and Dr. Pavalavalli Govindasamy of the East-West Center/Macro International in the PRC Project are appreciated and acknowledged. The assistance rendered by Mr. Dharendra Kumar, Research Officer, IIPS is gratefully acknowledged. It is only due to their hard work that the NFHS could be completed successfully, according to schedule. The help of Mr. Prakash H. Fulpagare in the preparation of the report and that of Dr. B.S. Singh in producing the graphs for the report, is acknowledged.

Very special thanks are due to Mr. David Cantor for his immense help in the data entry operation, data analysis and the preparation of tables for Delhi. Mr. Sanjay Tiwari and Mr. D. Sahu, who assisted in data processing for Delhi deserve special mention. Macro International made available the ISSA (Integrated System for Survey Analysis) computer package for data entry and tabulation. The help of Ms. Sandra Rowland in editing this report for Delhi and that of Dr. Amitabh Kundu, Professor, Centre for the Study of Regional Development, Jawaharlal Nehru University, New Delhi for reviewing the report and offering his comments, are gratefully acknowledged.

The data collection in Delhi was successfully carried out by VIMARSH, the Consultancy Group, New Delhi. Our special thanks are due to Mr. Deepak Bhandari, Director, VIMARSH, and his colleagues Prof. D.C. Dubey, Dr. A. Bardhan, Mr. P.N. Kapoor, Dr. P.K. Chopra, and Mr. Sanjay Tiwari.

The complex task of conducting the NFHS in Delhi could be completed only with the dedicated and collaborative efforts put forth by IIPS; the Population Research Centre, Delhi; VIMARSH, the Consultancy Group, New Delhi; USAID, New Delhi; and the East-West Center/Macro International, United States of America. Special thanks are due to Professor S.N. Mishra, Director, Institute of Economic Growth, for his unhesitating logistic support for NFHS in Delhi, particularly in providing facilities for holding the training programme for interviewers at the Institute premises.

This acknowledgment cannot be concluded without expressing appreciation for the great amount of pains taken by the interviewers, supervisors and editors in collecting data from the metropolitan population in Delhi, where respondents often were not available during the day, and field work had to be done during odd hours. The interviewing teams, who have been the architects of this important survey, deserve our special thanks.

Last but not least, the credit goes to the 3,457 ever-married women of Delhi and the household respondents who spent their time and responded to the rather lengthy questionnaires with tremendous patience and without any expectation from the NFHS.

SUMMARY OF FINDINGS

The National Family Health Survey (NFHS) was carried out as the principal activity of a collaborative project to strengthen the research capabilities of the Population Research Centres (PRCs) in India, initiated by the Ministry of Health and Family Welfare (MOHFW), Government of India, and coordinated by the International Institute for Population Sciences (IIPS), Bombay. Interviews were conducted with a nationally representative sample of 89,777 ever-married women in the age group 13-49 from 24 states and the National Capital Territory of Delhi (which in this report is referred to as Delhi). The main objective of the survey was to collect reliable and up-to-date information on fertility, family planning, mortality, and maternal and child health.

The NFHS in Delhi, conducted between 8 February 1993 and 9 May 1993, gathered information on a representative sample of 3,457 ever-married women of age 13-49 from 3,677 households. The survey also collected information on 1,894 children of interviewed women born in the four years preceding the survey. In this report, the survey findings are presented for the National Capital Territory of Delhi as a whole. Because of the small rural sample size (268 women), the results are not presented separately for urban and rural areas.

The survey collected a variety of socioeconomic and demographic background data about the population of Delhi. The predominantly urban character of Delhi is reflected in its age distribution, with 35 percent of the population below age 15, and 3 percent age 65 or older at the time of the interview. The large percentage of the population (60 percent) in the working age group of 15-59 represents the influx of adult migrants in search of employment. Eighty-two percent of household heads are Hindu, 10 percent are Muslim and 5 percent are Sikh. Only 5 percent of household heads belong to scheduled castes and only 1 percent to scheduled tribes. More than 70 percent of females age 6 and above and 86 percent of males of the same age are literate. The median number of years of schooling is somewhat higher for males (8.4 years) than females (5.6 years). The average size of the household is 5.1 persons. A substantial majority of the households (81 percent) reside in *pucca* houses with electricity (96 percent), flush toilet (73 percent) and piped water supply facilities (over 80 percent). Most women are regularly exposed to the mass media, and one in four households owns a modern means of transportation.

Marriage is virtually universal in Delhi, with less than 1 percent of women age 40 or over never married, and a median age at marriage similar to the urban areas in India. By 25-29 over 90 percent of women have married. The singulate mean age at marriage is 24.3 years for males and 20.9 years for females. The singulate mean age at marriage for females increased by over two years from 1961 to 1993 and by only one year for males during the same period. There has also been a substantial decline in the proportion of women marrying at young ages. The proportion of women marrying below age 18 declined from 62 percent of those age 45-49 to 29 percent of those age 20-24. Marriage at young ages is now virtually nonexistent; only 5 percent of women age 15-19 are married at or below age 15. However, 40 percent of women age 20-29 are married below age 18, the legal minimum age at marriage.

There has been a decline in the level of fertility in Delhi. At current fertility levels, women have an average of 3.0 children each during their entire childbearing period. The fertility rate is 11 percent lower than the total fertility rate of 3.4 for all India, however, it is higher than the fertility rate of 2.7 for the urban areas of India. The differentials in fertility by

education and religion are substantial. The TFR among illiterate women is 4.5 compared with 2.1 for women who have completed high school. The TFR is 4.8 among Muslims, 2.9 among Hindus, 2.2 among Sikhs and 2.1 among women of other religions.

Births to women in the prime reproductive age of 20-29 account for 68 percent of total fertility in Delhi. Childbearing prior to age 20 is relatively low, with only 9 percent of women age 15-19 having given birth. Eighty-one percent of women age 40-49 had their last birth before age 35. The median interval between births is 31 months.

Knowledge of family planning is nearly universal in Delhi with 99 percent of ever-married women reporting knowledge of at least one modern method of family planning. Knowledge is highest for female as well as male sterilization (more than 95 percent). More than 90 percent of women know the pill, condom, and IUD. Traditional methods of contraception are generally less well known with periodic abstinence and withdrawal known to 54 and 31 percent, respectively.

Seventy-two percent of currently married women have ever used a method of family planning with two-thirds reporting use of a modern method and more than one-fifth a traditional method. Of the currently married women, 60 percent are currently using family planning; 55 percent use a modern method and almost 6 percent a traditional method. The most used method is the condom (21 percent), followed closely by female sterilization (20 percent). The IUD, pill and male sterilization are used by 3-8 percent of currently married women. Of the traditional methods, 3 percent use periodic abstinence or withdrawal. The use of family planning in Delhi is 18 percent higher than in the urban areas of India due to higher use of modern spacing methods, primarily the condom.

Notable differentials exist in the current use of contraception by education and religion. A strong positive relationship exists between education and current use, with 50 percent of illiterate women using contraception compared with 68 percent of women with at least a high school education. The use of contraception is higher among Hindus (61 percent) and Sikhs (66 percent) than among Muslims (47 percent). The use of family planning is comparatively lower for women with no children (13 percent), or only one child (48 percent) or no sons (46-58 percent) than among women with two or more children (70 percent), or one or more sons (48-77 percent). However, a distinct feature of the pattern of family planning use in Delhi is early initiation of use; 9 percent of the contraceptors initiated use before having any children and another 37 percent started using after they had their first child.

There is a balanced mix between the public and private sector sources of supply of contraceptive methods. The public sector comprising government hospitals, Primary Health Centres and other infrastructure is the source of supply to 45 percent of current users, while private doctors and pharmacist/drug stores supply 19 percent. The remaining 36 percent of users obtain their contraceptive supplies from shops, friends and relatives. Public sector institutions are the major sources of supply to users of sterilizations (both male and female) and IUD, while private shops are the major suppliers to pill and condom users. Private nonmedical sources supply almost twice as many users in Delhi as in the urban areas in India.

Among nonusers, less than two in five intend to use contraception in the future and nearly half do not intend to use it. A larger proportion (53 percent) of nonusers who have used a method earlier intend to use in the future than nonusers who have never used a method (31 percent). Among the intended users, a large percentage (49 percent) prefer the use of modern spacing methods compared to terminal methods (35 percent).

Almost 80 percent of women heard a family planning message on radio or television the month prior to the interview and 76 percent approve of such messages. Almost 90 percent of women approve of family planning and 76 percent say their husbands also approve. The level of education of both women and their husbands is positively related to the approval of family planning.

Information on the fertility preferences of currently married women was also collected in the NFHS. A large proportion of women (62 percent) stated that they either would wait for at least two years before their next birth or not have any more child at all in future. Another 23 percent of women or their husbands are sterilized and can have no more children. Only 10 percent want to have a child within two years. In Delhi, a sizeable proportion (40 percent) of women say that they are indifferent to the sex of an additional child, but 33 percent prefer a son.

Only 15 percent of currently married women have an unmet need for family planning (that is, they are not using contraception even though they do not want any more children or they want to wait at least two years before having their next child). The unmet need is equal (8 percent) for spacing and limiting methods. Current family planning services are inadequate for meeting the needs of young married women with less than two living children who would like to space their births.

The NFHS also provides information on maternal and child health, and the prevalence of five medical problems (malaria, blindness, tuberculosis, leprosy, and physical impairment of the limbs). The incidence of partial blindness is highest (13 per 1,000 population) followed by malaria (6 per 1,000). The incidence of physical impairment of limbs, leprosy and tuberculosis is less than 2.5 per 1,000 population.

During the two weeks preceding the survey, only 1 in 21 children (5 percent) suffered from acute respiratory infection (ARI -- cough accompanied by fast breathing), 11 percent of children had fever and 10 percent had diarrhoea. Most of children (65 to 88 percent) who were suffering from ARI, fever or diarrhoea were taken to health facility or provider.

Knowledge of use of Oral Rehydration Salts (ORS) packets for the treatment of diarrhoea is widespread. Overall, 74 percent of mothers are familiar with ORS and 45 percent have ever used ORS. However, only 21 percent of children with a recent episode of diarrhoea were treated with ORS packets and 28 percent received a recommended home oral rehydration fluid.

The infant mortality rate for the five-year period preceding the survey (1988-92) is estimated to be 65 per 1,000 live births and the under-five mortality rate for the same period is 83 per 1,000 live births. Both the infant and under-five mortality rates declined by 12-13 percent during the last 15 years, but are higher than the rates for the urban areas of India (56 and 75 per 1,000 births, respectively). The infant and child mortality rates estimated in the

NFHS are closely associated with the level of education of mothers. The infant mortality rate ranges from 82 per 1,000 live births to illiterate mothers to 29 per 1,000 live births to mothers with at least a high school education. Females have higher mortality rates than males for all infant and child mortality measures except neonatal mortality.

Both antenatal care and delivery services are quite adequate in Delhi. For births in the last four years, only 17 percent of the mothers did not receive any antenatal care. Three-quarters of births were to mothers who received antenatal care from allopathic doctors, two doses of tetanus toxoid vaccine and iron/folic acid tablets. These proportions for antenatal care and delivery services are similar to those for the urban areas in India. Forty-four percent of deliveries took place in medical institutions and 53 percent of deliveries were attended by a doctor or a nurse/midwife.

The Universal Immunization Programme (UIP) has had considerable success in Delhi. Only 7 percent of young children (age 12-23 months) have not been vaccinated against any of the six preventable childhood diseases (tuberculosis, diphtheria, pertussis, tetanus, polio and measles) compared with 16 percent in the urban areas in India. Fifty-eight percent of children are fully vaccinated (compared with 51 percent in the urban areas in India) and the remaining 35 percent are partly vaccinated. The BCG coverage is 90 percent, three doses of DPT and polio coverage is 72-75 percent, and measles coverage is 70 percent. First born children, boys and children of educated mothers and mothers other than scheduled castes have better vaccination coverage than others.

Breastfeeding is universal in Delhi with 96 percent of all children born in the four years preceding the survey having been breastfed. On average, children are breastfed for about 22 months. Educated women, those who work outside the home and those who are exposed to mass media have slightly shorter duration of breastfeeding than others. Male children, Muslim children, and scheduled caste children are breastfed longer. Among the most recent births, only 6 percent were breastfed within one hour of birth and 40 percent were breastfed within 24 hours of births. Although it is recommended that the first breast milk should be given to children because it contains colostrum, which provides natural immunity to the children, the majority (73 percent) of women squeeze the first milk from their breast before breastfeeding their children. In Delhi exclusive breastfeeding is not common. Thirty-four percent of babies are given water as a supplement as early as 0-1 month of age and only 20 percent of children age 0-3 months are exclusively breastfed compared with 51 percent in India as a whole. There is increasing supplementation by milk, other than mother's milk, other liquids such as juice or tea and mushy foods with an increase in the child's age beyond 3 months. Supplementation by solid and mushy food increases from a low level of 2 percent up to 3 months to more than 80 percent by 16-27 months.

Chronic and acute undernutrition are high in Delhi. Over 40 percent of children are underweight and/or stunted. The proportion of children who are severely undernourished is 12 percent in case of weight-for-age and 19 percent in case of height-for-age. One in every eight children is excessively thin (wasted). Undernutrition varies substantially by age of children, being lowest in the first six months of life. It increases thereafter; reaching a peak of 55 percent underweight at age 2 years and 54 percent stunted at age 3 years. Wasting reaches a maximum of 17 percent of children at one year of age and declines thereafter.

Knowledge of AIDS is low in Delhi; only 36 percent of ever-married women have heard about it. The sources of knowledge mentioned by these women are television (84 percent), newspapers (45 percent), radio (28 percent) and magazines (29 percent). A large majority (81 percent) of women who have heard about AIDS are aware that AIDS can be transmitted through sexual intercourse. Knowledge of AIDS and its mode of transmission is comparatively higher among women age 25-34, women with at least a high school education, Sikh women, and women exposed to mass media. One in five women who have heard about AIDS think that it is curable and 6 percent think that an AIDS vaccine exists. Misconceptions about modes of transmission of AIDS are extensive, ranging from 17 percent who think it can be transmitted by shaking hands with someone with AIDS to 41 percent who think it can be transmitted by kissing someone with AIDS. Women who know about AIDS correctly identified practice of safe sex (52 percent), use of condoms (40 percent), checking blood prior to transfusion (13 percent) and sterilizing needles or syringes for injections (10 percent) as means of avoiding AIDS.

CHAPTER 1

INTRODUCTION

1.1 Background of the Survey

The Ministry of Health and Family Welfare (MOHFW), Government of India, has sponsored the development of 18 Population Research Centres (PRCs) located in universities and institutes of national repute throughout India. In 1991, the MOHFW initiated the Project to Strengthen the Survey Research Capabilities of the PRCs (PRC Project) with financial support from the United States Agency for International Development (USAID). The National Family Health Survey (NFHS) is being undertaken as an important component of the PRC Project.

The NFHS covers the population in 24 states and the National Capital Territory of Delhi (the erstwhile Union Territory of Delhi, which recently attained statehood) which contain 99 percent of the population of India. The NFHS is a household survey with an overall sample size of 89,777 ever-married women in the age group 13-49. Because of the scale of this undertaking, the data collection under the NFHS was carried out in three phases in 1992 and 1993. Andhra Pradesh, Himachal Pradesh, Madhya Pradesh, Tamil Nadu and West Bengal were the states covered in the first phase. The states covered in the second phase of the NFHS were Assam, Goa, Haryana, Karnataka, Kerala, Maharashtra, Rajasthan and Uttar Pradesh. In the third phase of the NFHS, Arunachal Pradesh, Bihar, Gujarat, the Jammu Region of Jammu and Kashmir, Manipur, Meghalaya, Mizoram, Nagaland, Orissa, Punjab, Tripura and the National Capital Territory of Delhi were covered.

The NFHS is a collaborative project of the MOHFW, Government of India, New Delhi; the International Institute for Population Sciences (IIPS), Bombay; several Consulting Organizations (COs); all the PRCs; USAID, New Delhi; and the East-West Center/Macro International. The MOHFW designated IIPS, Bombay, as the nodal organization, responsible for providing coordination and technical guidance for the NFHS. The PRCs participated in all stages of survey implementation for the states in which they are located. IIPS and the PRCs collaborated with a number of COs in India for survey implementation. Each CO was responsible for facilitating survey activities in one or more states covered by the NFHS. Technical assistance for the NFHS was provided by the East-West Center/Macro International.

VIMARSH, The Consultancy Group, a private research organization in New Delhi, was selected to be the CO for the NFHS in Delhi. The Population Research Centre, situated in the Institute of Economic Growth, Delhi University Campus collaborated with the CO in the implementation of the survey in Delhi.

1.2 Origin of Delhi

The origin of Delhi is traced in a reference in the famous epic Mahabharata that the Pandavas had founded a city called Indraprastha on the banks of the river Yamuna. The site is located in the present ruins of *Purana Killa*, but there is no direct evidence to identify this city with that of Delhi.

Delhi being the National Capital Territory occupies a place of special importance in the administrative set up of India. The territorial boundaries of Delhi were fixed as far back as 1912 when a decision was taken by the Emperor to transfer the capital of British India from Calcutta to Delhi at the Delhi Darbar in 1911. At that time Delhi became an independent province comprising the whole of Delhi Tahsil and a portion of Ballabgarh Tahsil. In 1915, some villages from Ghaziabad Tahsil of the Meerut District and the Shahadara town across the Yamuna river were transferred to the Delhi province. There have not been any boundary changes since 1915.

After the adoption of the Constitution of India, Delhi was given the status of part-C state and the legislative Assembly was set up in 1952. In 1956, the State Reorganisation Act came into force. Under this Act, Delhi became the Union Territory. The Metropolitan Council was set up in 1966 which continued until the new legislative assembly came into being under the National Capital Territory Act of 1993. In this report, the National Capital Territory of Delhi is referred to as Delhi.

1.3 Geographical Features

Physical Characteristics

Delhi lies between 28° 25' and 28° 53' N latitude and 76° 50' and 77° 22' E longitude. It is situated between the Himalaya and Aravali ranges in the heart of the Indian subcontinent. It is surrounded in the East across the Yamuna river by Uttar Pradesh and on the other sides by Haryana. The major part of the Territory lies to the west of the Yamuna river.

Delhi can be broadly divided into three geographical segments (1) the Yamuna Flood Plains, (2) the Ridge, and (3) the Plains. The Yamuna Flood Plains region is low lying, sandy and flood prone. Recently due to flood control measures, a sizable part of the area has been saved from recurrent floods. The Ridge segment originates from the Aravali Hills of Rajasthan and enters Delhi from the south in a northeastern direction and encircles the Territory to the northwest and west. The highest point is 318.5 metres. The Plains is a major proportion of the total area on which Delhi, New Delhi, the Cantonment, and a number of villages are located. Delhi's altitude ranges between 213 to 305 metres above sea level, descending from north to south.

Climate, Rainfall and Seasons

The climatic conditions in Delhi are typical of those prevailing in the western part of the tropic of cancer. Here the summer is very hot and winter is very cold with little moisture in the air. The mean daily temperature is at its highest in June at 38° to 45° centigrade and lowest in January at 6° to 9° centigrade. The percentage relative humidity varies between 29 in May to 77 in August.

The Southwest Monsoon brings moderate to heavy rainfall in Delhi during June to September. About 84 percent of the total rainfall in the year occurs during these four months. A total of 170-220 mm of rainfall occurs during July and August. Hot dry winds blow from the desert in the west and northwest during half of the summer days.

1.4 Area and People

Area and Administrative Divisions

Delhi has an area of 1,483 km² and comprises three stationary towns (Delhi Municipal Corporation, New Delhi Municipal Committee, and Delhi Cantonment) and 29 census towns. The rural area is divided into two tahsils, Delhi and Mehrauli.

People, Culture, Religion and Language

Delhi's cultural evolution stretches back into antiquity. It was the seat of imperial power for a long period before it became the capital of the second most populous country in the world. Its strategic location has permitted the entry of many diverse cultures. It is also a hub of industry, trade, commerce and higher education. It has acquired a cosmopolitan character drawing people from all parts of the country and the world. As such, it is a centre of international political, social and cultural interactions.

Hindus constitute nearly 84 percent of Delhi's population, Muslims 8 percent, Sikhs 6 percent, and the rest (2 percent) belong to Christian, Jain, Buddhist and other religions (Office of the Registrar General and Census Commissioner, 1984a). Hindi is spoken by the majority of the population, but there is a sizeable population who speak Urdu and Punjabi. Given the cosmopolitan character of Delhi, all the different languages of India are spoken by subgroups of its population.

1.5 Economy

In Delhi, the majority (79 percent) of the population is engaged in the tertiary sector. Nearly 70 percent of the net domestic product was derived from the tertiary sector in 1990-91. Thirty-five percent of the income in the tertiary sector comes from finance, insurance, real estate and business services, and another 26 percent comes from community, social, and personal services. Industry also occupies an important place in Delhi's economy. During the period 1981-87 to 1989-90, there was an increase of 62 percent in the number of industrial units. Own-account enterprises form 54 percent of the total enterprises as per the Economic Census of 1990 (Office of the Registrar General and Census Commissioner, 1991a). Delhi being centrally located, plays an important part in the redistribution of goods to neighbouring states. The most important items traded in Delhi are fruits, vegetables, food grains, fodder, cloth, bicycles, dry fruits and hosiery.

1.6 Basic Demographic Indicators

The basic demographic indicators of Delhi, compared with the whole of India are presented in Table 1.1. The total population of Delhi according to the 1991 Census is 9.42 million. The decadal population growth rate in Delhi during 1981-91 (51.5 percent) was quite high compared with the national level of 23.9 percent. As nearly 90 percent of the population lives in urban areas, the population density (per km²) is quite high, 6,352 compared with the national average of 273.

| Table 1.1 Basic demographic indicators | | |
|---|-----------------|-------------|
| Basic demographic indicators for Delhi and India, 1981-1992 | | |
| Index | Delhi | India |
| Population (1991) | 9,420,644 | 846,302,688 |
| Percent population increase (1981-91) | 51.5 | 23.9 |
| Density (Population/km ²) (1991) | 6352 | 273 |
| Percent urban (1991) | 89.9 | 26.1 |
| Sex ratio (1991) | 827 | 927 |
| Percent 0-14 years old (1981) | 35.5 | 39.6 |
| Percent 65+ years old (1981) | 2.6 | 3.8 |
| Percent scheduled caste (1991) | 19.1 | 16.7 |
| Percent scheduled tribe (1991) | 0.0 | 8.0 |
| Percent literate (1991) ^a | | |
| Male | 82.0 | 64.1 |
| Female | 67.0 | 39.3 |
| Total | 75.3 | 52.2 |
| Crude birth rate (1992) ^b | 26.0 | 29.0 |
| Crude death rate (1992) ^b | 6.3 | 10.0 |
| Exponential growth rate (1981-91) | 4.15 | 2.14 |
| Infant mortality rate (1992) ^b | 44 ^c | 79 |
| Couple protection rate (1992) | 42.2 | 43.5 |
| U: Not available | | |
| ^a Based on the population age 7 and above | | |
| ^b Provisional | | |
| ^c Three-year moving average, 1990-92 | | |
| Source: Office of the Registrar General (1992, 1993a, 1994), Office of the Registrar General and Census Commissioner (1987, 1992), Ministry of Health and Family Welfare (1991, 1992) | | |

The sex ratio (number of females per 1,000 males) is low at 827 compared with the all-India level of 927. This is because of selective migration of males to Delhi for employment. In 1981, the percentage of the child population (age 0-14 years) and older population (age 65+) was low at 35.5 percent and 2.8 percent, respectively, compared with the corresponding figures for all-India of 39.6 percent and 3.8 percent.

The scheduled castes¹ comprise 19 percent of the total population of Delhi compared with 17 percent of the country as a whole. There are no scheduled tribes² in Delhi.

¹ The Government of India has identified certain castes as socially and economically backward and, recognizing the need to protect them from social injustice and all forms of exploitation, the Constitution of India has conferred on them special protection. Scheduled castes refer to such castes, races or tribes or parts of groups, within such castes, races or tribes as are declared to be scheduled castes by the President of India by public notification (Office of the Registrar General and Census Commissioner, 1984b).

² Scheduled tribes refer to such tribes or tribal communities or parts of or groups within such tribes or tribal communities as are declared to be scheduled tribes by the President of India by public notification (Office of the Registrar General and Census Commissioner, 1984b).

As expected in an urban population, the literacy rate (for the population age 7 years and above) is higher (75.3 percent) in Delhi than in the country as a whole (52.2 percent). Similarly, Delhi's male and female literacy rates of 82.0 percent and 67.0 percent, are higher than the all-India rates of 64.1 percent and 39.3 percent, respectively.

The crude birth rate of 26 per 1,000 population and the crude death rate of 6.3 per 1,000 population are lower than the all-India crude birth rate of 29 and crude death rate of 10, as estimated by the Sample Registration System (SRS) in 1992. The annual exponential growth rate of 4.15 percent for Delhi was much higher than that of India (2.14 percent) during 1981-91. The higher growth rate is largely due to migration. The couple protection rate (CPR, defined as the percentage of eligible couples effectively protected against pregnancy) of 42 in Delhi is almost the same as the CPR of 44 in India in 1992. Comparisons of the total fertility rate and life expectancy are not possible because there are no published estimates of these indicators for Delhi at this writing.

Table 1.2 shows the major demographic trends during 1971-91. As can be seen in the table, the total population of Delhi increased from 4.1 million in 1971 to 6.2 million in 1981 and to 9.4 million in 1991. The decadal growth rate was unchanged between 1961-71 (52.9 percent) and 1971-81 (53.0 percent). The decadal growth rate, however, declined slightly to 51.5 percent during the decade 1981-91. The density of population is continuously increasing in Delhi. It

| Table 1.2 Trends in basic demographic indicators | | | |
|--|-----------|-----------|-------------------|
| Trends in basic demographic indicators, Delhi, 1971-91 | | | |
| Index | 1971 | 1981 | 1991 |
| Population | 4,065,698 | 6,220,406 | 9,420,644 |
| Percent population increase (previous decade) | 52.9 | 53.0 | 51.5 |
| Density (population/km ²) | 2738 | 4194 | 6352 |
| Percent urban | 89.7 | 92.7 | 89.9 |
| Sex ratio | 801 | 808 | 827 |
| Percent 0-14 years old | 38.6 | 35.5 | U |
| Percent 65+ years old | 2.5 | 2.6 | U |
| Percent scheduled caste | 15.6 | 18.0 | 19.1 |
| Percent scheduled tribe | 0.0 | 0.0 | 0.0 |
| Percent literate ^a | | | |
| Male | 63.7 | 68.4 | 82.0 |
| Female | 47.8 | 53.1 | 67.0 |
| Total | 56.6 | 61.5 | 75.3 |
| Crude birth rate | 33.6 | 26.9 | 26.0 ^b |
| Crude death rate | 7.6 | 7.1 | 6.3 ^b |
| Exponential growth rate | 4.25 | 4.25 | 4.15 |
| Couple protection rate | 18.5 | 35.2 | 42.2 ^c |

^aBased on the population age 5 and above for 1971 and 1981 and the population age 7 and above for 1991.

^b1992, provisional

^c1992

Source: Office of the Registrar General (1982, 1985, 1992, 1993a, 1994), Office of the Registrar General and Census Commissioner (1974, 1976, 1984b, 1987), Ministry of Health and Family Welfare (1989, 1991, 1992)

increased from 2,738 persons per square kilometre in 1971 to 4,194 in 1981 and to a high of 6,352 in 1991. In fact, Delhi has the highest density among all the States and Territories of India.

The percent urban population increased from 89.7 percent in 1971, to 92.7 percent in 1981, but declined to 89.9 percent in 1991, due to a very high growth rate in rural areas (109.9 percent) during the decade 1981-91. Owing to the shortage of housing facilities in urban areas, people are settling in rural areas where land prices and rents are comparatively lower. The sex ratio increased gradually from 801 in 1971 to 808 in 1981 and to 827 in 1991. The percent of the population age 0-14 has declined from 38.6 percent in 1971 to 35.5 percent in 1981. The 1991 Census age data is not yet available, but we may expect it to decline further in 1991. This may be due to the reduction in the level of fertility and immigration of the adult male working population. The population age 65 and above shows a little increase from 2.5 percent in 1971 to 2.6 percent in 1981.

The percentage of the scheduled caste population has increased from 15.6 percent in 1971 to 18.0 percent in 1981 and to 19.1 percent in 1991. The pace of increase in the female literacy rate has been higher than the male literacy rate in both the decades 1971-81 and 1981-91. The literacy rate of the male population age 5 and above increased by 4.7 percentage points during 1971-81 from 63.7 percent to 68.4 percent, while the corresponding increase was 5.3 points in the case of females (from 47.8 percent to 53.1). Although the literacy rates for 1981 and 1991 are not strictly comparable because the most recent rates are available for the population age 7 and above, it is certain that both male and female literacy rates have increased during the decade.

The exponential growth rate of the population remained constant during the decades 1961-71 and 1971-81 at 4.25 percent, but has declined slightly to 4.15 percent during 1981-91. The crude birth rate declined from 33.6 in 1971 to 26.0 in 1992, and during this period, the crude death rate declined from 7.6 to 6.3. The percentage of couples effectively protected by various methods of family planning increased from 19 percent in 1971 to 35 in 1981, and to 42 in 1992.

1.7 Population and Family Welfare Policies and Programmes

The family welfare programme in India promotes responsible parenthood, with a two-child family norm (regardless of the sex of the children) through the voluntary use of contraceptive methods best suited to each couple (Ministry of Health and Family Welfare, 1991). Health and family planning services in Delhi, as in other states, are provided through a network of Primary Health Centres (PHCs), sub-centres, family welfare centres, postpartum centres, voluntary organizations, and other facilities, in accordance with the national family welfare policy and guidelines provided under the family welfare programme of the country. The national family planning programme started in 1951 with a clinical approach. This was followed by the extension approach, which was introduced in 1963-64. Mass vasectomy camps were organized during 1970-73. During the seventies, a community-oriented service network was developed, in which family planning services were offered as part of the overall package of health services. This integrated-and coordinated approach was implemented during the period 1974-77. The mother and child care approach, which commenced in 1977-78, is still

continuing. The Expanded Programme on Immunization (EPI) was introduced in 1978 with the objective of providing free vaccination services to all eligible children and expectant mothers. In order to step up the pace of immunization, the Universal Immunization Programme (UIP) was introduced in 1985-86 and is being implemented through the existing network of the primary health care system such as Primary Health Centres and sub-centres.

In Delhi, as in the country as whole, the family welfare programme is voluntary, leaving the choice of the method to the individual couple. The programme in Delhi has relied principally on sterilization. The temporary contraceptive methods, such as the IUD, condom, and pill, are also offered under the cafeteria approach. As of 31 March 1992, nearly half of the couple protection rate of 42.2 was accounted for by sterilization operations. Mass media and interpersonal communications are utilized to explain the various methods of contraception and to remove sociocultural barriers among the people. The government's long-term national goal is to reach a net reproduction rate of 1.0 by 2011-2016.

1.8 Health Priorities and Programmes

Delivery of health services in Delhi is mainly governed by the National Health Policy which was approved by the Parliament in 1983. Although the National Health Policy places a major emphasis on ensuring primary health care to all by the year 2000, it nevertheless identifies certain areas which need special attention. These areas are: (1) nutrition for all segments of the population, (2) the immunization programme, (3) maternal and child health care, (4) the prevention of food adulteration and maintenance of the quality of drugs, (5) water supply and sanitation, (6) environmental protection, (7) school health programmes, (8) occupational health services, and (9) prevention and control of locally endemic diseases. Active community participation has been considered to be one of the most important supportive activities for successful implementation of the health programmes.

CHAPTER 2

SURVEY DESIGN AND IMPLEMENTATION

2.1 Objectives of the NFHS

The primary objective of the NFHS is to provide national-level and state-level data on fertility, nuptiality, family size preferences, knowledge and practice of family planning, the potential demand for contraception, the level of unwanted fertility, utilization of antenatal services, breastfeeding and food supplementation practices, child nutrition and health, immunizations, and infant and child mortality. The NFHS is also designed to explore the demographic and socioeconomic determinants of fertility, family planning, and maternal and child health. This information is intended to assist policy makers, administrators and researchers in assessing and evaluating population and family welfare programmes and strategies. The NFHS used uniform questionnaires and uniform methods of sampling, data collection and analysis with the primary objective of providing a source of demographic and health data for inter-state comparisons. The data collected in the NFHS are also comparable with those of the Demographic and Health Surveys (DHS) conducted in many other countries¹.

2.2 Questionnaires

Three types of questionnaires were used in the NFHS: the Household Questionnaire, the Woman's Questionnaire and the Village Questionnaire (see Appendix D). The overall content and format of the questionnaires were determined in a Questionnaire Design Workshop held in Pune in September, 1991. The workshop was attended by representatives from all the PRCs, the Consulting Organizations, MOHFW, IIPS, other Indian organizations, USAID and the East-West Center/Macro International. The contents and design of the questionnaires were based broadly on the DHS Model B Questionnaire, which is designed for use in countries with low contraceptive prevalence. Keeping in view the Indian sociocultural milieu and the objectives of the NFHS, additions and modifications were made to the model questionnaire after extensive deliberations at the workshop. In addition to a standard set of questions in all the states of the NFHS, it was decided at the workshop that individual states could recommend a number of state-specific questions which would be formulated after considering the issues of importance in each state. Based on the recommendations of this workshop, the questionnaires were finalized at IIPS, Bombay. The questionnaires are largely precoded, with fixed response categories.

A pretest of the questionnaires was carried out by IIPS with the help of the PRC, Bhopal, in October, 1991. A 10-day training session for interviewers and supervisors was conducted at the PRC. For the pretesting of the questionnaires, a total of 150 pretest interviews were completed in two villages near Bhopal and a few urban blocks within Bhopal city. After the pretest, appropriate changes were made in the questionnaires, based on the experience of the pretest. The NFHS in Delhi used the standard Household Questionnaire and Woman's Questionnaire. State-specific questions on general awareness and knowledge of Acquired

¹ The Demographic and Health Surveys (DHS) programme is an international project designed to collect comparable survey data across countries on fertility, family planning, and maternal and child health.

Immune Deficiency Syndrome (AIDS), were added to the Woman's Questionnaire.

Questionnaires used in Delhi were bilingual, consisting of questions both in Hindi and English. A pretest of the Hindi version of the questionnaires was carried out by the trained field staff of the of PRC and VIMARSH, in several rural and urban localities in Delhi. The necessary changes were made in the Hindi version of the questionnaires based on the experience of the pretest.

The Household Questionnaire was used to list all usual residents of each sample household, plus all visitors who slept in that household the night before the interview. Some basic information was collected on the characteristics of each person listed, including age, sex, marital status, education, occupation and relationship to the head of the household, as well as health status. The main purpose of this section of the Household Questionnaire was to identify women who were eligible for the Woman's Questionnaire (ever-married women age 13-49 years). In addition, the Household Questionnaire collected information on the household itself, such as the source of water, type of toilet facilities, materials used in the construction of the house, source of lighting, cooking fuel, ownership of agricultural land and livestock, ownership of various consumer durable goods, and characteristics of the head of the household such as religion, caste or tribe. The Household Questionnaire was also used to collect detailed information on all the live births and deaths that took place within the last two years in the household.

The Woman's Questionnaire was used to collect information from eligible women -- that is, all ever-married women, usual residents as well as visitors, age 13-49 years. The Woman's Questionnaire consisted of seven sections:

Section 1. Respondent's Background: Questions on age, marital status, age at marriage and education of the eligible women are included. If the respondent is a visitor, information about her own household is also collected.

Section 2. Reproduction: In this section, information is collected about the births that a woman had during her life. The information collected includes the total number of sons and daughters that a woman has given birth to, information about stillbirths and abortions, a complete birth history including month and year of birth, current age, sex, survival status, and if dead, age at death for each of the live births, and information about current pregnancy and menstruation.

Section 3. Contraception: This section collects information on the knowledge, ever use and current use of various family planning methods, intentions for future use, and for current users, the duration of use, source of the method, and problems experienced with use.

Section 4. Health of Children: The questions in this section relate to births in the year of the survey as well as to all the births in the previous four calendar years. The objective of this section is to obtain information related to the health of children. The topics include antenatal care, breastfeeding, vaccinations and recent illnesses of young children. The questions are organized into two subsections: Section 4A containing questions on pregnancy and breastfeeding and Section 4B containing questions on immunization and

health of children.

Section 5. Fertility Preferences: This section gathers information on the desire for additional children, ideal family size and sex composition of children, preferred and ideal birth intervals, and husband's attitude towards family size. This section also provides a subsection (Section 5A) to include a set of state-specific questions on the topic of awareness and knowledge of AIDS.

Section 6. Husband's Background and Woman's Work: Questions related to age, education and work status of the husband as well as questions on the work status of the woman herself are included.

Section 7. Height and Weight: All living children born since 1 January 1989 to the eligible women interviewed were weighed and measured. The results were recorded in this section of the Woman's Questionnaire. The NFHS is the first national survey that collected demographic, health and anthropometric data simultaneously. The measurement of height and weight was a separate operation that was conducted after the individual interview was completed. All interviewers, editors and supervisors were trained in taking anthropometric measurements. For the measurement of weight of the children, standard spring balance weighing machines (Salter scales) were used. The height/length boards used in the survey were constructed from acrylic and other synthetic materials with a metal frame to provide stability and durability.

2.3 Sample Design

The sample design adopted for the NFHS in Delhi is a systematic two-stage sample of households and provides for statistical estimates for the National Capital Territory as a whole. Because of the small size of the rural population, no provision was made for separate estimates for rural areas. The universe consists of all urban and rural areas of Delhi.

Sample Size and Allocation

The overall sample size in terms of eligible women to be selected for interview in the National Capital Territory was set at 3,300. After allowing for nonresponse at household and individual interview levels, it was estimated that there would be approximately 3,000 completed interviews of eligible women respondents (ever-married women aged 13-49 years). Although, as indicated earlier, the sample design did not provide for separate estimates for rural areas, the sample provided for inclusion of urban and rural households in proportion to the respective population size in the two areas. Thus the sample is completely self-weighted. The overall sampling fraction (the probability, f , of selecting a woman in Delhi) is 0.001777, computed as follows:

$$f = \frac{n \times 1.10}{N}$$

where n = number of women to be interviewed in Delhi adjusted to account for nonresponse and other loss; and
 N = projected population of eligible women in Delhi in December, 1992.

The Rural Sample: The Frame, Stratification and Selection

In rural areas, the 1991 Census list of villages served as the sampling frame and a two-stage sample design with the selection of villages in the first stage and households in the selected village in the next stage was adopted. Only an implicit stratification by the percent of scheduled caste population was used prior to the selection of villages. In all, 10 villages were selected as Primary Sampling Units (PSUs). The selection of PSUs was made systematically with probability proportional to size (PPS). On average, 30 households were selected in each selected PSU, at the second sampling stage. The probability of selecting a PSU (f_1) was computed as:

$$f_1 = \frac{a \times s_i}{\sum s_i}$$

where a = number of rural PSUs selected from Delhi
 s_i = the population size of the selected PSU
 $\sum s_i$ = total rural population of Delhi

A household listing operation carried out in each of the selected PSUs prior to the main survey provided the necessary frame for selecting the households at the second sampling stage. The household listing operation consisted of preparing up-to-date notional maps, assigning numbers to structures, recording addresses of these structures, identifying the residential structures and listing the names of heads of all the households in the residential structures. Five household listing teams, each team comprising a lister and mapper, were trained during 11-16 January, 1993 at New Delhi. The household listing operation started on 18 January 1993. This operation was supervised by regular field staff of the PRC and VIMARSH. The households to be interviewed were selected from the household lists using systematic sampling with equal probabilities. The probability of selecting a household from a selected PSU (f_2) was computed as:

$$f_2 = \frac{f}{f_1}$$

All the selected households were contacted during data collection, and no replacement was made if a selected household was absent during data collection.

The Urban Sample: The Frame, Stratification and Selection

In the urban areas, the list of 1991 Census Enumeration Blocks obtained from the Office of the Register General of India provided the first-stage sampling frame. The urban population of Delhi consists of four divisions: New Delhi Municipal Committee (NDMC), Delhi Cantonment, Delhi Municipal Corporation (DMC) and Census Towns. From each division, the required number of blocks (PSUs) were selected using PPS after arranging the blocks

geographically and ordering them within each division by percent of scheduled caste population (alternating between ascending and descending order).

In the urban areas of Delhi, a sample comprising 225 blocks (PSUs) was thus selected. The selection of households in the second stage of sampling was done as in the rural areas after a household listing operation in the selected blocks. On average, a sample of 12 households was selected systematically from each block.

The probability of selecting a Census Enumeration Block was calculated as follows:

$$f_1 = \frac{a \times s_i}{\Sigma s_i}$$

where a = number of Census Enumeration Blocks selected from urban Delhi
 s_i = the population size of the selected Block
 Σs_i = total urban population of Delhi

The probability of selecting a household from a selected block (f_2) was computed as:

$$f_2 = \frac{f}{f_1}$$

2.4 Recruitment, Training and Fieldwork

In order to maintain uniform survey procedures across the states, four manuals dealing with different aspects of the survey were prepared at IIPS. The *Interviewer's Manual* consisted of instructions for the interviewers regarding interviewing techniques, field procedures, and instructions on the method of asking each question and recording answers. The *Manual for Field Editors and Supervisors* contained a detailed description of the role of field editors and supervisors in the survey. A list of checks to be made by the field editor in the filled-in questionnaires was also provided in this manual. The *Household Listing Manual* was meant for household listing teams, and contained procedures to be adopted for household listing. The guidelines for the training of the field staff were described in the manual entitled *Training Guidelines*. The representatives of each of the COs and the PRCs were trained in a series of Training of the Trainers Workshops organized by IIPS at the beginning of each phase of data collection. The purpose of these workshops was to ensure uniformity in data collection procedures in different states. Persons who were trained in each workshop subsequently trained the field staff in each state according to the standard procedures discussed in the Training of Trainers Workshops. In these workshops, detailed discussions were held on the objectives of the NFHS, different aspects of the survey, roles of various organizations participating in the survey, details of each of the three questionnaires used in the survey, methods of data collection and field supervision, and guidelines for the training of the field staff. Four persons from VIMARSH were trained at the first and second Training of the Trainers Workshops held at Lonavala during December, 1991 and July, 1992, and two persons from the PRC were trained in the Third Training of the Trainers Workshop held at IIPS in October, 1992.

The recruitment and training of field staff for the main survey was done at the PRC. Thirty-one interviewers comprising 25 males and 6 females, each having either a bachelor's or a master's degree and knowing local language(s) were selected after an interview conducted by senior staff of the PRC and VIMARSH, during 27-29 December 1992. The selected persons were trained for three weeks at the PRC during 11 January-5 February 1993. The training was conducted by the staff from the PRC, VIMARSH and IIPS. Representatives of Macro International were also present during training and field practice sessions.

The three-week training course consisted of instructions in interviewing techniques and field procedures for the survey, a detailed review of each item in the questionnaire, instructions and practice in weighing and measuring children, mock interviews between participants in the classroom and practice interviews in the field. In addition, two special lectures were arranged: one on the topic of maternal and child health care including immunization and another on Acquired Immune Deficiency Syndrome (AIDS) by experts in these areas. Female trainees who performed satisfactorily in the training programme were selected as interviewers for the main survey. In addition to the main training, two days' training was specially arranged for field editors and supervisors. The editors were trained to detect errors in the filled-in questionnaires and resolve problems. A list of checks to be made while editing the filled-in questionnaires was also supplied to them.

The fieldwork for the NFHS in Delhi was carried out by five interviewing teams, each team consisting of one field supervisor, one field editor and four female interviewers (see Appendix C for a complete list of survey staff). The fieldwork was carried out between 8 February and 9 May 1993. Assignment of PSUs to the teams and various logistical decisions were made by the staff of VIMARSH designated as coordinators. Each team was allowed a fixed period of time to complete fieldwork in a PSU before moving to the next PSU. Each interviewer was instructed not to conduct more than three individual interviews a day and was required to make a minimum of three callbacks if the eligible woman identified in the selected household was not present at the time of the household interview. The entire field work was closely supervised by senior staff of VIMARSH, the PRC and IIPS.

The main duty of the field editor was to examine the completed questionnaires in the field for completeness, consistency and legibility of the information collected and to ensure that all necessary corrections were made. Special attention was paid to missing information, skip instructions, filter questions, age information, and completeness of the birth history and the health section. If the problems were major, such as discrepancies between the birth history and the health section, the interviewers were required to revisit the respondent to correct the problems. If a return visit was not possible, the editor tried to establish, with the interviewer's assistance, the correct response. If either of these options was not possible, the editor designated the response as either "missing" or "inconsistent". An additional duty of the field editor was to observe ongoing interviews and verify the accuracy of the method of asking questions, recording answers and following skip instructions correctly. The field supervisor conducted spot-checks to verify the accuracy of information collected on the eligibility of respondents. Throughout the survey, the staff from VIMARSH, the PRC and IIPS maintained close contacts with all the teams through direct communication and spot-checking. The objective was to provide support and advice to staff in the field and to enhance data quality and the efficiency of interviewers. This objective was accomplished by communicating data problems and possible

solutions to the interviewing teams, reminding interviewers about proper probing techniques and examining the fieldwork of the supervisors. In addition, data from the field were simultaneously entered into microcomputers, and field check tables were produced during the fieldwork to assess the quality of the data and identify problem areas. These tables were discussed with the interviewing teams and supervisors during the fieldwork so that they could improve their performance if needed. Each team supervisor was provided with the original household listing, layout sketch map and the household sample selected for each PSU.

2.5 Field Problems

There are a variety of field problems that may be encountered in a large-scale sample survey like the NFHS. However, the data collection for the NFHS in Delhi did not face any serious problems. Apart from some minor problems that the interviewers faced in identification of selected households in poor and very densely populated clusters, such as *Jhugi Jhopri*, and some problems in gaining entry in restricted and prohibited areas of the Delhi Cantonment Board, the fieldwork in Delhi went smoothly.

2.6 Data Processing

The data processing work for the NFHS in Delhi started simultaneously with field work operations. All completed questionnaires were sent to the office of VIMARSH in New Delhi for data processing. This process consisted of office editing, coding, data entry and machine editing. Although field editors had examined the completed questionnaires in the field, the questionnaires were re-edited at the VIMARSH office by specially trained office editors. This re-examination covered checking all skip sequences, checking circled response codes, and checking the information recorded in the filter questions. Special attention was paid to the consistency of responses to age questions and the accurate completion of the birth history. A second stage of office editing comprised the assignment of appropriate codes for the information on occupation, caste and cause of death, and the addition of commonly mentioned "other" responses to the coding scheme. One supervisor and three data entry operators were responsible for data entry and computer editing operations. The data were processed using four microcomputers and the data entry and editing software known as the Integrated System for Survey Analysis (ISSA). The data entry, done directly from the precoded questionnaires, started within one week of the receipt of the first set of completed questionnaires. All data entry and editing operations were completed by 8 June 1993. Computer-based checks were done to clean the data and remove inconsistencies. Age imputation was also completed at this stage. Age variables such as current age, age at first marriage, age of the woman when she started living with her husband, and the ages of all children were imputed for those cases in which information was missing or incorrect entries were detected.

A preliminary report highlighting the important findings of the survey in Delhi was prepared in September, 1993. The preliminary report was primarily meant for disseminating the data on basic demographic and health parameters among programme planners, policy makers and administrators soon after the data collection was over. The report contained sixteen tables and a brief description of the findings on fertility, knowledge and use of contraception, utilization of antenatal services, immunization, feeding practices and health of children, infant and child mortality, and knowledge of AIDS.

In order to maintain comparability with all the states, the tabulation plan for the detailed state reports was finalized at a workshop held in Vadodara in December, 1992. The final tables for Delhi were produced at IIPS based on this tabulation plan, with additional tables for the state-specific questions on knowledge of AIDS.

2.7 Areas for Reporting Survey Results

In this report, survey results are reported for Delhi as a whole. Because of the small size of the rural sample, results are not presented separately for rural and urban areas, although the sample was proportionally drawn from both the rural and urban areas.

2.8 Sample Implementation

Table 2.1 shows the results pertaining to response rates for both household and individual interviews in the survey. This table also shows reasons for nonresponse. Of the 3,868 households selected in Delhi, interviews were completed in 95 percent of the cases. In about 2 percent of the cases, the selected household dwellings were vacant or destroyed. The household response rate (the number of households interviewed per 100 occupied households) was 97 percent. A slightly higher response rate for the household interviews was recorded in rural areas (98 percent) than in urban areas (97 percent).

In the interviewed households, 3,528 women were identified as eligible for the individual interview. Interviews were successfully completed with 3,457 (98 percent) of the eligible women. The individual response rate was almost the same in both urban and rural areas.

Nonresponse at both the household and individual levels was mainly due to households being absent or an eligible female respondent not being at home despite repeated household visits. Cases where an eligible woman refused to be interviewed were few (overall, only 0.3 percent).

Table 2.1 Sample results

Sample results for households and eligible women, Delhi, 1995

| Result | Urban | | Rural | | Total | |
|--|--------|---------|--------|---------|--------|---------|
| | Number | Percent | Number | Percent | Number | Percent |
| Households selected | 3560 | 100.0 | 308 | 100.0 | 3868 | 100.0 |
| Households completed (C) | 3377 | 94.9 | 300 | 97.4 | 3677 | 95.1 |
| Households with no competent respondent (HP) | 7 | 0.2 | 1 | 0.3 | 8 | 0.2 |
| Households absent (HA) | 96 | 2.7 | 5 | 1.6 | 101 | 2.6 |
| Households refused (R) | 14 | 0.4 | 0 | -- | 14 | 0.4 |
| Households vacant/no dwelling (DV) | 56 | 1.6 | 2 | 0.6 | 58 | 1.5 |
| Dwellings destroyed (DD) | 2 | 0.1 | 0 | -- | 2 | 0.1 |
| Dwellings not found (DNF) | 8 | 0.2 | 0 | -- | 8 | 0.2 |
| Other (O) | | | | | | |
| Households occupied | 3494 | 100.0 | 306 | 100.0 | 3800 | 100.0 |
| Households interviewed | 3377 | 96.7 | 300 | 98.0 | 3677 | 96.8 |
| Households not interviewed | 117 | 3.3 | 6 | 2.0 | 123 | 3.2 |
| Household response rate (HHR)¹ | NA | 96.7 | NA | 98.0 | NA | 96.8 |
| Eligible women | 3254 | 100.0 | 274 | 100.0 | 3528 | 100.0 |
| Women interviewed (EWC) | 3189 | 98.0 | 268 | 97.8 | 3457 | 98.0 |
| Women not at home (EWNH) | 46 | 1.4 | 5 | 1.8 | 51 | 1.4 |
| Women postponed (EWP) | 1 | -- | 0 | -- | 1 | -- |
| Women refused (EWR) | 9 | 0.3 | 0 | -- | 9 | 0.3 |
| Women partly interviewed (EWPC) | 6 | 0.2 | 0 | -- | 6 | 0.2 |
| Other (EWO) | 3 | 0.1 | 1 | 0.4 | 4 | 0.1 |
| Individual response rate (EWRR)² | NA | 98.1 | NA | 98.2 | NA | 98.1 |
| Overall response rate (ORR)³ | NA | 94.8 | NA | 96.2 | NA | 94.9 |

NA: Not applicable

-- Less than 0.05 percent

¹Using the number of households falling into specific response categories, the household response rate (HHR) is calculated as:

$$HHR = \frac{C}{C + HP + HA + R + DNF} \times 100$$

²Using the number of eligible women falling into specific response categories, the individual response rate (EWRR) is calculated as:

$$EWRR = \frac{EWC}{EWC + EWNH + EWP + EWR + EWPC} \times 100$$

³The overall response rate (ORR) is calculated as:

$$ORR = (HHR \times EWRR)/100$$

CHAPTER 3

HOUSEHOLD AND RESPONDENT BACKGROUND CHARACTERISTICS

This chapter presents a profile of the demographic and socioeconomic characteristics of households and individual respondents in the NFHS. The chapter also includes some comparisons of the NFHS results with results from the 1991 Census of India.

3.1 Age-Sex Distribution of the Household Population

The NFHS household population can be tabulated in two ways: *de facto* (the place each person slept the night before the survey interview) and *de jure* (the place of usual residence). The *de facto* and *de jure* populations in Delhi may differ because of temporary population movements. Table 3.1 shows the *de facto* population in the NFHS household sample, classified by age and sex. The total *de facto* sample population is 18,725.

The urban character of Delhi is reflected in its age distribution. Thirty-five percent of the population is below 15 years of age and 5 percent is age 60 or more. The relatively small proportion of the very young and old population may be partly due to declining fertility and partly due to the disproportionate in-migration of the working age population.

Examination of the single-year age distributions (see Table B.1 in Appendix B and Figure 3.1) indicates substantial distortions of the data due to misreporting of age and preference for particular digits. One of the most commonly used measures of digit preference in age reporting is the Myers' Index (United Nations, 1955). This index provides an overall summary of preferences for, or avoidance of, each of the ten digits, from 0 to 9. The Myers' Indices computed for the male and female populations of the NFHS data are 39.3 and 12.9, respectively. The corresponding indices for males and females in Delhi from the 1981 Census are 48.5 and 50.7, respectively (Office of the Registrar General and Census Commissioner, 1984c). Although the method of collecting information on the age of household members was almost the same in the Census and the NFHS, age reporting in the NFHS as judged from these indices is considerably better. In the NFHS, as in the Census, the interviewer collected information on the age of household members from the head of the household or any other responsible adult member of the household. The Myers' Indices for males and females in the NFHS indicate that age reporting is better in the case of females than in the case of males. Figure 3.1 also indicates that the age distribution is smoother for women in the age group 13-49 than for other females or for males. The better age reporting for females in the age group 13-49 in the NFHS is mainly due to the difference in the method of tabulating age information for males and females in the reproductive ages. In the Household Questionnaire, the ages of all males and females are reported by the head of the household or other household respondent. No extensive probing techniques were adopted for obtaining age information in the household listing. For eligible women who were interviewed using the Woman's Questionnaire, the age reported by the woman herself replaces the age reported in the Household Questionnaire if there is a discrepancy. Her age on the Woman's Questionnaire is based on her month and year of birth, if known, otherwise is the age she reports. A variety of probing techniques were used to elicit accurate age information from the respondent. The data suggest that probing and other elaborate measures

Table 3.1 Household population by age and sex

Percent distribution of the *de facto* household population by age and sex, Delhi, 1993

| Age | Male | Female | Total |
|---------------|-------|--------|-------|
| < 1 | 2.3 | 2.6 | 2.4 |
| 1 - 4 | 9.2 | 10.2 | 9.6 |
| 5 - 9 | 12.0 | 12.8 | 12.3 |
| 10-14 | 10.4 | 11.2 | 10.8 |
| 15-19 | 10.5 | 9.9 | 10.2 |
| 20-24 | 10.4 | 10.8 | 10.6 |
| 25-29 | 10.7 | 10.1 | 10.4 |
| 30-34 | 8.2 | 7.9 | 8.0 |
| 35-39 | 7.7 | 6.0 | 6.9 |
| 40-44 | 4.7 | 4.4 | 4.5 |
| 45-49 | 4.0 | 4.6 | 4.3 |
| 50-54 | 2.8 | 2.1 | 2.5 |
| 55-59 | 2.3 | 2.6 | 2.5 |
| 60-64 | 1.7 | 1.9 | 1.8 |
| 65-69 | 1.3 | 1.0 | 1.2 |
| 70-74 | 0.9 | 1.1 | 1.0 |
| 75-79 | 0.4 | 0.4 | 0.4 |
| 80 + | 0.5 | 0.5 | 0.5 |
| Total percent | 100.0 | 100.0 | 100.0 |
| Number | 10216 | 8509 | 18725 |
| Sex ratio | NA | NA | 833 |

NA: Not applicable

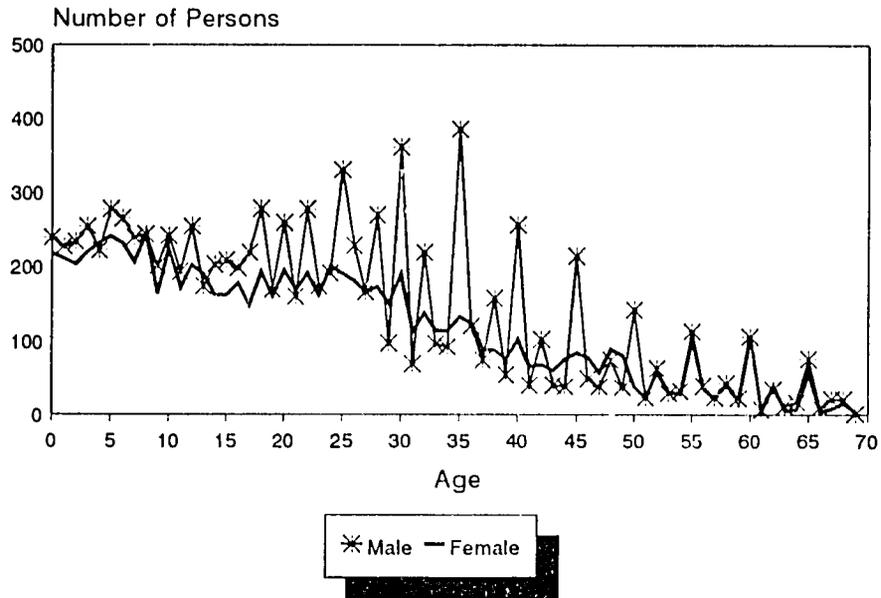
used for arriving at the age of the eligible women have helped in reducing the biases in age reporting including the bias due to digit preference.

The distribution by five-year age groups is shown in the population pyramid in Figure 3.2. The irregular dip in the proportion of women at age 50-54 is indicative of a possible shifting of the age of women from age 50-54 to age 45-49 and age 55-59. This is an unusual phenomenon because in the Demographic and Health Surveys, it is generally found that there is a slight tendency to displace the age of women from age group 45-49 to 50-54, presumably to reduce the workload of the interviewer (Rutstein and Bicego, 1990). Perhaps, interviewers in the NFHS in Delhi were overcompensating because of warnings that questionnaires would be carefully scrutinized in the case of women recorded as age 50. However, the impact of this apparent shifting of age on the quality of data is minimal because the shifting is not pronounced.

The *de facto* population sex ratio (females per 1,000 males) in Delhi is 833. The comparable figure from the 1991 Census is 827 (see Table 1.1). Although the sex ratio is slightly higher in the NFHS, the difference is very small (6 per 1,000).

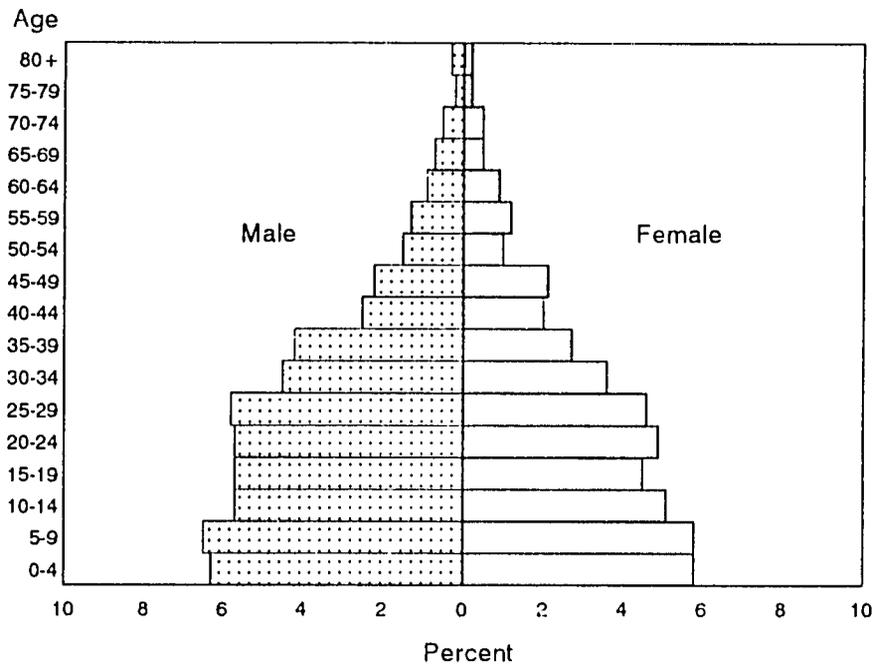
Table 3.2 provides information on age distribution by sex and sex ratios by age for the NFHS *de jure* population. By and large, the age distributions for the *de facto* and the *de jure* populations are similar in the NFHS. The total population sex ratio for Delhi is 824 in the

Figure 3.1
Number of Persons Reported at Each Age
by Sex



NFHS, Delhi, 1993

Figure 3.2
Population Pyramid of Delhi



NFHS, Delhi, 1993

Table 3.2 *De jure* household population by age and sex

Percent distribution of the *de jure* population by age and sex, Delhi, 1993

| Age | Male | Female | Sex ratio |
|------------|-------|--------|-----------|
| 0 - 4 | 11.4 | 12.6 | 910 |
| 5 -14 | 22.3 | 24.0 | 885 |
| 15-29 | 31.6 | 30.7 | 800 |
| 30-49 | 24.7 | 23.0 | 767 |
| 50-64 | 7.0 | 6.6 | 776 |
| 65+ | 2.9 | 3.1 | 864 |
| Total | 100.0 | 100.0 | 824 |
| Median age | 22.6 | 21.7 | NA |

NA: Not applicable

NFHS sample, which is quite close to the census value of 827. The lower sex ratios in the working age groups possibly reflects disproportionate in-migration of males in these age groups.

3.2 Marital Status

The NFHS gathered information on the marital status of all household members age 6 and over. Table 3.3 shows the marital status distribution of the *de facto* household population by age and sex. Among females age 6 or more years, 54 percent are currently married and 39 percent have never been married. The percentage never married is higher for males (46 percent) than females which reflects a lower age at marriage for females. The proportion divorced or separated is small in Delhi, and the impact of widowhood is quite limited until the older ages. However, nearly one-quarter of women age 55-59 and more than one-half of women age 60 and over are widows.

Of more interest is the proportion of persons who marry young. Among persons age 15-19, only 4 percent of males and 19 percent of females are ever married in Delhi. By age 35 most of the females have ever married and the percentage of never married females drops to less than 2 percent in age group 30-34 and less than 1 percent in 35-39. By age 40, nearly all males have ever married, only less than 2 percent of males are never married in age groups 40-44 and 45-49. Overall, women marry at much younger ages than men. A more comprehensive discussion of marriage patterns is contained in the next chapter, which is devoted entirely to nuptiality.

3.3 Household Composition

Table 3.4 shows the percent distribution of households by various characteristics of the household head (sex, age, marital status, religion and caste/tribe), as well as the number of usual household members. Nearly 94 percent of household heads are males. The median age of household heads is 40 years. Eighty-eight percent of household heads are currently married, 8 percent are widowed and 3 percent have never married. Overall, 82 percent of household heads are Hindu, 10 percent are Muslim, 5 percent are Sikh and the remaining 3 percent belong to

Table 3.3 Marital status of the household population

Percent distribution of the *de facto* household population age 6 and above by marital status, according to age and sex, Delhi, 1993

| Age | Marital status | | | | | | Total percent |
|---------------|----------------|-------------------|---------|----------|-----------|------------|---------------|
| | Never married | Currently married | Widowed | Divorced | Separated | DK/missing | |
| Male | | | | | | | |
| 6-12 | 98.8 | 0.2 | 0.2 | 0.1 | 0.1 | 0.6 | 100.0 |
| 13-14 | 99.7 | -- | 0.3 | -- | -- | -- | 100.0 |
| 15-19 | 96.4 | 3.5 | -- | 0.1 | -- | -- | 100.0 |
| 20-24 | 64.5 | 34.7 | 0.3 | 0.1 | 0.4 | 0.1 | 100.0 |
| 25-29 | 23.9 | 75.5 | 0.4 | -- | 0.3 | -- | 100.0 |
| 30-34 | 5.6 | 93.1 | 0.8 | 0.1 | 0.4 | -- | 100.0 |
| 35-39 | 2.3 | 95.9 | 1.4 | 0.3 | -- | 0.1 | 100.0 |
| 40-44 | 1.1 | 95.8 | 2.7 | 0.2 | 0.2 | -- | 100.0 |
| 45-49 | 1.9 | 95.6 | 2.4 | -- | -- | -- | 100.0 |
| 50-54 | 2.4 | 94.1 | 2.8 | 0.3 | 0.3 | -- | 100.0 |
| 55-59 | 1.3 | 93.8 | 4.6 | 0.4 | -- | -- | 100.0 |
| 60+ | 0.8 | 81.4 | 17.2 | -- | 0.2 | 0.4 | 100.0 |
| Total | 46.4 | 51.5 | 1.8 | 0.1 | 0.2 | 0.2 | 100.0 |
| Female | | | | | | | |
| 6-12 | 99.3 | -- | 0.3 | -- | -- | 0.4 | 100.0 |
| 13-14 | 99.7 | 0.3 | -- | -- | -- | -- | 100.0 |
| 15-19 | 81.2 | 18.5 | -- | -- | 0.4 | -- | 100.0 |
| 20-24 | 29.7 | 69.2 | 0.4 | 0.4 | 0.2 | -- | 100.0 |
| 25-29 | 6.7 | 92.5 | 0.3 | 0.2 | 0.2 | -- | 100.0 |
| 30-34 | 1.5 | 94.8 | 2.4 | 0.1 | 1.2 | -- | 100.0 |
| 35-39 | 0.8 | 94.1 | 4.1 | -- | 1.0 | -- | 100.0 |
| 40-44 | 0.8 | 91.4 | 7.0 | -- | 0.8 | -- | 100.0 |
| 45-49 | 0.5 | 83.8 | 15.1 | -- | 0.5 | -- | 100.0 |
| 50-54 | 1.1 | 77.7 | 21.2 | -- | -- | -- | 100.0 |
| 55-59 | 0.5 | 73.1 | 25.1 | 1.4 | -- | -- | 100.0 |
| 60+ | 1.4 | 43.8 | 54.4 | -- | 0.2 | 0.2 | 100.0 |
| Total | 39.3 | 53.7 | 6.4 | 0.1 | 0.4 | 0.1 | 100.0 |

DK: Don't know
 -- Less than 0.05 percent

other religions. Only 5 percent of the household heads belong to scheduled castes. According to the 1991 Census, 19 percent of the population in Delhi belong to scheduled castes (see Table 1.1). Unlike in other parts of India, no tribe in Delhi is identified as scheduled tribe by the local government. However, in the NFHS, about 1 percent of the household heads are reported as belonging to scheduled tribes. The mean NFHS household size is 5.1 persons per household.

Table 3.5 shows the percent distribution of the *de facto* household population by age and sex. All subsequent tables in this chapter and in the following chapters are based on the *de facto* sample, unless otherwise specified¹. Overall, 3 percent of the *de facto* population listed in the

¹ It is expected that the *de facto* sample will be more representative of women in Delhi since all women are interviewed where they are staying at the time of the survey. A *de jure* sample, on the other hand, would miss usual residents who are temporarily staying elsewhere at the time of the survey.

Table 3.4 Household composition

Percent distribution of households by selected characteristics of household head and size, Delhi, 1993

| Characteristic | Percent |
|---|---------|
| Sex of household head | |
| Male | 93.7 |
| Female | 6.3 |
| Age of household head | |
| < 30 | 17.9 |
| 30 - 44 | 43.9 |
| 45 - 59 | 25.9 |
| 60+ | 12.3 |
| Median age | 39.9 |
| Marital status of household head | |
| Never married | 3.4 |
| Currently married | 88.4 |
| Widowed | 7.8 |
| Divorced | 0.1 |
| Separated | 0.3 |
| Religion of household head | |
| Hindu | 82.4 |
| Muslim | 9.7 |
| Sikh | 5.3 |
| Other | 2.5 |
| Caste/tribe of household head | |
| Scheduled caste | 5.0 |
| Scheduled tribe | 0.9 |
| Other | 94.1 |
| Number of usual members | |
| 1 | 6.1 |
| 2 | 7.6 |
| 3 | 11.2 |
| 4 | 18.8 |
| 5 | 18.6 |
| 6 | 14.5 |
| 7 | 9.3 |
| 8 | 5.3 |
| 9+ | 8.6 |
| Mean size | 5.1 |
| Total percent | 100.0 |
| Number of households | 3677 |

Note: Table is based on *de jure* members, i.e., usual residents.

Table 3.5 Usual residents and visitors

Percent distribution of the *de facto* household population by resident status in the household, according to age and sex, Delhi, 1993

| Age | Resident status | | Total percent | Number |
|---------------|-----------------|------------|---------------|--------------|
| | Usual resident | Visitor | | |
| MALE | | | | |
| < 1 | 92.9 | 7.1 | 100.0 | 239 |
| 1 - 4 | 95.7 | 4.3 | 100.0 | 936 |
| 5 - 14 | 97.9 | 2.1 | 100.0 | 2290 |
| 15-19 | 99.0 | 1.0 | 100.0 | 1072 |
| 20-24 | 98.0 | 2.0 | 100.0 | 1061 |
| 25-29 | 98.3 | 1.7 | 100.0 | 1090 |
| 30-34 | 98.7 | 1.3 | 100.0 | 837 |
| 35-39 | 98.5 | 1.5 | 100.0 | 790 |
| 40-44 | 98.5 | 1.5 | 100.0 | 476 |
| 45-49 | 98.5 | 1.5 | 100.0 | 412 |
| 50+ | 97.9 | 2.1 | 100.0 | 1012 |
| Total | 97.9 | 2.1 | 100.0 | 10216 |
| FEMALE | | | | |
| < 1 | 94.5 | 5.5 | 100.0 | 218 |
| 1 - 4 | 94.8 | 5.2 | 100.0 | 866 |
| 5 - 14 | 97.7 | 2.3 | 100.0 | 2035 |
| 15-19 | 94.8 | 5.2 | 100.0 | 840 |
| 20-24 | 92.4 | 7.6 | 100.0 | 918 |
| 25-29 | 94.9 | 5.1 | 100.0 | 861 |
| 30-34 | 97.2 | 2.8 | 100.0 | 668 |
| 35-39 | 97.4 | 2.6 | 100.0 | 509 |
| 40-44 | 98.7 | 1.3 | 100.0 | 373 |
| 45-49 | 96.7 | 3.3 | 100.0 | 390 |
| 50+ | 94.3 | 5.7 | 100.0 | 830 |
| Total | 95.8 | 4.2 | 100.0 | 8509 |
| TOTAL | | | | |
| < 1 | 93.7 | 6.3 | 100.0 | 457 |
| 1 - 4 | 95.3 | 4.7 | 100.0 | 1802 |
| 5 - 14 | 97.8 | 2.2 | 100.0 | 4325 |
| 15-19 | 97.1 | 2.9 | 100.0 | 1912 |
| 20-24 | 95.4 | 4.6 | 100.0 | 1979 |
| 25-29 | 96.8 | 3.2 | 100.0 | 1951 |
| 30-34 | 98.0 | 2.0 | 100.0 | 1505 |
| 35-39 | 98.1 | 1.9 | 100.0 | 1299 |
| 40-44 | 98.6 | 1.4 | 100.0 | 849 |
| 45-49 | 97.6 | 2.4 | 100.0 | 802 |
| 50+ | 96.3 | 3.7 | 100.0 | 1842 |
| Total | 97.0 | 3.0 | 100.0 | 18725 |

Note: Total includes 1 male and 1 female with missing information on age, who are not shown separately.

sample households at the time of the interview were visitors who did not usually live in the household. Visiting is common among young women in the childbearing years and their children and also elderly persons over 50 years of age. This pattern undoubtedly results from the common practice of women returning to their parents' house for delivering a child (especially the first or second child) and staying there during the postpartum period. The elderly persons may be visiting the households of their married sons and daughters as this practice is common in big cities.

3.4 Educational Attainment

The educational level of household members is an important characteristic because educational attainment often affects reproductive behaviour, the use of contraceptives, the health of children and proper hygienic practices. Table 3.6 shows the extent of literacy and level of education of the *de facto* household population age 6 and above by age and sex. A little less than 30 percent of females and 14 percent of males age 6 and above are illiterate. The NFHS levels of illiteracy are somewhat lower than the 1991 Census rates of 33 percent for females and 18 percent for males age 7 and above (see Table 1.1). A higher percentage of males than females

| Table 3.6 Educational level of the household population | | | | | | | | | | |
|---|-------------------|------------------------------|-------------------------|------------------------|----------------------|-------------------|---------------|--------|-------------------------------------|------|
| Percent distribution of the <i>de facto</i> household population age 6 and above by literacy and level of education, and median number of completed years of schooling, according to age and sex, Delhi, 1993 | | | | | | | | | | |
| Age | Educational level | | | | | | Total percent | Number | Median number of years of schooling | |
| | Illiterate | Literate, < primary complete | Primary school complete | Middle school complete | High school complete | Above high school | | | | |
| MALE | | | | | | | | | | |
| 6 - 9 | 19.4 | 77.1 | 2.0 | -- | -- | -- | 1.4 | 100.0 | 948 | 1.9 |
| 10-14 | 5.6 | 32.0 | 49.3 | 12.5 | 0.5 | -- | 0.1 | 100.0 | 1065 | 5.6 |
| 15-19 | 11.3 | 4.6 | 17.2 | 34.4 | 29.2 | 3.2 | 0.2 | 100.0 | 1072 | 9.2 |
| 20-24 | 13.0 | 3.3 | 12.9 | 16.1 | 33.1 | 21.3 | 0.3 | 100.0 | 1061 | 10.3 |
| 25-29 | 12.8 | 4.2 | 9.6 | 16.3 | 33.6 | 23.4 | 0.1 | 100.0 | 1090 | 10.4 |
| 30-34 | 14.7 | 4.3 | 11.2 | 13.9 | 31.7 | 24.0 | 0.2 | 100.0 | 837 | 10.3 |
| 35-39 | 16.3 | 4.1 | 12.9 | 12.3 | 29.4 | 24.9 | 0.1 | 100.0 | 790 | 10.3 |
| 40-44 | 16.6 | 5.5 | 12.2 | 11.1 | 28.8 | 25.6 | 0.2 | 100.0 | 476 | 10.3 |
| 45-49 | 14.6 | 5.1 | 10.7 | 12.1 | 27.7 | 29.6 | 0.2 | 100.0 | 412 | 10.4 |
| 50+ | 21.9 | 8.8 | 12.3 | 9.1 | 25.8 | 21.8 | 0.3 | 100.0 | 1012 | 8.9 |
| Total | 14.3 | 16.0 | 15.9 | 14.4 | 23.3 | 15.7 | 0.3 | 100.0 | 8763 | 8.4 |
| FEMALE | | | | | | | | | | |
| 6 - 9 | 20.6 | 76.7 | 2.4 | 0.1 | -- | -- | 0.2 | 100.0 | 844 | 2.0 |
| 10-14 | 8.9 | 29.6 | 47.5 | 13.7 | 0.3 | -- | -- | 100.0 | 950 | 5.6 |
| 15-19 | 14.4 | 2.7 | 14.6 | 28.9 | 33.5 | 5.8 | -- | 100.0 | 840 | 9.3 |
| 20-24 | 27.0 | 2.7 | 9.4 | 12.3 | 24.6 | 24.0 | -- | 100.0 | 918 | 9.6 |
| 25-29 | 31.7 | 3.8 | 10.6 | 10.8 | 21.1 | 21.7 | 0.2 | 100.0 | 861 | 8.5 |
| 30-34 | 33.5 | 4.0 | 11.4 | 8.4 | 20.1 | 22.5 | 0.1 | 100.0 | 668 | 8.1 |
| 35-39 | 36.0 | 3.1 | 10.0 | 8.8 | 18.5 | 23.2 | 0.4 | 100.0 | 509 | 8.1 |
| 40-44 | 39.7 | 5.1 | 11.3 | 6.2 | 19.3 | 18.5 | -- | 100.0 | 373 | 5.7 |
| 45-49 | 41.5 | 4.1 | 12.6 | 9.7 | 19.0 | 13.1 | -- | 100.0 | 390 | 5.5 |
| 50+ | 57.8 | 5.9 | 11.9 | 7.1 | 19.0 | 6.7 | 0.5 | 100.0 | 830 | 0.0 |
| Total | 29.2 | 15.8 | 15.1 | 11.2 | 16.0 | 12.5 | 0.2 | 100.0 | 7183 | 5.6 |

Table 3.6 Educational level of the household population (Contd.)

Percent distribution of the *de facto* household population age 6 and above by literacy and level of education, and median number of completed years of schooling, according to age and sex, Delhi, 1993

| Age | Educational level | | | | | | | Total percent | Number | Median number of years of schooling |
|--------------|-------------------|------------------------------|-------------------------|------------------------|----------------------|-------------------|-----------|---------------|--------|-------------------------------------|
| | Illiterate | Literate, < primary complete | Primary school complete | Middle school complete | High school complete | Above high school | Miss- ing | | | |
| TOTAL | | | | | | | | | | |
| 6 - 9 | 20.0 | 76.9 | 2.2 | 0.3 | -- | -- | 0.6 | 100.0 | 1793 | 1.9 |
| 10-14 | 7.2 | 30.9 | 48.4 | 13.1 | 0.4 | -- | -- | 100.0 | 2015 | 5.6 |
| 15-19 | 12.7 | 3.8 | 16.1 | 32.0 | 31.1 | 4.3 | 0.1 | 100.0 | 1912 | 9.2 |
| 20-24 | 19.5 | 3.0 | 11.3 | 14.4 | 29.2 | 22.5 | 0.2 | 100.0 | 1979 | 10.1 |
| 25-29 | 21.1 | 4.0 | 10.0 | 13.9 | 28.1 | 22.7 | 0.2 | 100.0 | 1951 | 10.1 |
| 30-34 | 23.1 | 4.2 | 11.3 | 11.4 | 26.5 | 23.3 | 0.2 | 100.0 | 1505 | 10.0 |
| 35-39 | 24.0 | 3.7 | 11.8 | 10.9 | 25.1 | 24.2 | 0.2 | 100.0 | 1299 | 9.8 |
| 40-44 | 26.7 | 5.3 | 11.8 | 9.0 | 24.6 | 22.5 | 0.1 | 100.0 | 849 | 9.0 |
| 45-49 | 27.7 | 4.6 | 11.6 | 11.0 | 23.4 | 21.6 | 0.1 | 100.0 | 802 | 8.7 |
| 50+ | 38.1 | 7.5 | 12.1 | 8.2 | 18.7 | 15.0 | 0.4 | 100.0 | 1844 | 5.5 |
| Total | 21.0 | 15.9 | 15.5 | 13.0 | 20.0 | 14.3 | 0.2 | 100.0 | 15949 | 7.3 |

-- Less than 0.05 percent

have completed each level of schooling. The median number of years of schooling is 8.4 for males and 5.6 for females.

There has been progress in the level of literacy over time (Figure 3.3). Data for younger age groups, particularly females shows marked improvement in the level of literacy. This is indicated by a substantial decline in the percentage of illiterate females, from 27 in the age group 20-24 to 14 in the age group 15-19 and 9 in the age group 10-14.

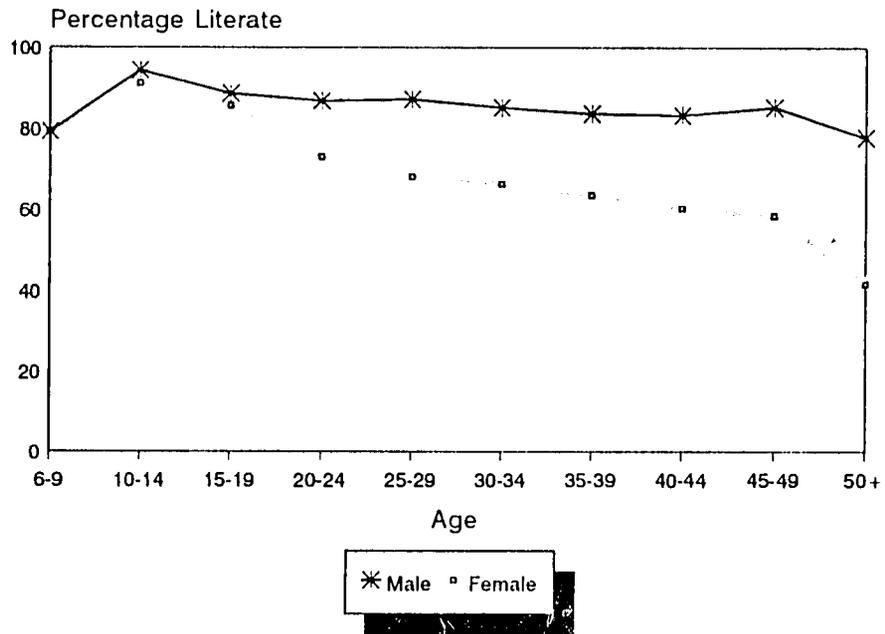
Table 3.7 and Figure 3.4 show school attendance rates for the school-age household population, by age and sex. The table focuses on children age 6-14 because the Indian Constitution established a goal of providing free and compulsory education for children through age 14. In Delhi, 87 percent of children age 6-14 are attending school. The sex differential in attendance rates is rather small, 88 percent of males and 86 percent of females age 6-14 attend school.

Table 3.7 School attendance

Percentage of the *de facto* household population age 6-14 years attending school by age and sex, Delhi, 1993

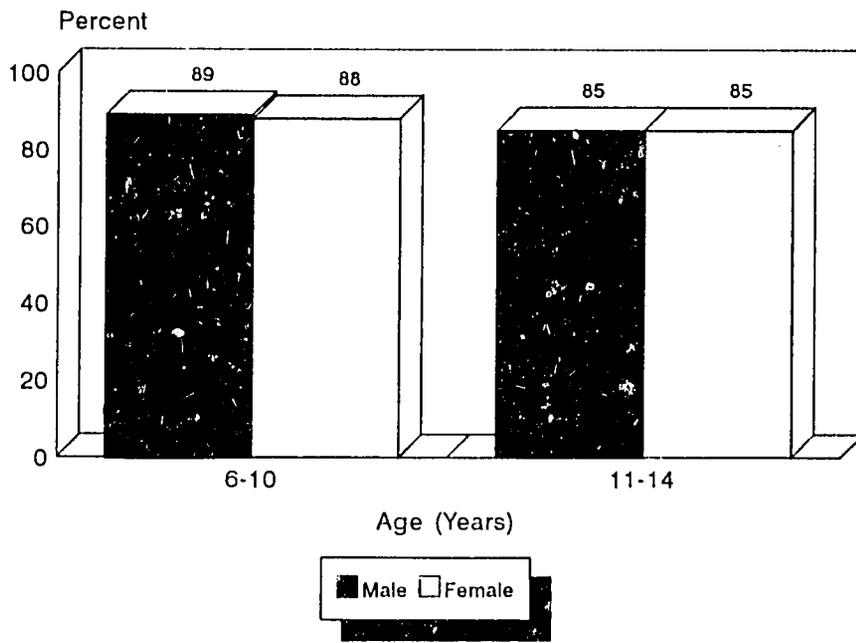
| Age | Male | Female | Total |
|-------|------|--------|-------|
| 6 -10 | 89.2 | 87.5 | 88.4 |
| 11-14 | 85.0 | 84.6 | 84.8 |
| 6 -14 | 87.5 | 86.3 | 86.9 |

Figure 3.3
Percentage Literate by Age and Sex



NFHS, Delhi, 1993

Figure 3.4
School Attendance by Age and Sex



NFHS, Delhi, 1993

3.5 Housing Characteristics

The urban nature of Delhi is also reflected in its housing characteristics (Table 3.8). Most of the households in Delhi have electricity. Only 5 percent of the households did not have electricity. Most of the households have piped drinking water (84 percent), and nearly all of the remaining get drinking water from a handpump. The sources of water used for bathing and washing are very similar to the sources of drinking water. A large majority of the households (73 percent) have a flush toilet (using either piped water or bucket water for flushing), 11 percent have a pit toilet or latrine, and the remaining (16 percent) have no facility.

More than 50 percent use liquid petroleum gas and another 38 percent use kerosene oil as fuel for cooking. Other traditional types of fuel such as coal, wood and cowdung cakes are used by only a small proportion of households.

Based on the material used for the construction of walls, roof, and floor, a household in the NFHS is classified as *kachcha*, *pucca* or *semi-pucca*. Four-fifths of households live in *pucca* (high-quality materials throughout, including roof, walls, and floor) houses, and 14 percent live in *semi-pucca* (partly low-quality and partly high-quality materials). Only a small percentage (5 percent) of households live in *kachcha* (made from mud, thatch, or other low-quality materials) houses. The NFHS also collected information on whether households own any livestock. A follow-up question was asked on where the livestock are kept at night, because keeping them inside the house may affect the health of the residents adversely. Ninety-five percent of households in Delhi do not own any livestock and 3 percent of households have livestock that are kept inside the house at night.

Crowded conditions affect health as well as to the quality of life. The number of persons per room is used as a measure of crowding in the NFHS. A majority of households (63 percent) have fewer than three persons per room. Ten percent of households, however, have five to seven persons per room and 5 percent of households are very crowded with seven or more persons per room. The mean number of persons per room is 2.6.

Table 3.9 contains three sets of measures related to the socioeconomic status of the household: household ownership of agricultural land, livestock by type, and durable goods by type. As it is expected in a predominantly urban area, 88 percent of households in Delhi do not own any agricultural land. Of the 12 percent of land-owning households, three-fourths have irrigated land. Only 3 percent of the households have buffalo, and 1 percent each have cows and goats.

The possession of durable goods is another indicator of a household's socioeconomic level; some goods may also have other benefits. For example, having access to a radio or television may expose household members to innovative ideas; a refrigerator prolongs the wholesomeness of food; and a means of transportation allows greater access to services outside the local area. Table 3.9 shows that 70 percent of households possess a television, 65 percent a radio, 60 percent a sewing machine and more than 85 percent, a clock or a watch. Other consumer durable goods often found in households are bicycles (43 percent), refrigerators (41 percent), motorcycles/scooters (26 percent) and cars (8 percent). These data show that a sizable number of households in Delhi have exposure to mass media and access to a modern means of

Table 3.8 Housing characteristics

Percent distribution of households by housing characteristics, Delhi, 1993

| Housing characteristic | Percent |
|--|---------|
| Electricity | |
| Yes | 95.5 |
| No | 4.5 |
| Source of bathing/washing water | |
| Piped | 81.6 |
| Handpump | 18.1 |
| Well water | 0.2 |
| Surface water | -- |
| Other | 0.2 |
| Source of drinking water | |
| Piped | 84.3 |
| Handpump | 15.2 |
| Well water | 0.2 |
| Surface water | -- |
| Other | 0.2 |
| Sanitation | |
| Flush | 72.5 |
| Pit toilet/latrine | 11.2 |
| Other | 0.5 |
| No facility | 15.9 |
| Type of fuel for cooking | |
| Wood | 4.4 |
| Cow dung cakes | 3.9 |
| Coal/coke/lignite/charcoal | 1.1 |
| Kerosene | 37.9 |
| Electricity | 0.6 |
| Liquid petroleum gas | 50.5 |
| Other | 1.6 |
| Type of house | |
| Kachcha | 5.3 |
| Semi-pucca | 13.6 |
| Pucca | 81.0 |
| Place where livestock is kept | |
| Inside the house | 1.9 |
| Outside the house | 3.0 |
| No livestock | 95.0 |
| Persons per room | |
| < 3.0 | 62.8 |
| 3.0-4.9 | 22.2 |
| 5.0-6.9 | 10.3 |
| 7.0+ | 4.7 |
| Mean | 2.6 |
| Total percent | 100.0 |
| Number of households | 3677 |

-- Less than 0.05 percent

Table 3.9 Household ownership of land, livestock and durable goods

Percentage of households owning agricultural land, livestock and various consumer durable goods, Delhi, 1993

| Item owned | Percent |
|---|---------|
| Agricultural land | |
| No land | 88.1 |
| Irrigated land only | |
| < 1 Acre | 2.7 |
| 1-5 Acres | 4.7 |
| 6+ Acres | 1.3 |
| Non-irrigated land only | |
| < 1 Acre | 0.5 |
| 1-5 Acres | 0.7 |
| 6+ Acres | 0.3 |
| Irrigated and non-irrigated land | |
| < 1 Acre | 0.4 |
| 1-5 Acres | 0.6 |
| 6+ Acres | 0.6 |
| Total percent | 100.0 |
| Livestock | |
| Bullock | 0.9 |
| Cow | 1.4 |
| Buffalo | 2.5 |
| Goat | 1.1 |
| Sheep | -- |
| Other | 0.2 |
| No livestock | 95.0 |
| Consumer durable goods | |
| Sewing machine | 59.7 |
| Clock/watch | 85.4 |
| Radio | 65.1 |
| Television | 70.0 |
| Refrigerator | 41.4 |
| Bicycle | 42.7 |
| Motorcycle/scooter | 26.1 |
| Car | 8.3 |
| Tractor | 0.4 |
| Thresher | 0.3 |
| Bullock Cart | 0.2 |
| Water pump | 4.9 |
| Number of households | 3677 |

-- Less than 0.05 percent

transportation.

3.6 Background Characteristics of Respondents

Whereas the previous tables considered characteristics of households, based on results from the NFHS Household Questionnaire, this section examines selected background characteristics of primary respondents (ever-married women age 13-49), based on the NFHS Woman's Questionnaire.

Table 3.10 shows several basic background characteristics of 3,457 respondents in the NFHS: age, marital status, education, religion, caste/tribe, work status, and husband's education. The age distribution is bell shaped. The percentage in each age group increases till age 25-29 reflecting an increase in the proportion married in successive age groups. Ninety-six percent of respondents (ever-married women) are currently married. Among the remaining most are widowed. Less than 1 percent are divorced or separated. Thirty-seven percent of ever-married women are illiterate and another 37 percent have completed high school. The pattern of distribution of respondents by religion and caste/tribe is similar to the pattern of distribution of households by these characteristics, as discussed in section 3.3.

Table 3.10 also shows the distribution of respondents by respondent's work status and husband's education. In the NFHS, work includes any kind of job for which the woman is paid in cash or in kind as well as unpaid work on a family farm or business. Eighty-one percent of respondents report that they are not working. Only 2 percent of women are working on a family farm or in some other family business, 11 percent are employed in nonfamily businesses, and the remaining 7 percent are self-employed. Regarding husband's education, 14 percent of husbands are illiterate, and 57 percent have completed high school.

Table 3.11 examines differentials in the respondent's education, by selected background characteristics. The proportion illiterate among women age 25-49 increases with age, reflecting improvements in levels of education over time. The higher percentage of illiterates in the two youngest age groups of 15-19 and 20-24 reflects the prevalence of early marriage among illiterate and less educated women rather than a reversal in the trend in education in recent years. The percentage of illiterates is higher among Muslim women (63 percent) than among Hindus (37 percent), Sikhs (17 percent), and women of other religions (7 percent). The rate of illiteracy is also higher among scheduled castes (66 percent) and scheduled tribes (57 percent) than among others (36 percent). With respect to husband's literacy, 88 percent of women with illiterate husbands are illiterate themselves. Even among men who have completed high school (but have not gone on to a higher level of education), a little over 25 percent have married illiterate women, reflecting the general tendency of men to marry women with less education than themselves. However, nearly 32 percent of husbands with a high school education have married wives with the same level of education.

Table 3.12 provides information on exposure of respondents to the mass media. Only a small percentage of respondents in Delhi are not regularly exposed to the media. A large percentage (83 percent) of respondents watch television at least once a week and listen to radio at least once a week (64 percent). Exposure to cinema or theatre is small -- only 6 percent visit once a month. Exposure to mass media increases with age and education. Hindus have higher

Table 3.10 Background characteristics of respondents

Percent distribution of ever-married women age 13-49, by selected background characteristics, Delhi, 1993

| Background characteristic | Percent | Number of women |
|---------------------------------|---------|-----------------|
| Age | | |
| 13-14 | -- | 1 |
| 15-19 | 4.4 | 153 |
| 20-24 | 18.3 | 631 |
| 25-29 | 22.9 | 790 |
| 30-34 | 18.8 | 651 |
| 35-39 | 14.4 | 497 |
| 40-44 | 10.2 | 354 |
| 45-49 | 11.0 | 380 |
| Marital status | | |
| Currently married | 95.7 | 3310 |
| Widowed | 3.4 | 117 |
| Divorced | 0.1 | 5 |
| Separated | 0.7 | 25 |
| Education | | |
| Illiterate | 37.4 | 1293 |
| Literate, < primary complete | 3.5 | 120 |
| Primary school complete | 11.6 | 400 |
| Middle school complete | 10.6 | 366 |
| High school complete | 19.8 | 686 |
| Above high school | 17.1 | 592 |
| Religion | | |
| Hindu | 81.6 | 2822 |
| Muslim | 10.0 | 347 |
| Sikh | 5.9 | 204 |
| Buddhist | 0.1 | 3 |
| Christian | 0.8 | 28 |
| Jain | 1.4 | 50 |
| Other | 0.1 | 3 |
| Caste/tribe | | |
| Scheduled caste | 5.7 | 198 |
| Scheduled tribe | 0.9 | 30 |
| Other | 93.4 | 3229 |
| Work status | | |
| Not working | 80.7 | 2789 |
| Working in family farm/business | 1.8 | 61 |
| Employed by someone else | 10.9 | 376 |
| Self-employed | 6.7 | 231 |
| Husband's education | | |
| Illiterate | 14.2 | 492 |
| Literate, < primary complete | 4.2 | 144 |
| Primary school complete | 10.6 | 366 |
| Middle school complete | 13.7 | 472 |
| High school complete | 31.9 | 1103 |
| Above high school | 25.2 | 870 |
| Don't know/missing | 0.3 | 10 |
| Total percent | 100.0 | NA |
| Number of women | 3457 | 3457 |

NA: Not applicable

-- Less than 0.05 percent

Table 3.11 Respondent's level of education by background characteristics

Percent distribution of ever-married women age 13-49 by highest level of education attained, according to selected background characteristics, Delhi, 1993

| Background characteristic | Respondent's level of education | | | | | | Total percent | Number |
|----------------------------|---------------------------------|------------------------------|-------------------------|------------------------|----------------------|-------------------|---------------|-------------|
| | Illiterate | Literate, < primary complete | Primary school complete | Middle school complete | High school complete | Above high school | | |
| Age | | | | | | | | |
| 15-19 | 43.8 | 2.6 | 20.9 | 17.6 | 13.1 | 2.0 | 100.0 | 153 |
| 20-24 | 38.4 | 3.5 | 10.6 | 14.1 | 23.3 | 10.1 | 100.0 | 631 |
| 25-29 | 34.2 | 3.9 | 11.1 | 11.0 | 20.9 | 18.9 | 100.0 | 790 |
| 30-34 | 34.4 | 3.4 | 11.5 | 8.9 | 20.0 | 21.8 | 100.0 | 651 |
| 35-39 | 36.4 | 2.4 | 10.1 | 10.1 | 18.1 | 22.9 | 100.0 | 497 |
| 40-44 | 40.4 | 4.8 | 11.6 | 6.2 | 17.5 | 19.5 | 100.0 | 354 |
| 45-49 | 43.4 | 3.2 | 12.4 | 8.7 | 18.9 | 13.4 | 100.0 | 380 |
| Religion | | | | | | | | |
| Hindu | 36.7 | 3.1 | 11.7 | 10.9 | 19.9 | 17.6 | 100.0 | 2822 |
| Muslim | 62.5 | 6.6 | 10.1 | 6.3 | 12.4 | 2.0 | 100.0 | 347 |
| Sikh | 16.7 | 2.9 | 11.3 | 11.8 | 27.9 | 29.4 | 100.0 | 204 |
| Other | 7.1 | 3.6 | 13.1 | 13.1 | 28.6 | 34.5 | 100.0 | 84 |
| Caste/tribe | | | | | | | | |
| Scheduled caste | 65.7 | 2.5 | 16.2 | 7.1 | 4.0 | 4.5 | 100.0 | 198 |
| Scheduled tribe | (56.7) | (3.3) | (3.3) | (13.3) | (13.3) | (10.0) | 100.0 | 30 |
| Other | 35.5 | 3.5 | 11.4 | 10.8 | 20.9 | 18.0 | 100.0 | 3229 |
| Husband's education | | | | | | | | |
| Illiterate | 87.8 | 3.9 | 5.1 | 2.2 | 1.0 | -- | 100.0 | 492 |
| Lit., < primary complete | 64.6 | 9.0 | 17.4 | 5.6 | 3.5 | -- | 100.0 | 144 |
| Primary school complete | 61.5 | 4.9 | 19.9 | 8.5 | 4.6 | 0.5 | 100.0 | 366 |
| Middle school complete | 45.8 | 5.1 | 19.7 | 17.6 | 10.0 | 1.9 | 100.0 | 472 |
| High school complete | 25.4 | 3.5 | 14.1 | 15.8 | 31.5 | 9.7 | 100.0 | 1103 |
| Above high school | 4.9 | 0.8 | 3.2 | 6.6 | 30.2 | 54.3 | 100.0 | 870 |
| Total | 37.4 | 3.5 | 11.6 | 10.6 | 19.8 | 17.1 | 100.0 | 3457 |

Note: Total includes 1 woman age 13-14 and 10 women whose husband's education is not known, who are not shown separately.

() Based on 25-49 cases

-- Less than 0.05 percent

exposure to television and radio than Muslims but less exposure than women of other religions. Scheduled castes also have less exposure to mass media than others.

Table 3.12 Exposure to mass media

Percent of ever-married women age 13-49 who usually watch television or listen to the radio at least once a week or visit a cinema at least once a month or who are not regularly exposed to any of these media, by selected background characteristics, Delhi, 1993

| Background characteristic | Exposure to mass media | | | | Number of women |
|---------------------------|---|---|---|------------------------------------|-----------------|
| | Watches television at least once a week | Listens to the radio at least once a week | Visits cinema/theatre at least once a month | Not regularly exposed to any media | |
| Age | | | | | |
| 15-19 | 76.5 | 61.4 | 7.8 | 17.6 | 153 |
| 20-24 | 76.5 | 63.4 | 10.9 | 17.6 | 631 |
| 25-29 | 82.4 | 65.1 | 5.9 | 12.3 | 790 |
| 30-34 | 83.9 | 64.1 | 4.5 | 12.4 | 651 |
| 35-39 | 88.1 | 63.2 | 4.2 | 9.5 | 497 |
| 40-44 | 84.2 | 59.9 | 3.4 | 14.1 | 354 |
| 45-49 | 86.1 | 65.5 | 1.8 | 12.1 | 380 |
| Education | | | | | |
| Illiterate | 65.1 | 44.2 | 2.6 | 28.4 | 1293 |
| Lit., < middle complete | 87.7 | 66.3 | 4.8 | 8.3 | 520 |
| Middle school complete | 92.1 | 72.4 | 6.0 | 4.9 | 366 |
| High school and above | 95.9 | 79.7 | 9.2 | 2.4 | 1278 |
| Religion | | | | | |
| Hindu | 83.7 | 64.2 | 5.6 | 12.5 | 2822 |
| Muslim | 66.6 | 49.3 | 5.5 | 26.2 | 347 |
| Other | 92.7 | 75.0 | 7.3 | 5.6 | 288 |
| Caste/tribe | | | | | |
| Scheduled caste | 73.2 | 50.0 | 4.0 | 21.7 | 198 |
| Scheduled tribe | (80.0) | (70.0) | (10.0) | (13.3) | 30 |
| Other | 83.4 | 64.4 | 5.8 | 12.8 | 3229 |
| Total | 82.8 | 63.6 | 5.7 | 13.3 | 3457 |

Note: Total includes 1 woman age 13-14, who is not shown separately.
 () Based on 25-49 cases

CHAPTER 4

NUPTIALITY

This chapter presents findings on marriage patterns from the National Family Health Survey. Marriage is of particular interest, not only because of its importance in its own right, but also because of its influence on fertility and population growth, the nature of family relationships, and the status of women. After examining current marital status distributions, the chapter considers age at first marriage, age at first effective marriage, and marriage between blood relatives.

4.1 Current Marital Status

Table 4.1 shows the current marital status of women by age. Information on marital status comes from the Woman's Questionnaire, except for the information on never-married women, which comes from the Household Questionnaire. Table 4.1 repeats some of the information presented in Table 3.3, which also includes information for males and covers a wider range of ages. The percentages never married in the two tables differ slightly due to differential nonresponse among eligible women.

Table 4.1 suggests that marriage is virtually universal in Delhi. At age 35-39 less than 1 percent of women have never been married. Only 19 percent of women age 15-19 have married, but by age 20-24 most women (70 percent) have married. The proportion divorced and separated, among women age 13-49, together account for less than 1 percent and the widowed account for a little more than 2 percent.

4.2 Age at First Marriage

The description of marriage patterns can be sharpened by examining values of the Singulate Mean Age at Marriage (SMAM), which is calculated from the age-specific proportions never married for age groups 15-19 through 45-49 (Hajnal, 1953; Shryock and Siegel, 1980). Table 4.2 presents SMAMs computed from the 1961, 1971, and 1981 Census, and from the NFHS for both males and females. The SMAM from the NFHS for females is 20.9 years. On average, males marry about three and a half years later than females. Marriage patterns over time are also evident from an examination of changes in the SMAM. The SMAMs from the 1961, 1971 and 1981 Censuses and the NFHS indicate that the major change in age at marriage took place between 1961-71; there is little change between 1971-81. The SMAM for females has risen by about two years during the two decades 1961-81 (from 18.7 years in 1961 to 20.5 years in 1981). The increase from 1981-93 is roughly half a year from 20.5 years to 20.9 years. The SMAM for males from 1961 to 1993, however, rose by only one year, and remained unchanged between 1981 and 1993.

More detailed information on the age at first marriage is shown in Table 4.3. The table shows the percentage of all women who were married by specified exact ages and the median

Table 4.1 Current marital status

Percent distribution of women age 15-49 by current marital status according to age, Delhi, 1993

| Age | Marital status | | | | | Total percent |
|-------|----------------|-------------------|---------|----------|-----------|---------------|
| | Never married | Currently married | Widowed | Divorced | Separated | |
| 15-19 | 81.1 | 18.6 | -- | -- | 0.4 | 100.0 |
| 20-24 | 29.8 | 69.5 | 0.2 | 0.2 | 0.2 | 100.0 |
| 25-29 | 6.7 | 92.4 | 0.4 | 0.1 | 0.5 | 100.0 |
| 30-34 | 1.5 | 95.3 | 2.0 | 0.3 | 0.9 | 100.0 |
| 35-39 | 0.8 | 94.4 | 3.8 | -- | 1.0 | 100.0 |
| 40-44 | 0.9 | 91.8 | 6.4 | -- | 0.8 | 100.0 |
| 45-49 | 0.4 | 84.1 | 14.9 | -- | 0.5 | 100.0 |
| Total | 22.4 | 74.3 | 2.6 | 0.1 | 0.6 | 100.0 |

-- Less than 0.05 percent

age at first marriage¹.

The median age at first marriage is used instead of the mean age at marriage (where both are calculated directly from reported ages at marriage) because the median, unlike the mean, is unaffected by age truncation. For example, the mean age at first marriage for the cohort of women age 20-24 at the time of the survey will be affected by marriages that occur after the survey, but the median age at first marriage for the cohort will not be so affected as long as at least half of the women have married by age 20. This means that changes in the median age at first marriage by age cohort (from oldest to youngest) can meaningfully be interpreted as a trend over time.

Table 4.2 Singulate mean age at marriage

Singulate mean age at marriage from selected sources, Delhi, 1961-93

| Source | Singulate mean age at marriage | | |
|-------------|--------------------------------|--------|------------|
| | Male | Female | Difference |
| 1961 Census | 23.3 | 18.7 | 4.6 |
| 1971 Census | 24.0 | 20.0 | 4.0 |
| 1981 Census | 24.3 | 20.5 | 3.8 |
| 1993 NFHS | 24.3 | 20.9 | 3.4 |

¹ Median age at first marriage is not calculated for age cohorts in which fewer than 50 percent of the women were married by the age that defines the lower boundary of the age group. The computation can not be made in these cohorts without introducing selectivity bias because the latest age that all women in the age group attained by the time of the survey is the age that defines the lower boundary of the age group. Suppose, for example, that at the time of the survey, 40 percent of women in the 15-19 age group had married by age 15 and 50 percent by age 19. It does not necessarily follow that 19 is the median, because the number of single women age 15, 16, and 17 at the time of the survey who subsequently marry at ages 16, 17 and 18 might be enough to lower the median to 18 by the time everyone in the cohort reaches age 20.

Table 4.3 Age at first marriage

Percentage of women married by specific exact ages, and median age at first marriage, by current age, Delhi, 1993

| Current age ¹ | Percentage ever married before age: | | | | | | Percent never married | Median age at first marriage |
|--------------------------|-------------------------------------|------|------|------|------|------|-----------------------|------------------------------|
| | 13 | 15 | 18 | 20 | 22 | 25 | | |
| 15-19 | 1.9 | 4.7 | NA | NA | NA | NA | 81.1 | NC |
| 20-24 | 5.5 | 11.3 | 28.7 | 52.1 | NA | NA | 29.8 | 19.7 |
| 25-29 | 7.1 | 15.2 | 40.1 | 61.1 | 75.7 | 89.3 | 6.7 | 18.7 |
| 30-34 | 7.7 | 18.9 | 43.7 | 62.5 | 76.3 | 91.9 | 1.5 | 18.5 |
| 35-39 | 9.4 | 19.4 | 42.9 | 63.6 | 79.6 | 93.0 | 0.8 | 18.5 |
| 40-44 | 5.6 | 18.8 | 50.7 | 68.9 | 79.2 | 92.4 | 0.9 | 17.9 |
| 45-49 | 11.5 | 24.4 | 62.1 | 77.3 | 85.2 | 94.1 | 0.4 | 16.7 |
| 20-49 | 7.4 | 16.8 | 41.7 | 61.9 | 75.3 | 86.4 | 9.4 | 18.6 |
| 25-49 | 8.1 | 18.6 | 45.9 | 65.2 | 78.3 | 91.7 | 2.7 | 18.3 |

NA: Not applicable

NC: Not calculated because less than 50 percent of women in the age group x to x+5 have married by age x

¹The current age groups include both never-married and ever-married women.

Table 4.3 shows a clear trend toward rising age at marriage, especially at very young ages. The proportion marrying by age 13 declines from 12 percent in the 45-49 age cohort to only 2 percent in the 15-19 age cohort, and the proportion marrying by age 15 declines from 24 percent in the 45-49 age cohort to 5 percent in the 15-19 age cohort. The corresponding decline in the percentage ever married by age 18 is from 62 percent at age 45-49 to 29 percent at age 20-24. The declines are more pronounced in marriages of teenagers in the recent past. For example, 40 percent of women age 25-29 were married before age 18, whereas only 29 percent of women age 20-24 were married by the same age. The median age at first marriage correspondingly increases from 16.7 years in the 45-49 age cohort to 19.7 years in the 20-24 age cohort, a rise of 3 years. Moreover, although the median cannot be calculated for the 15-19 age group, it is almost certain to rise well above the 19.7 year median observed for the 20-24 age group.

Table 4.4 shows median ages at first marriage for all women by age and selected background characteristics. Median age at first marriage is considerably higher among more educated women. The lowest median age is for illiterate women (15.6 years). In fact, within each age group, the median age at first marriage is six years higher among women who have completed high school than among illiterate women. Differences by religion also exist, Sikhs marry later than Hindus, who in turn marry later than Muslims. The median age at marriage for women age 25-49 is 20.2 years for Sikhs, 18.2 for Hindus and 17.1 for Muslims. The median age at marriage of scheduled caste and scheduled tribe women is almost as low as that for illiterate women, and is much lower than that for non-SC/ST group. The median age at marriage has increased for all groups shown in Table 4.4.

According to the Child Marriage Restraint Act of 1978, the minimum legal age at marriage in India is 18 years for women and 21 years for men. In Delhi, however, more than 40 percent of all women in the age group 20-49 are married before reaching age 18 (see Table 4.3). In the NFHS, respondents were asked about the legal minimum age at marriage for females and males in India. Table 4.5 presents the percentage of women who reported correctly

Table 4.4 Median age at first marriage

Median age at first marriage among women age 20-49 years, by current age and selected background characteristics, Delhi, 1993

| Background characteristic | Current age | | | | | 20-49 | 25-49 |
|---------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | 20-24 | 25-29 | 30-34 | 35-39 | 40-49 | | |
| Education | | | | | | | |
| Illiterate | 16.5 | 15.9 | 15.5 | 15.6 | 15.5 | 15.7 | 15.6 |
| Lit., < middle complete | 18.3 | 17.5 | 16.9 | 17.4 | 16.6 | 17.3 | 17.0 |
| Middle school complete | 19.4 | 18.6 | 18.4 | 18.5 | 17.2 | 18.6 | 18.3 |
| High school and above | NC | 21.9 | 22.0 | 21.6 | 21.5 | NC | 21.8 |
| Religion | | | | | | | |
| Hindu | 19.6 | 18.6 | 18.4 | 18.4 | 17.1 | 18.6 | 18.2 |
| Muslim | 18.7 | 18.2 | 16.8 | 17.9 | 16.4 | 17.8 | 17.1 |
| Sikh | NC | (20.3) | (20.6) | (20.1) | 19.7 | NC | 20.2 |
| Other | NC | * | (22.7) | * | (16.8) | NC | 21.4 |
| Caste/tribe | | | | | | | |
| Scheduled caste | (16.9) | (17.4) | (15.9) | (15.2) | (15.5) | 16.0 | 15.8 |
| Scheduled tribe | * | * | * | * | * | (18.1) | (15.9) |
| Other | 19.9 | 18.8 | 18.7 | 18.7 | 17.4 | 18.8 | 18.5 |
| Total | 19.7 | 18.7 | 18.5 | 18.5 | 17.2 | 18.6 | 18.3 |

NC: Not calculated because less than 50 percent of the women have married for the first time by age 20
 () Based on 25-49 cases
 * Median not shown; based on fewer than 25 cases

the legal minimum legal age at marriage in India according to selected background characteristics. Overall, 65 percent of respondents could correctly identify age 18 as the legal minimum age at marriage for females and 51 percent could correctly identify age 21 as the legal minimum age at marriage for males. Accurate knowledge of the legal minimum age requirements for marriage is closely related to literacy and educational attainment. More than 80 percent of women with at least a middle school education know the legal minimum age at marriage for females and more than 60 percent know it for males. However, among illiterate women 41 percent could correctly specify the legal minimum age at marriage for females and 22 percent could identify it for males. Knowledge of the legal minimum age requirement is lower among Muslims than among others. As expected, the provisions are less well known among scheduled castes and tribes than among others. The legal minimum age at marriage for males is less well known than the legal minimum age at marriage for females by every group of women shown in Table 4.5.

4.3 Age at First Cohabitation

Table 4.6 shows median age at first cohabitation with the husband. The age at marriage in Table 4.3 and the age at first cohabitation with the husband in Table 4.6 may differ because formal marriage is not always immediately followed by cohabitation with the husband, which generally does not occur until after the *gauna* ceremony. In Delhi cohabitation generally starts immediately after marriage as is evident from a small difference of only 4 months between median ages at first marriage and cohabitation with the husband. As the median age at marriage has risen, the difference between the age at marriage and the age at first cohabitation has decreased.

Table 4.5 Knowledge of minimum legal age at marriage

Percentage of ever-married women age 13-49 who correctly know the minimum legal age at marriage for males and females, by selected background characteristics, Delhi, 1993

| Background characteristic | Percentage who correctly know legal minimum age at marriage: | | Number of women |
|---------------------------|--|-------------|-----------------|
| | For males | For females | |
| Age | | | |
| 13-19 | 43.5 | 53.2 | 154 |
| 20-29 | 51.8 | 64.9 | 1421 |
| 30-39 | 51.8 | 67.3 | 1148 |
| 40-49 | 47.4 | 65.9 | 734 |
| Education | | | |
| Illiterate | 22.3 | 40.7 | 1293 |
| Lit., < middle complete | 49.4 | 64.4 | 520 |
| Middle school complete | 63.4 | 81.4 | 366 |
| High school and above | 75.8 | 86.2 | 1278 |
| Religion | | | |
| Hindu | 50.9 | 65.8 | 2822 |
| Muslim | 35.4 | 55.3 | 347 |
| Sikh | 61.3 | 71.1 | 204 |
| Other | 72.6 | 81.0 | 84 |
| Caste/tribe | | | |
| Scheduled caste | 35.4 | 58.1 | 198 |
| Scheduled tribe | (46.7) | (56.7) | 30 |
| Other | 51.5 | 65.9 | 3229 |
| Total | 50.5 | 65.4 | 3457 |

() Based on 25-49 cases

4.4 Marriage Between Relatives

Table 4.7 provides information on marriage between relatives. Marriage between relatives is a form of inbreeding that has implications for mortality and morbidity as well as fertility. For example, Bittles et al. (1992) found a positive association between consanguinity and fertility in 19 out of 22 populations. They also found that mortality is significantly higher among children of marriages between blood relatives. In analyzing the relationship between inbreeding and mortality, it is important to control for socioeconomic variables because of a tendency for marriage between relatives to be more common in lower socioeconomic groups whose mortality is higher primarily for socioeconomic reasons. Such a refined analysis is, however, not feasible in this report and will have to await further studies.

Table 4.7 indicates that 4 percent of ever-married women married a first cousin (on either their father's side or their mother's side), less than 3 percent married a second cousin, uncle, or other blood relative, and less than 1 percent married a brother-in-law. Another 3 percent married other non-blood relation. Thus, consanguineous marriages are not common in Delhi. These findings on consanguineous marriages are consistent with previous findings of considerably lower levels of consanguinity in North India than in South India (Sanghvi, 1966; Bittles et al., 1991). The percentage marrying a close relative is higher among women under age 25 than among older women. Differentials by education are not notable, but differentials by religion are substantial. Muslim women are most likely to have entered into consanguineous marriages. A little more than 25 percent of Muslim women have married a blood relative compared with 9 percent of Sikh women and 4 percent of Hindu women. Consanguineous marriages are slightly less common among scheduled tribes and castes than among others.

Table 4.6 Age at first cohabitation with husband

Percentage of women who started living with husband by specific exact ages, and median age at first cohabitation with husband, by current age, Delhi, 1993

| Current age ¹ | Percentage who started living with husband before age: | | | | | | Percent never cohabited | Median age at first cohabitation with husband |
|--------------------------|--|------|------|------|------|------|-------------------------|---|
| | 13 | 15 | 18 | 20 | 22 | 25 | | |
| 15-19 | 0.2 | 2.6 | NA | NA | NA | NA | 81.1 | NC |
| 20-24 | 0.9 | 5.5 | 26.0 | 50.8 | NA | NA | 29.8 | 19.9 |
| 25-29 | 1.1 | 8.7 | 36.9 | 60.0 | 75.5 | 89.3 | 6.7 | 18.9 |
| 30-34 | 1.1 | 8.9 | 38.0 | 60.5 | 75.5 | 91.6 | 1.5 | 18.9 |
| 35-39 | 2.0 | 9.6 | 36.7 | 62.1 | 79.2 | 92.8 | 0.8 | 18.8 |
| 40-44 | 1.7 | 11.2 | 45.6 | 67.5 | 79.0 | 92.4 | 0.9 | 18.3 |
| 45-49 | 2.1 | 12.3 | 56.6 | 76.5 | 85.2 | 94.1 | 0.4 | 17.4 |
| 20-49 | 1.3 | 8.7 | 37.3 | 60.6 | 74.9 | 86.3 | 9.4 | 18.9 |
| 25-49 | 1.5 | 9.8 | 41.0 | 63.8 | 78.0 | 91.6 | 2.7 | 18.6 |

NA: Not applicable

NC: Not calculated because less than 50 percent of women in the age group x to x+5 have started living with husband by age x

¹The current age groups include both never-married and ever-married women.

Table 4.7 Marriage between relatives

Percent distribution of ever-married women by relationship to current (last) husband, according to selected background characteristics, Delhi, 1993

| Background characteristic | First cousin | | Second cousin | Other blood Uncle | Other relation | Brother in-law | Other non-blood relation | Not related | Total per-cent | Number |
|---------------------------|---------------|---------------|---------------|-------------------|----------------|----------------|--------------------------|-------------|----------------|--------|
| | Father's side | Mother's side | | | | | | | | |
| Age | | | | | | | | | | |
| 15-19 | 2.0 | 5.2 | -- | -- | 2.6 | -- | 7.2 | 83.0 | 100.0 | 153 |
| 20-24 | 1.7 | 3.2 | 1.1 | -- | 1.7 | 0.3 | 3.5 | 88.4 | 100.0 | 631 |
| 25-29 | 1.9 | 1.1 | 1.0 | -- | 2.2 | 0.8 | 3.0 | 89.9 | 100.0 | 790 |
| 30-34 | 1.5 | 1.1 | 0.2 | -- | 1.4 | 0.6 | 3.1 | 91.7 | 100.0 | 651 |
| 35-39 | 2.4 | 1.0 | 0.8 | -- | 2.6 | -- | 3.0 | 90.1 | 100.0 | 497 |
| 40-44 | 1.7 | 1.1 | 1.4 | -- | 2.0 | 0.3 | 3.7 | 89.5 | 100.0 | 354 |
| 45-49 | 1.8 | 0.3 | 0.3 | 0.3 | 1.3 | 0.3 | 2.9 | 92.9 | 100.0 | 380 |
| Education | | | | | | | | | | |
| Illiterate | 2.2 | 1.8 | 0.9 | 0.1 | 2.2 | 0.7 | 3.7 | 88.4 | 100.0 | 1293 |
| Lit., < middle complete | 2.9 | 1.9 | 0.8 | -- | 3.7 | 0.4 | 3.5 | 86.7 | 100.0 | 520 |
| Middle school complete | 1.1 | 3.0 | 0.8 | -- | 2.2 | -- | 2.2 | 90.7 | 100.0 | 366 |
| High school and above | 1.3 | 0.8 | 0.5 | -- | 0.9 | 0.2 | 3.3 | 92.6 | 100.0 | 1278 |
| Religion | | | | | | | | | | |
| Hindu | 0.9 | 0.9 | 0.5 | -- | 1.4 | 0.4 | 3.2 | 92.6 | 100.0 | 2822 |
| Muslim | 9.2 | 7.2 | 2.6 | 0.3 | 6.6 | 0.6 | 4.0 | 69.5 | 100.0 | 347 |
| Sikh | 3.9 | 1.0 | 2.0 | -- | 2.5 | -- | 4.9 | 85.8 | 100.0 | 204 |
| Other | -- | 1.2 | -- | -- | -- | -- | 1.2 | 97.6 | 100.0 | 84 |
| Caste/tribe | | | | | | | | | | |
| Scheduled caste | 0.5 | 1.5 | 0.5 | -- | 2.5 | -- | 2.5 | 92.4 | 100.0 | 198 |
| Scheduled tribe | (--) | (--) | (3.3) | (--) | (--) | (--) | (6.7) | (90.0) | 100.0 | 30 |
| Other | 2.0 | 1.6 | 0.7 | -- | 1.9 | 0.4 | 3.4 | 89.8 | 100.0 | 3229 |
| Total | 1.9 | 1.6 | 0.8 | -- | 1.9 | 0.4 | 3.4 | 90.0 | 100.0 | 3457 |

Note: Total includes 1 woman age 13-14, who is not shown separately.

-- Less than 0.05 percent

() Based on 25-49 cases

CHAPTER 5

FERTILITY

A major objective of the NFHS in Delhi was to provide detailed information on fertility levels, differentials and trends in the Territory. This chapter presents a description of current and past fertility levels, cumulative fertility and family size, fertility level by sociodemographic characteristics, pregnancy outcomes, birth intervals and duration of postpartum amenorrhoea, abstinence and nonsusceptibility. Topics such as age at first birth and age at last birth, teenage childbearing and age at menopause are also discussed.

Most of the fertility estimates are based on complete birth histories of ever-married women age 13-49. Birth intervals and mother's age at initiation of childbearing are computed from data on the timing of births. Several procedures were established to facilitate complete and accurate reporting of births, including their timing. First, women were asked about the number of sons and daughters presently living at home and elsewhere and those who had died. Second, for each live birth in the birth history, information was collected on sex, age and survival status of the child. For dead children, age at death was noted. Third, interviewers received extensive training in methods of probing to help respondents recall all births and details of births. In addition, interviewers were instructed to check any documents (such as horoscopes, school certificates or vaccination cards) that may provide information on date of birth. Finally, interviewers were required to record the reason for any birth interval of four or more years in order to prevent omission of births, especially births of children who died before the date of the survey. This additional probing also helped to obtain more accurate information on stillbirths and abortions.

Despite various measures taken to improve data quality, the NFHS may still be subject to the same kinds of errors inherent in all retrospective sample surveys -- namely, the omission of some births (especially births of children who died at very young ages) and the difficulty of determining birth dates accurately. However, these problems may not be common in Delhi where the level of female literacy is comparatively high.

5.1 Current Fertility Levels, Differentials and Trends

Fertility levels, differentials and trends are discussed using various summary measures of fertility calculated from the NFHS data. These measures include the crude birth rate (CBR), the general fertility rate (GFR), age-specific fertility rates (ASFRs) and the total fertility rate (TFR). NFHS fertility statistics are derived from the birth history information and information recorded in the Household Questionnaire for three and two years before the survey, respectively. Because the NFHS fieldwork in Delhi was conducted from 8 February to 9 May 1993, the three years prior to the survey correspond roughly to the years 1990-92. A three-year period is chosen for the rates as a compromise of three objectives: to obtain the most current information, to reduce the effect of sampling variation, and to minimize problems with the displacement of births from recent years to earlier years. Fertility estimates from the Sample Registration System (SRS) maintained by the Office of the Registrar General, are not available for Delhi, except for the crude birth rate. Hence the NFHS estimates of GFR, TFR and ASFRs for Delhi cannot be compared with the estimates from the SRS.

Crude Birth Rate

Table 5.1 shows two different sets of NFHS crude birth rates. The first set is based on births that occurred to usual residents of the household during the two-year period prior to the survey as obtained in the Household Questionnaire. This CBR is calculated as the annual number of births in the period per 1,000 usual residents, at the time of the survey. The denominator for this CBR is adjusted by projecting the population backwards to the midpoint of the time period on the basis of the intercensal population growth rate in Delhi. The second estimate is derived from the birth history information collected in the Woman's Questionnaire and refers to the three-year period before the survey. It is calculated as a sum of products, where each product is an age-specific fertility rate multiplied by the proportion of women in the specific age group, out of the total *de facto* population, both male and female.

Although the CBR estimates are based on information from two different parts of the interview (often with different respondents), the two estimates agree quite closely with one another. The CBR estimated from the woman's birth history (the three-year estimate) for Delhi is 26.7 compared to 27.3 estimated from the household birth record (the two-year estimate). The crude birth rate from the SRS (not shown in the table) for 1992 (26.0) is lower than the NFHS estimate from the household birth record.

| Table 5.1 Current fertility | |
|--|--|
| Age-specific and cumulative fertility rates and crude birth rates, Delhi, 1993 | |
| Age | Fertility rates (1990-92) ¹ |
| 15-19 | 0.066 |
| 20-24 | 0.224 |
| 25-29 | 0.184 |
| 30-34 | 0.086 |
| 35-39 | 0.040 |
| 40-44 | 0.005 |
| 45-49 | 0.000 |
| TFR 15-44 | 3.02 |
| TFR 15-49 | 3.02 |
| GFR | 113 |
| CBR based on | |
| Household birth record | 27.3 |
| Woman's birth history | 26.7 |

Note: Rates from NFHS are for the period 1-36 months before the interview except for the CBR from the household birth record which is based on the period 1-24 months before the interview. Rates for the age group 45-49 might be slightly biased due to truncation.
TFR: Total Fertility Rate for ages 15-44 and 15-49, expressed per woman
GFR: General Fertility Rate (births to women age 13-49 divided by woman-years lived between age 15 and 49) expressed per 1,000 women
CBR: Crude Birth Rate, expressed per 1,000 population
¹Three years preceding the survey

General Fertility Rate

The general fertility rate in the NFHS is calculated by dividing the total number of births to women age 13-49 that occurred during the time period by the number of women-years lived between the ages of 15 and 49 during the period, and multiplying the result by 1,000. The NFHS estimate of the GFR for Delhi for 1990-92 is 113 births per 1,000 women.

Age-Specific and Total Fertility Rates

Both the CBR and GFR are crude summary measures of fertility. A more precise picture of fertility can be obtained by examining the age-specific fertility rates and the total fertility rate which, unlike the CBR and GFR, are not affected by the age structure of the population. The TFR is a summary measure that is interpreted as the number of children that a woman would bear if she experienced the current age-specific fertility rates throughout her reproductive years. The numerator of an age-specific fertility rate is live births in a five-year age group, and the denominator is the number of woman-years lived in the same five-year age interval during the three-year time period.

A TFR of 3.0 children is observed for the period 1990-92 for both the 15-44 age range and the 15-49 age range, since there were no births to women age 45-49 during the last three years preceding the survey. According to this measure, the TFR in Delhi is lower than the NFHS total fertility rate of 3.4 children per woman for India, however, it is higher than the TFR of 2.7 children per woman for all urban areas in India (International Institute of Population Sciences, 1994).

The age-specific fertility rates follow the expected bell-shaped pattern. Fertility peaks in the 20-24 age group, reflecting the pattern of early marriage and early childbearing. The fertility rate declines substantially in the next age group, 25-29, and falls steeply thereafter (see Figure 5.1). The prime childbearing ages in Delhi extend from age 15 to 34, during which 93 percent of births occur; however, 68 percent of the total fertility is confined to the age group 20-29 years. Early childbearing in Delhi is relatively low since only 11 percent of total fertility is accounted for by births to women age 15-19. The contribution to fertility of women age 30-39 is only 22 percent.

Fertility Differentials and Trends

Table 5.2 and Figure 5.2 show current and cohort fertility by selected background characteristics. Current fertility is measured by the total fertility rate for the three years prior to the survey. Cohort fertility is measured by the mean number of children ever born to women age 40-49 at the time of the survey. Both measures are calculated from the birth history information in the Woman's Questionnaire.

If there had been no change in fertility for three or more decades prior to the survey, the current and cohort indicators would be nearly identical, differences being due solely to the slightly incomplete fertility of women age 40-49. If fertility has declined, current fertility will be lower than cohort fertility, with larger differences generally indicating more rapid decline. The gap between the TFR of 3.0 and the mean number of children ever born of 4.2 indicates that a substantial fertility decline has taken place in Delhi.

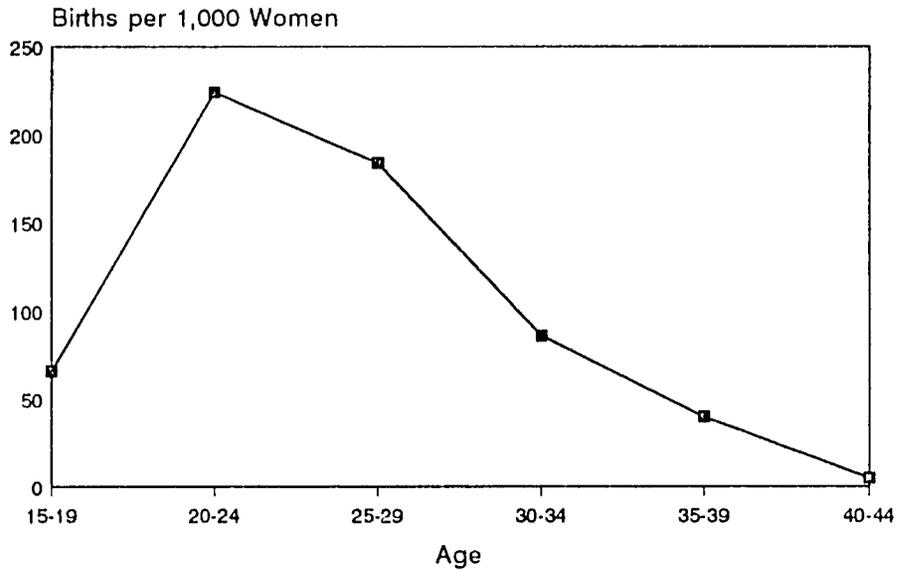
| Table 5.2 Fertility by background characteristics | | |
|---|-----------------------------------|--|
| Total fertility rate for the three years preceding the survey, and mean number of children ever born to women age 40-49 years, by selected background characteristics, Delhi, 1993 | | |
| Background characteristic | Total fertility rate ¹ | Mean number of children ever born to women age 40-49 years |
| Education | | |
| Illiterate | 4.47 | 5.34 |
| Lit., < middle complete | 3.27 | 4.61 |
| Middle school complete | 2.63 | 3.85 |
| High school and above | 2.09 | 2.69 |
| Religion | | |
| Hindu | 2.90 | 4.09 |
| Muslim | 4.76 | 6.87 |
| Sikh | 2.18 | 2.95 |
| Other | 2.06 | (3.80) |
| Caste/tribe | | |
| Scheduled caste | 3.62 | (5.14) |
| Other (Non-SC/ST) | 2.97 | 4.12 |
| Total | 3.02 | 4.19 |
| Note: Total rate and mean are based on all women including scheduled tribe women, the rate and mean for whom are not shown separately. () Based on 25-49 cases ¹ Rate for women age 15-49 years | | |

Table 5.2 also provides information on the socioeconomic differentials in fertility and the trends in fertility in each socioeconomic subgroup. Fertility differentials by education and religion are quite substantial. Current fertility declines from 4.5 children per woman for illiterate women to 2.1 children per woman for women with at least a high school education. Current fertility is 22 percent lower than cohort fertility for women with at least a high school education, but only 16 percent lower for illiterate women.

Fertility differentials by religion indicate that Muslims have the highest fertility (4.8), followed by Hindus (2.9), and Sikhs (2.2). Muslim fertility is 64 percent higher than Hindu fertility and more than twice as high as Sikh fertility. Scheduled castes have higher fertility than the non-SC/ST group.

The most direct way of observing fertility trends is to examine changes in age-specific rates over time. Table 5.3 shows age-specific fertility rates for the 20-year period preceding the survey, calculated from the birth history information. Because birth histories are obtained only for women under age 50 at the time of the survey, no rate is available for women age 45 and over for the period 5-9 years prior to the survey, nor for women age 40 and over 10-14 years prior to the survey, nor for women age 35 and over 15-19 years prior to the survey. In almost every age group, fertility fell steadily from the period 15-19 years before the survey to the period 0-4 years before the survey, but the major decline took place in the most recent periods.

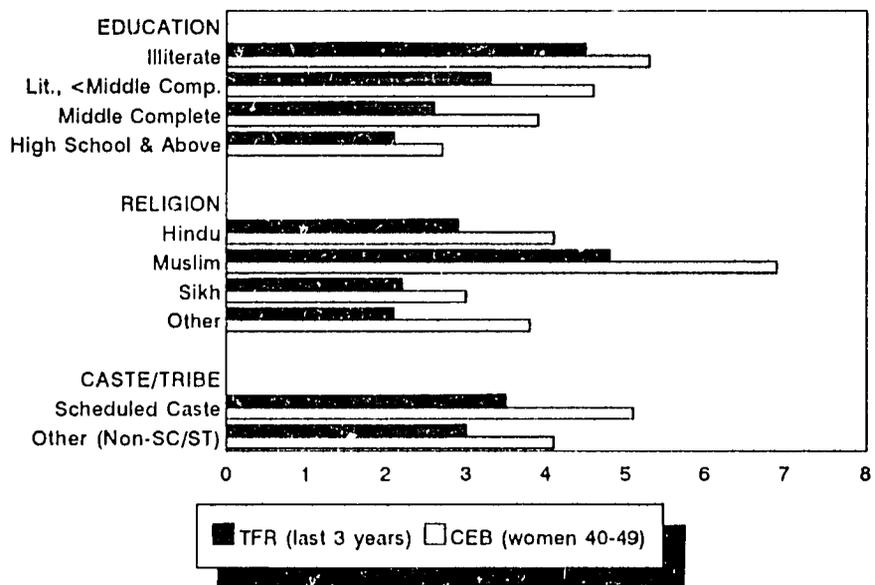
Figure 5.1
Age-Specific Fertility Rates



Note: Rates are for the three years before the survey (1990-92)

NFHS, Delhi, 1993

Figure 5.2
Total Fertility Rate (TFR) and Mean Number of Children Ever Born (CEB)



NFHS, Delhi, 1993

Table 5.3 Fertility trends

Age-specific fertility rates for five-year periods preceding the survey, Delhi, 1993

| Maternal age at birth | Years preceding survey | | | |
|-----------------------|------------------------|---------|---------|---------|
| | 0-4 | 5-9 | 10-14 | 15-19 |
| 15-19 | 0.072 | 0.107 | 0.105 | 0.106 |
| 20-24 | 0.234 | 0.256 | 0.278 | 0.279 |
| 25-29 | 0.183 | 0.220 | 0.222 | 0.233 |
| 30-34 | 0.087 | 0.100 | 0.124 | [0.151] |
| 35-39 | 0.035 | 0.047 | [0.048] | U |
| 40-44 | 0.004 | [0.015] | U | U |
| 45-49 | [0.000] | U | U | U |

Note: Age-specific fertility rates are per woman.
 U: Not available
 [] Truncated, censored

Further evidence of a decline in fertility over time is shown in Table 5.4, which gives fertility rates over the last 20 years by the number of years since women started living with their husbands. This measure controls to some extent for changing age at marriage and may help to elucidate the trends in Table 5.3. In most marital duration groups, especially the longer ones, fertility has fallen steadily over time. The rapidity of the fertility decline increases with marital duration, being most pronounced for women married for 15 or more years. Consistent with the trend in age-specific fertility rates shown in Table 5.3, the fertility decline has accelerated in the most recent period. The general absence of any marked fertility decline in the group married 0-4 years is typical of populations in which contraception is initiated only after the first birth or later. The declining trend in fertility in Delhi can also be substantiated by a comparison of the results from the NFHS with a similar study conducted by the Delhi PRC in 1969-70. The PRC study estimated a crude birth rate of 30, a TFR of 4.1 and a GFR of 144 in the Delhi

Table 5.4 Fertility by marital duration

Fertility rates for ever-married women by duration since first effective marriage (in years) for five-year periods preceding the survey, Delhi, 1993

| Duration of effective marriage | Years preceding survey | | | |
|--------------------------------|------------------------|-------|-------|-------|
| | 0-4 | 5-9 | 10-14 | 15-19 |
| 0 - 4 | 0.312 | 0.326 | 0.317 | 0.316 |
| 5 - 9 | 0.210 | 0.235 | 0.264 | 0.263 |
| 10-14 | 0.109 | 0.145 | 0.159 | 0.197 |
| 15-19 | 0.053 | 0.069 | 0.093 | 0.181 |
| 20-24 | 0.027 | 0.031 | 0.057 | * |
| 25-29 | 0.004 | 0.033 | * | U |

Note: Duration-specific fertility rates are per woman. The duration of effective marriage is defined as the difference between the woman's age at the specified time period and the age she began living with her husband.
 * Rates not shown; based on fewer than 125 person-years of exposure
 U: Not available

Metropolitan Area in 1968 (Goyal, 1974).

5.2 Outcome of Pregnancies

Table 5.5 shows the outcome of all pregnancies reported by ever-married women by their current age. Information on stillbirths and spontaneous and induced abortions was obtained in the reproduction section of the Woman's Questionnaire.

In any survey, it is more difficult to collect retrospective information on pregnancies than on live births, particularly on pregnancies spontaneously aborted within the first few months after conception. The number of total pregnancies and the percentage of all pregnancies that end in spontaneous abortions are almost certainly underestimated, therefore, they should not be subject to very intensive interpretation. Stillbirths are probably much more accurately reported than abortions. Reports of induced abortions may be suppressed by respondents, or induced abortions may be reported as spontaneous abortions, therefore the actual incidence of induced abortions may be much higher than reported.

Of the 11,565 pregnancies reported by sample women, 85 percent resulted in live births, 2 percent in stillbirths, 5 percent in induced abortions, and 8 percent in spontaneous abortions. There is relatively little variation in the outcome of pregnancies by age except for the youngest age group of 15-19 years, for which the combined percentage of abortions and stillbirths is relatively high.

In view of the problems of underreporting of early spontaneous abortions, it is useful to consider induced abortions and stillbirths in relation to live births rather than to total pregnancies. By this measure, there were 2.6 stillbirths and 5.4 induced abortions for every 100 live births in Delhi.

| Table 5.5 Outcome of pregnancy | | | | | | |
|--|----------------------|------------------|-------------|------------|---------------|-----------------------|
| Percent distribution of all pregnancies of ever-married women by their outcome, according to age of the woman, Delhi, 1993 | | | | | | |
| Current age | Outcome of pregnancy | | | | Total percent | Number of pregnancies |
| | Spontaneous abortion | Induced abortion | Still-birth | Live birth | | |
| 15-19 | 15.0 | 2.8 | 2.8 | 79.4 | 100.0 | 107 |
| 20-24 | 8.9 | 2.4 | 2.5 | 86.2 | 100.0 | 1059 |
| 25-29 | 9.1 | 4.1 | 2.3 | 84.6 | 100.0 | 2293 |
| 30-34 | 7.5 | 6.3 | 2.1 | 84.1 | 100.0 | 2437 |
| 35-39 | 6.8 | 5.6 | 1.8 | 85.8 | 100.0 | 2079 |
| 40-44 | 6.7 | 4.1 | 2.3 | 86.9 | 100.0 | 1690 |
| 45-49 | 8.1 | 3.6 | 2.6 | 85.7 | 100.0 | 1900 |
| Total | 7.9 | 4.6 | 2.2 | 85.3 | 100.0 | 11565 |

Note: There were no reported pregnancies for women age 13-14

5.3 Children Ever Born and Living

The distribution of women age 15-49 by number of children ever born is shown in Table 5.6 for both currently married women and all women. The table also shows the mean number of children ever born and surviving. Women in the childbearing years in Delhi, both ever-married and never-married, have borne an average of 2.2 children and have 2.0 currently living; currently married women have borne an average of 2.8 children and have an average of 2.6 currently living. The mean number of children ever born increases steadily with age for all women as well as currently married women, reaching a high of just over four children per woman for the 45-49 age group. Early childbearing is relatively rare in Delhi. Only 9 percent of all women in the 15-19 age group have ever had a child.

It is not uncommon in sample surveys to find mean numbers of children ever born for older age groups declining, which may indicate deteriorating completeness of reporting of children ever born as women reach the end of the reproductive age span. Although the steady increase in the mean number of children ever born with age does not provide conclusive evidence that births have been completely reported by older women, there is no indication of underreporting, either in the pattern or the level of fertility.

The distribution of women age 45-49 by number of children ever born is of particular interest since these women have nearly completed their childbearing (no births have occurred

Table 5.6 Children ever born and living

Percent distribution of all women and currently married women age 15-49 by number of children ever born and mean number of children ever born (CEB) and living, according to age, Delhi, 1993

| Age | Children ever born | | | | | | | | | | | Total percent | Number of women | Mean CEB | Mean children living | |
|--------------------------------|--------------------|------|------|------|------|------|------|-----|-----|-----|-----|---------------|-----------------|----------|----------------------|--|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10+ | | | | | |
| ALL WOMEN | | | | | | | | | | | | | | | | |
| 15-19 | 91.3 | 7.1 | 1.5 | -- | 0.1 | -- | -- | -- | -- | -- | -- | 100.0 | 808 | 0.11 | 0.10 | |
| 20-24 | 44.9 | 23.8 | 19.9 | 8.2 | 2.3 | 0.8 | -- | -- | -- | -- | -- | 100.0 | 899 | 1.02 | 0.92 | |
| 25-29 | 14.1 | 15.6 | 27.9 | 21.9 | 13.0 | 5.1 | 2.5 | -- | -- | -- | -- | 100.0 | 846 | 2.29 | 2.11 | |
| 30-34 | 5.7 | 6.8 | 28.8 | 22.4 | 19.5 | 8.2 | 5.1 | 1.1 | 1.5 | 0.5 | 0.5 | 100.0 | 661 | 3.10 | 2.85 | |
| 35-39 | 3.8 | 5.8 | 22.5 | 20.0 | 22.7 | 10.0 | 8.4 | 3.2 | 1.8 | 0.8 | 1.0 | 100.0 | 501 | 3.56 | 3.23 | |
| 40-44 | 2.0 | 4.2 | 18.8 | 20.4 | 17.4 | 14.3 | 7.8 | 8.1 | 3.1 | 1.4 | 2.5 | 100.0 | 357 | 4.11 | 3.58 | |
| 45-49 | 2.8 | 4.7 | 15.2 | 20.2 | 15.5 | 14.1 | 11.5 | 7.9 | 3.4 | 2.4 | 2.4 | 100.0 | 382 | 4.27 | 3.71 | |
| Total | 30.0 | 11.4 | 19.2 | 14.7 | 11.1 | 5.8 | 3.8 | 1.8 | 1.0 | 0.5 | 0.6 | 100.0 | 4454 | 2.22 | 2.00 | |
| CURRENTLY MARRIED WOMEN | | | | | | | | | | | | | | | | |
| 15-19 | 54.0 | 37.3 | 8.0 | -- | 0.7 | -- | -- | -- | -- | -- | -- | 100.0 | 150 | 0.56 | 0.51 | |
| 20-24 | 21.8 | 34.1 | 28.0 | 11.7 | 3.4 | 1.1 | -- | -- | -- | -- | -- | 100.0 | 625 | 1.44 | 1.31 | |
| 25-29 | 7.8 | 16.4 | 30.2 | 23.7 | 13.9 | 5.5 | 2.6 | -- | -- | -- | -- | 100.0 | 782 | 2.46 | 2.27 | |
| 30-34 | 3.3 | 6.8 | 29.8 | 22.7 | 20.0 | 8.6 | 5.2 | 1.1 | 1.4 | 0.5 | 0.5 | 100.0 | 630 | 3.18 | 2.92 | |
| 35-39 | 2.7 | 5.3 | 23.5 | 20.3 | 23.5 | 9.5 | 8.9 | 2.7 | 1.7 | 0.8 | 1.1 | 100.0 | 473 | 3.59 | 3.26 | |
| 40-44 | 0.9 | 3.7 | 18.3 | 21.3 | 17.4 | 14.9 | 8.5 | 7.9 | 3.0 | 1.2 | 2.7 | 100.0 | 328 | 4.19 | 3.67 | |
| 45-49 | 2.5 | 4.0 | 16.8 | 19.3 | 15.9 | 15.0 | 11.2 | 7.8 | 3.7 | 1.2 | 2.5 | 100.0 | 321 | 4.24 | 3.74 | |
| Total | 9.8 | 14.8 | 25.3 | 19.0 | 14.4 | 7.4 | 4.8 | 2.1 | 1.2 | 0.5 | 0.8 | 100.0 | 3309 | 2.82 | 2.56 | |
| -- Less than 0.05 percent | | | | | | | | | | | | | | | | |

in this age group during the last three years). Therefore, the distribution of children ever born represents the completed parity distribution for this cohort of women. Completed parity distributions are generally unimodal, with the modal number of children born near the mean number of children ever born. The distributions for women age 45-49 in Table 5.6 conforms to this pattern. This distribution is unimodal with the highest proportion of women at parity three, which is lower than the mean number of children ever born of four. The parity distributions for women age 40-44 closely resembles the unimodal distribution for women age 45-49.

The figures on childlessness (percentage of women age 45-49 with no children ever born) shown in Table 5.6 are relatively low, particularly for currently married women. The low level of childlessness in the older age groups is probably an indication of the relative absence of primary sterility in the population.

Differentials in the number of children ever born and children still living by background characteristics, shown in Table 5.7, provide additional information on fertility patterns. To

| Table 5.7 Mean number of children ever born and living by background characteristics | | | | | | |
|--|--------------------|------------|------------|-----------------|------------|------------|
| Age-standardized mean number of children ever born and living for currently married women, according to sex and selected background characteristics, Delhi, 1993 | | | | | | |
| Background characteristic | Children ever born | | | Children living | | |
| | Male | Female | Total | Male | Female | Total |
| Age | | | | | | |
| 15-19 | 0.3 | 0.3 | 0.6 | 0.3 | 0.2 | 0.5 |
| 20-24 | 0.8 | 0.7 | 1.4 | 0.7 | 0.6 | 1.3 |
| 25-29 | 1.3 | 1.2 | 2.5 | 1.2 | 1.1 | 2.3 |
| 30-34 | 1.7 | 1.5 | 3.2 | 1.5 | 1.4 | 2.9 |
| 35-39 | 1.9 | 1.7 | 3.6 | 1.7 | 1.5 | 3.3 |
| 40-44 | 2.2 | 2.0 | 4.2 | 1.9 | 1.8 | 3.7 |
| 45-49 | 2.3 | 2.0 | 4.2 | 2.0 | 1.7 | 3.7 |
| Education | | | | | | |
| Illiterate | 2.0 | 1.7 | 3.7 | 1.7 | 1.5 | 3.2 |
| Literate, < middle complete | 1.7 | 1.5 | 3.1 | 1.5 | 1.3 | 2.8 |
| Middle school complete | 1.3 | 1.2 | 2.5 | 1.2 | 1.1 | 2.3 |
| High school and above | 1.0 | 1.0 | 2.0 | 1.0 | 0.9 | 1.9 |
| Religion | | | | | | |
| Hindu | 1.5 | 1.3 | 2.8 | 1.3 | 1.2 | 2.5 |
| Muslim | 1.9 | 1.8 | 3.6 | 1.7 | 1.5 | 3.2 |
| Sikh | 1.3 | 1.1 | 2.4 | 1.2 | 1.0 | 2.2 |
| Other | 1.4 | 1.2 | 2.6 | 1.2 | 1.1 | 2.3 |
| Caste/tribe | | | | | | |
| Scheduled caste | 1.8 | 1.5 | 3.3 | 1.7 | 1.4 | 3.0 |
| Scheduled tribe | (1.9) | (1.3) | (3.1) | (1.6) | (1.1) | (2.7) |
| Other | 1.5 | 1.3 | 2.8 | 1.3 | 1.2 | 2.5 |
| Total | 1.5 | 1.3 | 2.8 | 1.4 | 1.2 | 2.6 |

Note: The means by education, religion and caste/tribe are standardized on the age distribution of all currently married women. Total means are based on all women age 13-49, including 1 woman age 13-14, the means for whom are not shown separately.
(.) Based on 25-49 cases

avoid the confounding influence of different age distributions of women in different groups, the mean values in the table are all age standardized, according to the age distribution of all currently married women. The average number of males ever born is slightly higher than the average number of females ever born, a biological pattern that is observed in most human populations. For male and female children together, the differentials by background characteristics follow the same pattern observed earlier. Fertility is higher among illiterate women and those with low educational attainment, as well as for Muslim women and for women belonging to scheduled castes. The differentials in the mean number of children still living are somewhat smaller than the differentials in the mean number of children ever born. This convergence reflects that the groups that exhibit high fertility are the same in which infant and child mortality are relatively high.

5.4 Birth Order

Births during the three years before the survey by birth order are shown in Table 5.8. Overall, 28 percent of all births were first order births and the same proportion were second order births. As one would expect, the number of births at each order is greater than the number at the next higher order. One would also expect younger women to have more lower order births and older women to have more higher order births. It can be seen in the table that first births as a percent of all births decline with age of mother. Higher order births are less numerous, but still substantial. Fourteen percent of all births were of order five and higher; nearly 8 percent were of order six and higher. Predictably, the birth order distribution is more skewed toward lower order births.

| Maternal age at birth | Order of birth | | | | | | Total percent | Number of births |
|-----------------------|----------------|------|------|------|------|------|---------------|------------------|
| | 1 | 2 | 3 | 4 | 5 | 6+ | | |
| 15-19 | 72.8 | 20.7 | 5.9 | 0.6 | -- | -- | 100.0 | 169 |
| 20-24 | 35.6 | 35.6 | 18.5 | 6.8 | 3.0 | 0.5 | 100.0 | 606 |
| 25-29 | 12.1 | 27.2 | 24.0 | 21.3 | 10.6 | 4.7 | 100.0 | 445 |
| 30-34 | 4.5 | 13.5 | 14.1 | 21.8 | 12.8 | 33.3 | 100.0 | 156 |
| 35-49 | -- | 8.6 | -- | 19.0 | 19.0 | 53.4 | 100.0 | 58 |
| Total | 28.0 | 27.7 | 17.5 | 12.7 | 6.7 | 7.5 | 100.0 | 1436 |

Note: Total includes 2 births to women age 13-14, which are not shown separately.
 -- Less than 0.05 percent

5.5 Birth Intervals

Birth intervals indicate the pace of childbearing. In addition, various researches have shown that children born too close to a previous birth are at increased risk of dying especially if the interval between births is less than 24 months (Govindasamy et al., 1993; Hobcraft et al., 1983). Table 5.9 presents the percent distribution of second and higher order births in the five years prior to the survey by the interval since the previous birth. In Delhi, 30 percent of births

Table 5.9 Birth intervals

Percent distribution of births during the five years preceding the survey by interval since previous birth, according to demographic and background characteristics, Delhi, 1993

| Characteristic | Months since previous birth | | | | | | Total percent | Median months since previous birth | Number of births |
|--------------------------------|-----------------------------|-------------|-------------|-------------|-------------|-------------|---------------|------------------------------------|------------------|
| | <12 | 12-17 | 18-23 | 24-35 | 36-47 | 48+ | | | |
| Age of the mother | | | | | | | | | |
| 20-29 | 2.5 | 13.3 | 18.0 | 34.6 | 17.6 | 13.9 | 100.0 | 28.5 | 1105 |
| 30-39 | 1.9 | 8.4 | 13.8 | 23.8 | 19.9 | 32.3 | 100.0 | 36.9 | 538 |
| 40-49 | (2.6) | (7.9) | (2.6) | (26.3) | (21.1) | (39.5) | 100.0 | (39.0) | 38 |
| Order of prior birth | | | | | | | | | |
| 1 | 1.8 | 13.4 | 15.7 | 28.4 | 20.3 | 20.4 | 100.0 | 32.0 | 656 |
| 2-3 | 1.9 | 10.3 | 16.8 | 32.3 | 18.0 | 20.7 | 100.0 | 30.2 | 739 |
| 4-5 | 3.7 | 12.6 | 15.0 | 34.6 | 13.1 | 21.0 | 100.0 | 29.2 | 214 |
| 6+ | 5.8 | 10.5 | 19.8 | 31.4 | 19.8 | 12.8 | 100.0 | 28.0 | 86 |
| Sex of prior birth | | | | | | | | | |
| Male | 1.9 | 12.4 | 16.6 | 30.1 | 18.4 | 20.6 | 100.0 | 30.6 | 833 |
| Female | 2.7 | 11.3 | 16.0 | 31.9 | 18.3 | 19.8 | 100.0 | 30.6 | 862 |
| Survival of prior birth | | | | | | | | | |
| Still living | 1.7 | 10.4 | 16.4 | 31.3 | 19.0 | 21.3 | 100.0 | 31.6 | 1545 |
| Deceased | 8.7 | 26.7 | 15.3 | 28.0 | 12.0 | 9.3 | 100.0 | 23.9 | 150 |
| Education of the mother | | | | | | | | | |
| Illiterate | 2.6 | 10.9 | 16.7 | 33.7 | 19.9 | 16.2 | 100.0 | 30.1 | 845 |
| Lit., < middle complete | 2.2 | 12.8 | 17.5 | 34.3 | 13.9 | 19.3 | 100.0 | 28.8 | 274 |
| Middle school complete | 4.4 | 13.9 | 17.1 | 29.7 | 15.2 | 19.6 | 100.0 | 28.7 | 158 |
| High school and above | 1.0 | 12.2 | 14.4 | 23.9 | 19.4 | 29.2 | 100.0 | 35.0 | 418 |
| Religion | | | | | | | | | |
| Hindu | 2.4 | 11.4 | 16.7 | 30.9 | 18.6 | 20.1 | 100.0 | 30.7 | 1345 |
| Muslim | 2.3 | 13.2 | 17.0 | 30.9 | 17.4 | 19.2 | 100.0 | 30.2 | 265 |
| Sikh | 1.6 | 7.8 | 9.4 | 37.5 | 18.8 | 25.0 | 100.0 | 30.0 | 64 |
| Caste/tribe | | | | | | | | | |
| Scheduled caste | 2.0 | 12.2 | 17.3 | 38.8 | 16.3 | 13.3 | 100.0 | 27.7 | 98 |
| Other (Non-SC/ST) | 2.3 | 11.8 | 16.3 | 30.4 | 18.4 | 20.8 | 100.0 | 30.8 | 1580 |
| Total | 2.3 | 11.8 | 16.3 | 31.0 | 18.3 | 20.2 | 100.0 | 30.6 | 1695 |

Note: First order births are excluded. The interval for multiple births is the number of months since the preceding pregnancy that ended in a live birth. There were no reported second order births to women age 13-14. Total includes 14 births to women age 15-19, 21 births to women belonging to other religions and 17 births to scheduled tribe women, which are not shown separately.

() Based on 25-49 cases

occur within two years, 31 percent within two-to-three years and 39 percent after three years or more of the previous birth. The proportion of births with intervals of less than 12 months is five times as high and the proportion of births within 12-17 months is two and a half times as high when the last birth is deceased, as when the last birth is still alive. Probably this reflects the cessation of breastfeeding when the child dies and the consequent shortening of postpartum amenorrhoea. The overall median interval between births is 31 months. The median birth interval is longer when the mother is older, perhaps because of the greater use of family planning at higher ages. The median interval declines with increase in the order of births. This is because women with large numbers of births are more fecund, and therefore have shorter median intervals than other women. The median interval is considerably higher for women who

had completed high school compared with less educated and illiterate women. This may also be due to more use of family planning among highly educated respondents. There is no difference in the median interval by sex of the prior birth and religion, however, scheduled castes have a slightly shorter median birth interval than the non-SC/ST group.

5.6 Age at First and Last Birth

The onset of childbearing is an important demographic indicator. Postponement of first births, reflecting a rise in the age at marriage, can make an important contribution to overall fertility decline. Table 5.10 shows the distribution of women by age at first birth and the median age at first birth. The median age at first birth for any group of women is the age by which half of them have had their first birth. For women in younger age groups, the number who will eventually become mothers is not known since some first births to the cohort will occur only in the future. The medians shown in Table 5.10 are, therefore, calculated for the ages by which one half of *all* women (ever-married and never-married) in the cohort have had a first birth, rather than the age by which half of all mothers in the cohort have had a first birth. This statistic may be computed without knowing how many women in the cohort will eventually have a first birth or when they will have a first birth. The medians are of course undefined for cohorts in which fewer than half of the women have had a first birth. This is the reason why no medians are given for the younger age groups (15-19 and 20-24) in Table 5.10.

Very early childbearing (below age 15) is not common in any of the age groups and the incidence has been dropping fairly steadily over the last 15 years. Early births are quite rare for women in the 15-19 age group. Only 9 percent of women age 15-19 have given birth to children. Childbearing before age 20 has also declined. Although 53 percent of women in the age group 45-49 have had their birth before age 20, the corresponding proportion of such women in the age group 20-24 is 32 percent. The median age at first birth is marginally higher for younger women.

| Current age ¹ | No birth ² | Age at first birth | | | | | | Total percent | Median age at first birth |
|--------------------------|-----------------------|--------------------|-------|-------|-------|-------|------|---------------|---------------------------|
| | | <15 | 15-17 | 18-19 | 20-21 | 22-24 | 25+ | | |
| 15-19 | 91.3 | 0.4 | 4.7 | 3.6 | NA | NA | NA | 100.0 | NC |
| 20-24 | 44.9 | 1.1 | 13.4 | 17.5 | 15.7 | 7.5 | NA | 100.0 | NC |
| 25-29 | 14.1 | 1.5 | 16.5 | 20.1 | 20.4 | 20.4 | 6.9 | 100.0 | 21.2 |
| 30-34 | 5.7 | 2.0 | 15.7 | 19.5 | 20.9 | 21.5 | 14.7 | 100.0 | 21.1 |
| 35-39 | 3.8 | 2.0 | 16.0 | 21.7 | 22.1 | 19.8 | 14.6 | 100.0 | 20.9 |
| 40-44 | 2.0 | 1.7 | 21.3 | 20.2 | 18.8 | 21.3 | 14.8 | 100.0 | 20.8 |
| 45-49 | 2.8 | 1.6 | 25.4 | 26.2 | 16.2 | 13.6 | 14.1 | 100.0 | 19.8 |

NA: Not applicable
 NC: Not calculated because less than 50 percent of the women in the age group x to x+n have had a birth by age x
¹The current age groups include both never-married and ever-married women.
²Never-married women are included in this category.

Table 5.11 shows the median age at first birth by selected background characteristics. The median ages at first birth within education groups show little change with age, suggesting that the trend toward later age at first birth may be due to the higher educational level of the younger cohorts. There is a clear increase in the median age at first birth with the level of education, with median values rising from 19 years for illiterate women to 20 years for women who have completed middle school and over 23 years for women who have completed high school.

Among major religious groups, the median age at first birth is highest for Sikhs at 22 years followed by Hindus at 21 years and Muslims at 19 years. Scheduled castes tend to begin childbearing, on average, two years earlier than the non-SC/ST group.

The age at last birth is another important determinant of overall fertility levels. Table 5.12 shows the distribution of women by age at last birth for women age 40-44 and 45-49. Although a few of these women may have another birth later on, the very low fertility rates for women in their forties seen earlier suggests that childbearing is virtually complete for this cohort. Exactly half of these women had completed their childbearing by age 30. Thus the median age at last birth for the 40-49 age group is also 30. About four-fifths (81 percent) had their last birth before age 35. In Delhi, no one reported having a birth after age 44. The median ages at last birth are not shown in the table, but may be computed by interpolation in the frequency distribution. The median age at last birth for women age 45-49 at the time of the survey is about 30 years. The difference between the median age at first birth for the 45-49 age group (19.8 years from Table 5.11) and the median age at last birth for the same age cohort

| Table 5.11 Age at first birth by background characteristics | | | | | | | | |
|--|-------------|--------|--------|--------|--------|--------|--------|-------|
| Median age at first birth among women age 20-49 years, by current age and selected background characteristics, Delhi, 1993 | | | | | | | | |
| Background characteristic | Current age | | | | | | | |
| | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 | 20-49 | 25-49 |
| Education | | | | | | | | |
| Illiterate | 19.1 | 18.9 | 19.3 | 19.0 | 19.0 | 19.1 | 19.1 | 19.1 |
| Lit., < middle complete | NC | 20.1 | 19.8 | 19.7 | 19.6 | 18.9 | 19.8 | 19.7 |
| Middle school complete | NC | 20.6 | 20.6 | 20.3 | * | (18.8) | NC | 20.3 |
| High school and above | NC | 23.6 | 23.6 | 23.2 | 23.4 | 22.8 | NC | 23.4 |
| Religion | | | | | | | | |
| Hindu | NC | 21.2 | 21.1 | 20.9 | 20.9 | 19.9 | NC | 20.9 |
| Muslim | NC | 19.8 | 19.2 | 19.1 | (19.5) | * | 19.8 | 19.3 |
| Sikh | NC | (21.8) | (22.4) | (21.7) | (21.6) | (21.5) | NC | 21.8 |
| Other | NC | NC | (24.2) | * | * | (18.7) | NC | 23.6 |
| Caste/tribe | | | | | | | | |
| Scheduled caste | (19.9) | (19.7) | (18.8) | (18.0) | * | * | 19.4 | 19.2 |
| Scheduled tribe | NC | * | NC | * | * | * | (19.5) | * |
| Other | NC | 21.3 | 21.3 | 21.1 | 20.9 | 19.9 | NC | 21.0 |
| Total | NC | 21.2 | 21.1 | 20.9 | 20.8 | 19.8 | NC | 20.9 |

NC: Not calculated because less than 50 percent of the women had their first child by age 20
 () Based on 25-49 cases
 * Median not shown; fewer than 25-49 cases

Table 5.12 Age at last birth

Percent distribution of ever-married women age 40-49 by age at last birth, according to current age, Delhi, 1993

| Current age | No birth | Age at last birth | | | | | | Total percent | Number of women |
|-------------|----------|-------------------|-------|-------|-------|-------|-------|---------------|-----------------|
| | | < 20 | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | | |
| 40-44 | 1.1 | 1.1 | 13.3 | 37.6 | 27.1 | 15.8 | 2.0 | 100.0 | 354 |
| 45-49 | 2.4 | 1.3 | 15.3 | 32.1 | 33.2 | 12.4 | 3.4 | 100.0 | 380 |
| 40-49 | 1.8 | 1.2 | 14.3 | 34.7 | 31.2 | 14.0 | 2.7 | 100.0 | 734 |

Note: There were no reported births to women age 45-49 at the time of birth.

gives an estimated reproductive life of around 10 years.

5.7 Childbearing at Young Ages

Fertility among teenagers (those under age 20) is drawing increasing attention from policymakers. Table 5.13 shows the percentages of ever-married women age 13-19 who are either mothers or are pregnant with their first child. The sum of these two percentages represents the proportion of young ever-married women who have begun childbearing. Overall, 60 percent of ever-married teenage women have begun childbearing. At the time of survey, 46 percent of ever-married women age 13-19 had already become mothers and another 14 percent were pregnant with their first child. However, because most women in this age group have never been married and the percentage of married teenage women has been falling, childbearing among teenage women is likely to be less common now than in the past. Not surprisingly, teenage motherhood is higher among illiterate women than among literate women.

Table 5.13 Childbearing among ever-married women age 13-19

Percentage of ever-married women age 13-19 who are mothers or pregnant with their first child, by age and literacy, Delhi, 1993

| Background characteristic | Percentage who are: | | Percent who have begun childbearing | Number of women |
|---------------------------|---------------------|---------------------------|-------------------------------------|-----------------|
| | Mothers | Pregnant with first child | | |
| Age | | | | |
| 13-17 | (31.6) | (13.2) | (44.7) | 38 |
| 18-19 | 50.0 | 14.7 | 64.7 | 116 |
| Literacy | | | | |
| Illiterate | 52.9 | 14.7 | 67.6 | 68 |
| Literate | 39.5 | 14.0 | 53.5 | 86 |
| Total | 45.5 | 14.3 | 59.7 | 154 |

() Based on 25-49 cases

5.8 Postpartum Amenorrhoea, Abstinence and Nonsusceptibility

The importance of lactational amenorrhoea and postpartum abstinence as a determinant of fertility is well recognized. The duration of postpartum amenorrhoea (delayed resumption of ovulation) following a birth is closely associated with the duration of breastfeeding, which tends to suppress resumption of ovulation. Conception can also be delayed by prolonged postpartum abstinence. The period of protection from amenorrhoea or abstinence or both is defined as the nonsusceptible duration. The first column of Table 5.14 shows proportions amenorrhoeic by months since birth. Over 90 percent of all women who had a birth in the two months prior to the survey were amenorrhoeic and that two-thirds of women whose last birth occurred 2-3 months prior to the survey were amenorrhoeic. The proportion amenorrhoeic gradually decreases as the number of months since birth increases. There is a general decline in the proportion of women still amenorrhoeic after 8-9 months since birth. In all age groups the proportions of mothers abstaining from sexual intercourse are much lower than the proportions amenorrhoeic. By 4-5 months after the birth, 7 percent of women were still abstaining. Twenty-four percent of women were nonsusceptible to pregnancy within 12-13 months of giving birth and only 9 percent were nonsusceptible within 14-15 months. Estimates

Table 5.14 Postpartum amenorrhoea, abstinence and nonsusceptibility

Percentage of births during the three years preceding the survey whose mothers are postpartum amenorrhoeic, postpartum abstaining and postpartum nonsusceptible, by number of months since birth, and median and mean durations, Delhi, 1993

| Months since birth | Percent of births whose mothers are: | | | Number of births |
|----------------------------------|--------------------------------------|-----------------------|---------------------------|------------------|
| | Postpartum amenorrhoeic | Postpartum abstaining | Postpartum nonsusceptible | |
| < 2 | (91.5) | (80.9) | (93.6) | 47 |
| 2 - 3 | 66.7 | 22.7 | 70.7 | 75 |
| 4 - 5 | 42.2 | 6.7 | 46.7 | 90 |
| 6 - 7 | 41.2 | 8.2 | 42.3 | 97 |
| 8 - 9 | 29.0 | -- | 29.0 | 100 |
| 10-11 | 18.5 | -- | 18.5 | 54 |
| 12-13 | 23.9 | 4.2 | 23.9 | 71 |
| 14-15 | 8.8 | -- | 8.8 | 80 |
| 16-17 | 6.3 | 3.1 | 7.3 | 96 |
| 18-19 | 6.5 | 1.1 | 7.6 | 92 |
| 20-21 | 1.2 | 2.4 | 3.5 | 85 |
| 22-23 | 7.8 | 3.1 | 7.8 | 64 |
| 24-25 | 1.7 | -- | 1.7 | 60 |
| 26-27 | -- | 4.7 | 4.7 | 64 |
| 28-29 | 3.3 | 2.2 | 5.4 | 92 |
| 30-31 | -- | -- | -- | 79 |
| 32-33 | -- | -- | -- | 92 |
| 34-35 | -- | 3.0 | 3.0 | 66 |
| Median | 4.3 | 1.8 | 4.8 | NA |
| Mean | 7.3 | 3.2 | 7.8 | NA |
| Prevalence/incidence mean | 6.5 | 2.2 | 7.0 | NA |

Note: Medians and means are based on current status. Nonsusceptible is defined as amenorrhoeic or abstaining or both.
 NA: Not applicable
 () Based on 25-49 cases
 -- Less than 0.05 percent

of means and medians are based on a smoothed distribution of the current status proportions in each months-since-birth group. The prevalence-incidence mean is obtained by dividing the number of mothers who are amenorrhoeic or abstaining (nonsusceptible) by the average number of births per month over a 36-month period. On the basis of this measure, it is evident that, on average, women remain nonsusceptible to conception for just 7 months after a birth, primarily due to the effects of postpartum amenorrhoea.

Table 5.15 shows median durations of postpartum amenorrhoea, postpartum abstinence, and postpartum nonsusceptibility by selected background characteristics. The median durations of amenorrhoea and abstinence, and thus of nonsusceptibility, are slightly longer for women age 30 and over than for women under age 30. Both amenorrhoea and abstinence durations tend to be shorter for women with more education. The period of amenorrhoea and nonsusceptibility are also relatively longer for scheduled castes than for the non-SC/ST group. Amenorrhoea, abstinence and nonsusceptibility are much longer among Hindus than among Muslims and Sikhs.

| Table 5.15 Median duration of postpartum nonsusceptibility by background characteristics | | | | |
|---|------------------------|-----------------------|------------------------------|------------------|
| Median number of months of postpartum amenorrhoea, postpartum abstinence and postpartum nonsusceptibility, by selected background characteristics, of mothers for births during the three years preceding the survey, Delhi, 1993 | | | | |
| Background characteristic | Postpartum amenorrhoea | Postpartum abstinence | Postpartum nonsusceptibility | Number of births |
| Age | | | | |
| 13-29 | 4.2 | 1.7 | 4.7 | 1095 |
| 30-49 | 4.9 | 2.2 | 5.1 | 309 |
| Education | | | | |
| Illiterate | 5.9 | 2.0 | 6.1 | 614 |
| Lit., < middle complete | 6.7 | 2.0 | 7.0 | 205 |
| Middle school complete | 0.8 | 0.4 | 0.8 | 151 |
| High school and above | 2.5 | 1.7 | 2.8 | 434 |
| Religion | | | | |
| Hindu | 4.9 | 2.0 | 5.3 | 1118 |
| Muslim | 2.3 | 0.4 | 2.4 | 207 |
| Sikh | 2.1 | 0.6 | 3.1 | 55 |
| Caste/tribe | | | | |
| Scheduled caste | 5.1 | 1.9 | 5.7 | 84 |
| Other (Non-SC/ST) | 4.3 | 1.7 | 4.7 | 1304 |
| Total | 4.3 | 1.8 | 4.8 | 1404 |

Note: Medians are based on current status. Total medians are based on all births including 24 births to women belonging to other religions and 16 births to scheduled tribe women, the medians for which are not shown separately.

5.9 Menopause

Another factor impinging on fertility is the onset of menopause. Later in life (typically beginning around age 30), the risk of pregnancy begins to decline with age. In the NFHS, menopause is defined as the lack of a menstrual period for at least six months preceding the survey for women who are neither pregnant nor postpartum amenorrhoeic. Women who report

that they are menopausal are also included in this group. In Delhi, menopause is relatively rare for women in their thirties, but its incidence increases rapidly after age 44 (Table 5.16). By age 44-45, 30 percent of women are in menopause. This figure increases to 52 percent for women age 46-47 and again to 74 percent for women age 48-49.

| Age | Percent | Number |
|-------|---------|--------|
| 30-34 | 2.5 | 563 |
| 35-39 | 4.1 | 442 |
| 40-41 | 12.1 | 141 |
| 42-43 | 12.1 | 116 |
| 44-45 | 30.1 | 136 |
| 46-47 | 52.1 | 117 |
| 48-49 | 73.7 | 133 |
| Total | 16.0 | 1648 |

Note: Percentage menopausal is defined as the percent of nonpregnant, non-amenorrhoeic currently married women whose last menstrual period occurred six or more months prior to the survey or who reported that they are menopausal.

CHAPTER 6

FAMILY PLANNING

Information about knowledge of family planning and the use of contraceptive methods is of practical use to policymakers and programme administrators for formulating policies and strategies. This chapter begins with an appraisal of the knowledge of contraceptive methods and knowledge of sources of supply of modern contraceptive methods before moving on to a consideration of current and past practice of family planning. Special attention is focused on nonuse, reasons for discontinuation, and intentions to use family planning in the future. The chapter also contains information on exposure to media coverage on family planning and interspousal discussions on family planning, and concludes with an analysis of attitudes toward family planning.

6.1 Knowledge of Family Planning Methods and Sources

Each respondent was asked the following question about her knowledge of family planning, "Now I would like to talk about family planning - the various ways or methods that a couple can use to delay or avoid a pregnancy. Which ways or methods have you heard about?" The respondent was first asked to name all the methods she knew or had heard of, without any prompting. Then, the interviewer read out the name and a short description of each method not mentioned and asked if she knew the method. Thus the woman's knowledge of contraception was measured at three levels: a) methods the woman thinks of on her own (she can name them spontaneously without probing), b) methods she knows when asked with short description about them (she recognizes the method after probing), and c) methods which she has not heard of. Six modern methods (pills, IUDs, injections, condoms, female sterilization and male sterilization) were included, as well as two traditional methods (periodic abstinence, or the rhythm method, and withdrawal). Any other methods mentioned by the respondent, such as herbs and breastfeeding, were also recorded. For each modern method known to the respondent, either spontaneously or after probing, she was asked if she knew where a person could go to get the method. If she reported knowing about the rhythm method, she was asked if she knew where a person could obtain advice on how to use the method.

Table 6.1 presents the extent of knowledge of ever-married women and currently married women as obtained by spontaneous responses (without any probe) and probed responses. The knowledge of family planning is nearly universal in Delhi, with 99 percent of ever-married women reporting knowledge of at least one modern method of family planning. Eighty-four percent of total knowledge of modern methods is spontaneous. Ever-married and currently married women do not differ much with regard to the knowledge of family planning methods.

Female and male sterilization is known to 95-97 percent of women. The three officially sponsored spacing methods, namely, the IUD, pill and condom, are each known to more than 90 percent of women. Only 35 percent of women know about injections. Traditional methods of contraception are generally less well known than modern methods; 58 percent of ever-married women report knowledge of these methods, with periodic abstinence better known (54 percent) than the withdrawal method (31 percent). The table reveals that probing was often needed to elicit complete knowledge about contraceptive methods, particularly traditional methods. Even

Table 6.1 Knowledge of contraceptive methods and source of methods

Percentage of ever-married and currently married women knowing any contraceptive method and knowing a source, by specific method, Delhi, 1993

| Method | Ever-married women | | | | Currently married women | | | |
|-------------------------------|--------------------|------------|-------|-----------------------------|-------------------------|------------|-------|-----------------------------|
| | Knowing method | | | Knowing source ¹ | Knowing method | | | Knowing source ¹ |
| | Without probe | With probe | Total | | Without probe | With probe | Total | |
| Any method | 84.0 | 14.8 | 98.8 | 94.3 | 84.5 | 14.4 | 99.0 | 94.5 |
| Any modern method | 83.4 | 15.4 | 98.8 | 93.7 | 83.9 | 15.0 | 98.9 | 93.9 |
| Pill | 68.9 | 25.1 | 94.0 | 78.8 | 69.3 | 25.0 | 94.3 | 79.3 |
| Copper T/IUD | 57.4 | 35.4 | 92.9 | 81.7 | 58.4 | 35.0 | 93.4 | 82.4 |
| Injection | 7.0 | 27.6 | 34.6 | 26.1 | 7.0 | 27.9 | 34.9 | 26.5 |
| Condom | 63.6 | 29.5 | 93.1 | 82.2 | 64.3 | 29.4 | 93.7 | 82.8 |
| Female sterilization | 46.1 | 51.2 | 97.3 | 89.7 | 46.7 | 50.8 | 97.5 | 90.0 |
| Male sterilization | 31.0 | 64.0 | 95.1 | 86.1 | 31.3 | 64.0 | 95.3 | 86.5 |
| Any traditional method | 16.5 | 41.9 | 58.4 | NA | 16.9 | 42.4 | 59.3 | NA |
| Rhythm/periodic abstinence | 9.6 | 44.2 | 53.8 | 36.4 | 9.8 | 44.8 | 54.6 | 36.8 |
| Withdrawal | 6.1 | 24.4 | 30.5 | NA | 6.3 | 24.8 | 31.1 | NA |
| Other methods | 5.6 | NA | 5.6 | NA | 5.6 | NA | 5.6 | NA |
| Number of women | 3457 | 3457 | 3457 | 3457 | 3310 | 3310 | 3310 | 3310 |

NA: Not applicable

¹For modern methods, the source refers to a place that a person could go to get the method. For rhythm/periodic abstinence, the source refers to a source of advice on how to use periodic abstinence.

for sterilization methods probed knowledge is higher than spontaneous knowledge.

The Third All India Survey on Family Planning Practices in India, conducted in 1988-89 (Operations Research Group, 1990), reached broadly similar conclusions about the knowledge of specific methods (90-100 percent of the currently married women in Delhi knew about male and female sterilization, 96 percent knew about the condom, 95 percent knew about the IUD and 91 percent about the pill).

Table 6.1 provides information about the extent of knowledge about sources of contraceptive methods. The question about the source of a method was asked only to those women who knew about the method. Knowledge about the sources of contraceptives is very high, with 94 percent of women knowing where to obtain at least one modern method of family planning. Eighty-six to 90 percent of women are knowledgeable about the source of sterilizations and approximately four-fifths know about the source of the pill, IUD or condom.

Table 6.2 shows differentials in the level of knowledge of modern contraceptive methods and sources of methods among currently married women according to background characteristics such as age, education, religion and caste/tribe. As mentioned earlier, the knowledge of contraception in Delhi is almost universal, therefore, there are no significant differentials by background characteristics. However, there are some differentials in knowledge of sources of any modern method. Younger women (under age 20) and illiterate women are not as

Table 6.2 Knowledge of methods and source by background characteristics

Percentage of currently married women knowing any method and at least one modern method and knowing a source for a modern method by selected background characteristics, Delhi, 1993

| Background characteristic | Knows any method | Knows any modern method ¹ | Knows source for any modern method | Number of women |
|---------------------------|------------------|--------------------------------------|------------------------------------|-----------------|
| Age | | | | |
| 15-19 | 98.0 | 98.0 | 80.7 | 150 |
| 20-24 | 98.6 | 98.6 | 91.7 | 625 |
| 25-29 | 99.1 | 99.1 | 95.4 | 782 |
| 30-34 | 98.9 | 98.9 | 95.6 | 630 |
| 35-39 | 99.4 | 99.2 | 94.5 | 473 |
| 40-44 | 98.8 | 98.8 | 95.7 | 328 |
| 45-49 | 99.7 | 99.1 | 95.3 | 321 |
| Education | | | | |
| Illiterate | 97.4 | 97.1 | 87.1 | 1216 |
| Lit., < middle complete | 99.8 | 99.8 | 95.4 | 497 |
| Middle school complete | 100.0 | 100.0 | 97.7 | 348 |
| High school and above | 99.9 | 99.9 | 99.0 | 1249 |
| Religion | | | | |
| Hindu | 98.9 | 98.8 | 93.8 | 2708 |
| Muslim | 98.8 | 98.8 | 92.1 | 329 |
| Sikh | 100.0 | 99.5 | 96.9 | 193 |
| Other | 100.0 | 100.0 | 98.7 | 80 |
| Caste/tribe | | | | |
| Scheduled caste | 98.4 | 98.4 | 90.4 | 187 |
| Scheduled tribe | (100.0) | (100.0) | (100.0) | 26 |
| Other | 99.0 | 98.9 | 94.1 | 3097 |
| Total | 99.0 | 98.9 | 93.9 | 3310 |

Note: Total includes 1 woman age 13-14, who is not shown separately.

() Based on 25-49 cases

¹Includes pill, copper T/IUD, injections, condoms, female sterilization and male sterilization

knowledgeable about such sources as other women.

6.2 Contraceptive Use

Ever Use of Family Planning Methods

All respondents were asked whether they had ever used each of the methods they knew. The use of contraception was further probed by asking whether they "ever used anything or tried in any way to delay or avoid getting pregnant". Table 6.3 presents the pattern of ever use by age separately for ever-married and currently married women.

Not only is knowledge of contraceptive methods high in Delhi, the ever use is also very high. Seventy-one percent of ever-married and 72 percent of currently married women have ever used a method. Modern methods have been used by two-thirds of ever-married women and currently married women, and traditional methods have been used by 22-23 percent of ever

Table 6.3 Ever use of contraception

Percentage of ever-married and currently married women who have ever used any contraceptive method, by specific method and age, Delhi, 1993

| Age | Any method | Any modern method | Pill | IUD | Injection | Condom | Female sterilization | Male sterilization | Any trad. method | Periodic abstinence | Withdrawal | Other methods | Number of women |
|--------------------------------|------------|-------------------|------|------|-----------|--------|----------------------|--------------------|------------------|---------------------|------------|---------------|-----------------|
| Ever-married women | | | | | | | | | | | | | |
| 15-19 | 19.0 | 18.3 | 5.2 | 2.6 | -- | 13.1 | 0.7 | -- | 3.9 | 2.6 | 2.0 | -- | 153 |
| 20-24 | 53.2 | 49.3 | 12.7 | 13.3 | 0.6 | 35.8 | 2.5 | 0.2 | 13.8 | 10.1 | 5.2 | 1.3 | 631 |
| 25-29 | 76.5 | 71.9 | 15.8 | 25.1 | 0.3 | 46.6 | 14.3 | 0.8 | 25.1 | 17.6 | 10.9 | 2.7 | 790 |
| 30-34 | 82.5 | 78.0 | 14.6 | 28.0 | 0.5 | 43.6 | 28.9 | 1.4 | 25.3 | 17.4 | 13.2 | 3.1 | 651 |
| 35-39 | 81.7 | 74.4 | 13.7 | 24.1 | 0.4 | 39.2 | 29.8 | 4.6 | 28.8 | 18.3 | 14.9 | 3.6 | 497 |
| 40-44 | 78.2 | 71.8 | 11.3 | 16.7 | 0.6 | 34.2 | 34.7 | 7.1 | 22.3 | 13.6 | 11.0 | 3.1 | 354 |
| 45-49 | 69.2 | 60.8 | 6.1 | 10.0 | 0.5 | 27.4 | 25.0 | 12.9 | 24.5 | 18.9 | 11.1 | 1.8 | 380 |
| Total | 70.9 | 65.7 | 12.7 | 19.8 | 0.4 | 38.1 | 19.8 | 3.3 | 22.3 | 15.4 | 10.5 | 2.5 | 3457 |
| Currently married women | | | | | | | | | | | | | |
| 15-19 | 18.7 | 18.0 | 4.7 | 2.7 | -- | 13.3 | 0.7 | -- | 3.3 | 2.0 | 2.0 | -- | 150 |
| 20-24 | 53.4 | 49.4 | 12.6 | 13.3 | 0.6 | 36.0 | 2.6 | 0.2 | 13.9 | 10.2 | 5.3 | 1.3 | 625 |
| 25-29 | 77.1 | 72.5 | 16.0 | 25.3 | 0.3 | 47.1 | 14.3 | 0.8 | 25.3 | 17.8 | 11.0 | 2.7 | 782 |
| 30-34 | 84.1 | 79.5 | 14.8 | 28.7 | 0.5 | 44.6 | 29.5 | 1.4 | 26.0 | 17.8 | 13.7 | 3.2 | 630 |
| 35-39 | 83.5 | 76.1 | 14.0 | 25.2 | 0.4 | 40.2 | 30.4 | 4.9 | 29.4 | 18.4 | 15.2 | 3.8 | 473 |
| 40-44 | 81.4 | 74.7 | 11.3 | 17.7 | 0.6 | 35.4 | 36.0 | 7.6 | 23.2 | 14.0 | 11.9 | 3.0 | 328 |
| 45-49 | 72.9 | 64.2 | 6.5 | 11.8 | 0.6 | 29.0 | 26.8 | 13.4 | 24.9 | 19.3 | 11.5 | 1.9 | 321 |
| Total | 72.2 | 66.9 | 12.9 | 20.6 | 0.5 | 39.1 | 20.0 | 3.2 | 22.6 | 15.5 | 10.8 | 2.5 | 3310 |

Note: Total includes 1 woman age 13-14, who is not shown separately.
 -- Less than 0.05 percent

married and currently married women. The most popular method ever used is the condom; adopted by 4 in 10 currently married women. The next most popular method ever used is the IUD (21 percent) followed by female sterilization (20 percent) and the pill (13 percent). Among the traditional methods, periodic abstinence has been used by 16 percent and withdrawal by 11 percent of currently married women.

Differential use of any modern method by age shows a comparatively low level of use among younger women (under 20 years) but among women age 20-24 almost half have ever used a modern method. Ever use of a modern method ranges from 73 to 80 percent among currently married women age 25-44, before declining to 64 percent among older women. Comparison of results with a similar sample survey (Demographic Research Centre, Delhi, 1970) conducted in Delhi by the Population Research Centre, Delhi in 1969-70, shows that the knowledge of family planning was universal even then. However, the ever use of contraceptives has shown an increase from 53 percent of women in the 1969-70 Survey to 71 percent of ever-married women in the 1993 NFHS.

Current Use of Family Planning Methods

Current use of contraception like that of ever use is high in Delhi, with 60 percent of currently married women practising family planning; 55 percent using modern methods and

another 6 percent using traditional methods (Table 6.4)¹. The percentage of ever-married women that use any method of contraception in Delhi is higher than both the national percentage of 40.6 and the all-India urban percentage of 51 (international Institute for Population Sciences, 1994). Most of the currently married women who have ever used contraception (84 percent) are currently using a method. The level of current use in the Delhi Demographic Survey, referred to earlier, was 45 percent in 1969-70. Thus, the contraceptive prevalence rate has increased substantially. Another set of statistics on current use is available from the Third All India Survey on Family Planning Practices in India, conducted in 1988-89 (Operations Research Group, 1990). That survey, which covered currently married women 15-44, found a contraceptive prevalence rate of 70 percent for Delhi; with 64 percent using modern methods and 5 percent using traditional methods. The NFHS prevalence rate, when restricted to those age 15-44 gives an estimate of the current use rate of 61 percent, with 55 percent using modern methods. The difference in the contraceptive prevalence rate for modern methods between the two surveys is partly due to the difference in the reported use of sterilization (male and female sterilization combined) which was 25 percent in the 1988-89 survey and 21 percent in the NFHS; and partly due to the difference in the reported use of condoms which was 27 percent in the 1988-89 survey and 22 percent in the NFHS. The current use rates observed for other modern methods such as the IUD and the pill are higher in the NFHS than those reported in the Third All India Survey.

Table 6.4 shows that the condom is the most popular contraceptive method in Delhi. The condom is being used by 21 percent of currently married women, followed closely by female

Table 6.4 Current use of contraception

Percent distribution of currently married women by contraceptive method currently used, according to age, Delhi, 1993

| Age | Any method | Any modern method | Pill | IUD | Injection | Condom | Female sterilization | Male sterilization | Any traditional method | Periodic abstinence | Withdrawal | Other methods | Not using any method | Total percent | Number of women |
|-------|------------|-------------------|------|------|-----------|--------|----------------------|--------------------|------------------------|---------------------|------------|---------------|----------------------|---------------|-----------------|
| 15-19 | 14.7 | 14.7 | 2.0 | 2.7 | -- | 9.3 | 0.7 | -- | -- | -- | -- | -- | 85.3 | 100.0 | 150 |
| 20-24 | 42.1 | 39.0 | 3.7 | 8.3 | 0.3 | 24.0 | 2.6 | 0.2 | 3.0 | 1.9 | 1.0 | 0.2 | 57.9 | 100.0 | 625 |
| 25-29 | 61.0 | 55.8 | 4.5 | 11.4 | -- | 24.8 | 14.3 | 0.8 | 5.2 | 2.9 | 2.2 | 0.1 | 39.0 | 100.0 | 782 |
| 30-34 | 74.3 | 68.4 | 2.7 | 11.0 | -- | 23.8 | 29.5 | 1.4 | 5.9 | 3.7 | 2.2 | -- | 25.7 | 100.0 | 630 |
| 35-39 | 74.4 | 65.1 | 2.1 | 7.8 | 0.2 | 19.7 | 30.4 | 4.9 | 9.3 | 4.7 | 4.2 | 0.4 | 25.6 | 100.0 | 473 |
| 40-44 | 72.0 | 62.5 | 1.8 | 1.8 | -- | 15.2 | 36.0 | 7.6 | 9.5 | 3.4 | 5.8 | 0.3 | 28.0 | 100.0 | 328 |
| 45-49 | 55.5 | 49.8 | 0.6 | 0.6 | -- | 8.4 | 26.8 | 13.4 | 5.6 | 3.7 | 1.9 | -- | 44.5 | 100.0 | 321 |
| 15-44 | 60.8 | 55.1 | 3.1 | 8.0 | 0.1 | 21.8 | 19.3 | 2.1 | 5.8 | 3.0 | 2.5 | 0.2 | 39.2 | 100.0 | 2988 |
| 15-49 | 60.3 | 54.6 | 2.9 | 7.8 | 0.1 | 20.5 | 20.0 | 3.2 | 5.7 | 3.1 | 2.5 | 0.2 | 39.7 | 100.0 | 3309 |
| 13-49 | 60.3 | 54.6 | 2.9 | 7.8 | 0.1 | 20.5 | 20.0 | 3.2 | 5.7 | 3.1 | 2.5 | 0.2 | 39.7 | 100.0 | 3310 |

Note: Total includes 1 woman age 13-14, who is not shown separately.
 -- Less than 0.05 percent

¹ In the NFHS, no specific reference period was defined for current use. The woman was asked whether she or her husband was currently using a method.

sterilization used by 20 percent; each of these methods account for one-third of the total contraceptive prevalence. The use of the condom in Delhi is the highest in the country and is almost nine times higher than the national rate and more than three times higher than the all-India urban rate. The use of female sterilization, however, is lower in Delhi than in the country as a whole (27 percent) and in urban areas (30 percent) of the country (International Institute for Population Sciences, 1994). Surprisingly, adoption of male sterilization is reported by only 3 percent of currently married women. Other modern methods like the IUD and pill are used by 8 percent and 3 percent of currently married women, respectively. Both of these methods are used at a higher rate in Delhi than in the combined urban areas of India (International Institute for Population Sciences, 1994). Traditional methods are used by 6 percent of currently married women with 3 percent using periodic abstinence and the same proportion using withdrawal.

The level of contraceptive use varies with the age of women, increasing from 15 percent of currently married women age 15-19 to a high of 74 percent of women age 30-39. In the two highest fertility groups (age 20-24 and 25-29), the contraceptive prevalence rates are 42 and 61 percent, respectively. Among modern methods, condoms are used most in the younger age groups between 20-29 and female sterilization is used most by women age 30 and above.

Socioeconomic Differentials in Current Use of Family Planning

Table 6.5 shows differences in current contraceptive use. There are notable differentials in current use by education of women. A strong positive relationship exists between education and the level of current use, with a prevalence rate of 50 percent among illiterate women and 68 percent among women who have completed at least high school. A similar association is exhibited in the use of modern methods, with greater use among women who are literate or have attained a middle or higher level of education (Figure 6.1). The relationship is also pronounced in the use of condoms and the IUD; the percentage of women using these methods increases consistently with increasing education. No consistent pattern emerges with respect to education and use of the pill, however, and adoption of sterilization is lowest among women who have completed high school.

Religious differences in the use of contraception are also pronounced. The prevalence rate is lowest among Muslims; only 43 percent of Muslim women are using any modern method compared with 55-56 percent among Hindus and Sikhs. Surprisingly, among scheduled caste women, the use of modern methods is slightly higher compared to others, primarily because of their higher acceptance of female sterilization.

Table 6.5 also shows the differentials in current use by the number and sex of living children. Contraceptive use is comparatively lower among women with no children or only one child than among women with 2 or more children. The use of female sterilization increases with the number of living children, but the use of condoms decreases because women adopt limiting methods when they reach their ideal family size. The data on the prevalence rate by the sex composition of living children indicate the existence of son preference; at each parity, the current use of family planning is lower for women with no sons and higher for women with at least one son. There is generally only a slight increase in contraceptive use with an increase in the number of sons. As expected, sterilization is a particularly unpopular method for women who do not have a son, but this is not true in the case of condom use.

Table 6.5 Current use by background characteristics

Percent distribution of currently married women by contraceptive method currently used, according to selected background characteristics, Delhi, 1993

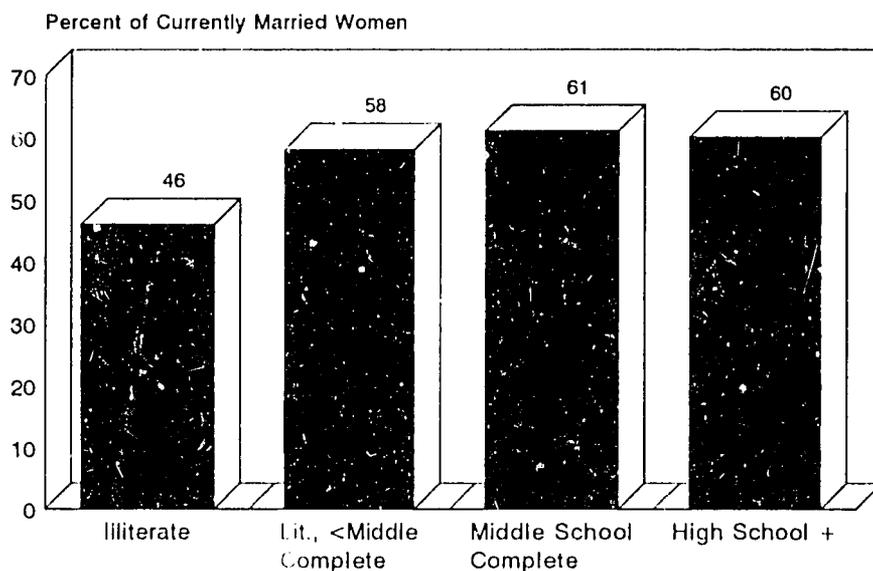
| Background characteristic | Any method | Any modern method | Pill | IUD | Injection | Condom | Female sterilization | Male sterilization | Any trad. method | Periodic abstinence | Withdrawal | Other methods | Not using any method | Total percent | Number of women |
|--|-------------|-------------------|------------|------------|------------|-------------|----------------------|--------------------|------------------|---------------------|------------|---------------|----------------------|---------------|-----------------|
| Education | | | | | | | | | | | | | | | |
| Illiterate | 50.2 | 46.2 | 3.2 | 3.8 | 0.1 | 13.1 | 22.3 | 3.8 | 4.0 | 3.0 | 0.8 | 0.2 | 49.8 | 100.0 | 1216 |
| Literate, < middle | 60.8 | 57.5 | 2.2 | 5.8 | 0.2 | 15.9 | 29.0 | 4.4 | 3.2 | 1.8 | 1.4 | -- | 39.2 | 100.0 | 497 |
| Middle school complete | 65.8 | 60.9 | 3.2 | 11.2 | 0.3 | 18.7 | 23.6 | 4.0 | 4.9 | 2.9 | 2.0 | -- | 34.2 | 100.0 | 348 |
| High school and above | 68.4 | 59.7 | 2.8 | 11.6 | -- | 30.0 | 13.3 | 2.0 | 8.6 | 3.8 | 4.6 | 0.2 | 31.6 | 100.0 | 1249 |
| Religion | | | | | | | | | | | | | | | |
| Hindu | 61.2 | 55.7 | 2.7 | 7.9 | 0.1 | 20.1 | 21.5 | 3.5 | 5.5 | 3.0 | 2.4 | 0.1 | 38.8 | 100.0 | 2708 |
| Muslim | 47.4 | 42.9 | 4.6 | 7.0 | 0.3 | 22.2 | 8.2 | 0.6 | 4.6 | 3.3 | 0.6 | 0.6 | 52.6 | 100.0 | 329 |
| Sikh | 65.8 | 55.4 | 2.6 | 9.8 | -- | 21.8 | 18.7 | 2.6 | 10.4 | 3.1 | 7.3 | -- | 34.2 | 100.0 | 193 |
| Other | 68.8 | 61.2 | 3.8 | 5.0 | -- | 23.7 | 22.5 | 6.3 | 7.5 | 6.3 | 1.3 | -- | 31.3 | 100.0 | 80 |
| Caste/tribe | | | | | | | | | | | | | | | |
| Scheduled caste | 58.8 | 55.6 | 2.7 | 3.2 | -- | 17.1 | 29.4 | 3.2 | 3.2 | 3.2 | -- | -- | 41.2 | 100.0 | 187 |
| Scheduled tribe | (61.5) | (53.8) | (7.7) | (--) | (--) | (15.4) | (23.1) | (7.7) | (7.7) | (7.7) | (--) | (--) | (38.5) | 100.0 | 26 |
| Other | 60.4 | 54.5 | 2.9 | 8.2 | 0.1 | 20.7 | 19.4 | 3.2 | 5.9 | 3.1 | 2.6 | 0.2 | 39.6 | 100.0 | 3097 |
| Number and sex of living children | | | | | | | | | | | | | | | |
| None | 13.1 | 11.4 | 1.7 | -- | -- | 9.4 | -- | 0.3 | 1.7 | 1.4 | 0.3 | -- | 86.9 | 100.0 | 351 |
| 1 child | 47.6 | 42.0 | 3.0 | 9.1 | -- | 28.5 | 0.7 | 0.6 | 5.6 | 2.8 | 2.6 | 0.2 | 52.4 | 100.0 | 536 |
| 1 son | 48.5 | 42.5 | 3.0 | 9.0 | -- | 28.8 | 1.0 | 0.7 | 6.0 | 2.3 | 3.3 | 0.3 | 51.5 | 100.0 | 299 |
| No sons | 46.4 | 41.4 | 3.0 | 9.3 | -- | 28.3 | 0.4 | 0.4 | 5.1 | 3.4 | 1.7 | -- | 53.6 | 100.0 | 237 |
| 2 children | 70.8 | 61.1 | 3.7 | 14.1 | 0.1 | 29.3 | 12.4 | 1.4 | 9.7 | 4.8 | 4.8 | 0.1 | 29.2 | 100.0 | 900 |
| 2 sons | 69.3 | 60.2 | 2.9 | 13.5 | -- | 23.7 | 17.9 | 2.2 | 9.1 | 3.3 | 5.8 | -- | 30.7 | 100.0 | 274 |
| 1 son | 75.4 | 65.1 | 4.5 | 15.4 | 0.2 | 32.2 | 11.7 | 1.0 | 10.3 | 5.7 | 4.3 | 0.2 | 24.6 | 100.0 | 487 |
| No sons | 57.6 | 48.9 | 2.2 | 10.8 | -- | 30.2 | 4.3 | 1.4 | 8.6 | 4.3 | 4.3 | -- | 42.4 | 100.0 | 139 |
| 3 children | 71.4 | 66.7 | 2.9 | 7.0 | 0.3 | 17.6 | 32.9 | 5.9 | 4.7 | 2.3 | 2.3 | -- | 28.6 | 100.0 | 681 |
| 3 sons | 76.6 | 74.0 | 1.3 | 7.8 | -- | 18.2 | 44.2 | 2.6 | 2.6 | 1.3 | 1.3 | -- | 23.4 | 100.0 | 77 |
| 2 sons | 73.9 | 69.7 | 3.3 | 6.5 | 0.3 | 12.7 | 40.7 | 6.2 | 4.2 | 1.3 | 2.9 | -- | 26.1 | 100.0 | 307 |
| 1 son | 71.3 | 64.8 | 3.0 | 8.3 | 0.4 | 19.1 | 26.5 | 7.4 | 6.5 | 3.9 | 2.6 | -- | 28.7 | 100.0 | 230 |
| No sons | 53.7 | 50.7 | 3.0 | 4.5 | -- | 34.3 | 6.0 | 3.0 | 3.0 | 3.0 | -- | -- | 46.3 | 100.0 | 67 |
| 4+ children | 67.9 | 63.8 | 2.5 | 4.2 | -- | 12.8 | 38.4 | 5.9 | 4.2 | 2.9 | 1.0 | 0.4 | 32.1 | 100.0 | 842 |
| 2+ sons | 68.7 | 64.4 | 2.0 | 3.2 | -- | 11.3 | 41.6 | 6.4 | 4.2 | 3.0 | 0.8 | 0.5 | 31.3 | 100.0 | 661 |
| 1 son | 67.7 | 64.6 | 4.4 | 8.2 | -- | 19.0 | 28.5 | 4.4 | 3.2 | 1.9 | 1.3 | -- | 32.3 | 100.0 | 158 |
| Total | 60.3 | 54.6 | 2.9 | 7.8 | 0.1 | 20.5 | 20.0 | 3.2 | 5.7 | 3.1 | 2.5 | 0.2 | 39.7 | 100.0 | 3310 |

Note: Total includes 23 women with 4 or more children but no sons, who are not shown separately.

() Based on 25-49 cases

-- Less than 0.05 percent

Figure 6.1
Current Use of Modern Contraceptive
Methods by Education



NFHS, Delhi, 1993

Number of Children at First Use of Contraception

In order to examine the timing of initial family planning use, the NFHS included a question on the number of living children women had when they first used a method. The

Table 6.6 Number of living children at first use

Percent distribution of ever-married women by number of living children at the time of first use of contraception, according to current age, Delhi, 1993

| Current age | Never used | Number of living children at the time of first use | | | | | Missing | Total percent | Number of women |
|--------------|-------------|--|-------------|-------------|-------------|-------------|------------|---------------|-----------------|
| | | 0 | 1 | 2 | 3 | 4+ | | | |
| 15-19 | 81.0 | 9.2 | 7.2 | 1.3 | -- | -- | 1.3 | 100.0 | 153 |
| 20-24 | 46.8 | 10.5 | 29.5 | 10.0 | 2.5 | 0.3 | 0.5 | 100.0 | 631 |
| 25-29 | 23.5 | 8.7 | 31.0 | 19.4 | 9.9 | 6.7 | 0.8 | 100.0 | 790 |
| 30-34 | 17.5 | 4.1 | 30.0 | 17.2 | 15.7 | 15.4 | 0.2 | 100.0 | 651 |
| 35-39 | 18.3 | 3.0 | 22.9 | 20.7 | 14.3 | 20.3 | 0.4 | 100.0 | 497 |
| 40-44 | 21.8 | 3.7 | 21.5 | 13.3 | 11.6 | 28.2 | -- | 100.0 | 354 |
| 45-49 | 30.8 | 2.1 | 18.2 | 12.4 | 9.7 | 26.8 | -- | 100.0 | 380 |
| Total | 29.1 | 6.1 | 25.9 | 15.2 | 10.0 | 13.2 | 0.4 | 100.0 | 3457 |

Note: Total includes 1 woman age 13-14, who is not shown separately.
 -- Less than 0.05 percent

distribution of ever-married women according to the number of living children at first contraceptive use is shown in Table 6.6. Overall, only 9 percent of contraceptors (6 percent of all ever-married women) initiated the use of contraception before having any children and 37 percent of ever-married women started using contraception after having their first child. In Delhi the largest percentage of users started using a method after they had their first child. This is a distinct feature of family planning acceptance in a predominantly urban population. Two-thirds of those who had ever used family planning initiated use when they had fewer than three living children.

Table 6.6, also shows a gradual shift towards initiating use at lower parities. There is a tendency for younger women to initiate family planning use when they had two or fewer living children. For example, the proportion of ever users initiating contraception when they had two or fewer children is almost twice as high for women age 20-24 (94 percent) as for women age 40-44 (49 percent).

Problems in the Current Use of Family Planning

Table 6.7 presents information on the problems faced by women while using the pill, the IUD and sterilization. A substantial majority of users of these methods (80 to 92 percent) did not report any problems. Among the 13 percent of the pill users who had problems, dizziness is the most common problem reported. In the case of the 20 percent reporting problems with the IUD, almost half mentioned the problem of excessive bleeding. The proportion of women complaining of problems with female sterilization (20 percent) is the same as for the IUD. The major causes of discomfort in the case of female sterilization are pain/backache and weakness/inability to work. Less than 10 percent of women mention problems with male sterilization. The same problems as are most common for female sterilization are most common for male sterilization according to female respondents.

Age at Sterilization

Table 6.8 shows the age and time relative to the interview at which couples obtained a sterilization. Of the 770 sterilization operations reported, 42 percent were conducted during the last five years, 22 percent were conducted 6-9 years before the survey and the remaining 36 percent were conducted 10 or more years before the survey. Almost two-thirds of the couples underwent sterilization before age 30. Very few cases of sterilization are reported to having been performed when the woman was in her forties. Only about 14 percent of sterilization operations reported are vasectomies. Most male sterilizations (76 percent) were performed more than 10 years ago. The median age of the woman at the time of her or her husband's sterilization was 28.2. It is difficult to assess trends in the age at sterilization more than 10 years before the survey because the NFHS only interviewed ever-married women age 13-49. Thus, there were no respondents in the survey who were age 40-49 during the period 10 or more years before the survey, since these women would have been age 50-59 at the time of the survey.

Table 6.7 Problems with current method

Percentage of current users of the pill, copper T/IUD, female sterilization and male sterilization who have had problems in using the method, Delhi, 1993

| Problem | Method | |
|----------------------------|-----------------------------|---------------------------|
| | Pill | |
| No problems | 86.5 | |
| Cramps | 2.1 | |
| Weight gain | 1.0 | |
| Dizziness | 6.3 | |
| Excessive bleeding | 2.1 | |
| Nausea/vomiting | 1.0 | |
| Allergy | 2.1 | |
| Headache | 2.1 | |
| Other | 3.1 | |
| Number of pill users | 96 | |
| | Copper T/IUD | |
| No problems | 79.9 | |
| Cramps | 1.9 | |
| Backache | 6.9 | |
| Irregular periods | 1.9 | |
| Excessive bleeding | 10.4 | |
| Weakness/inability to work | 1.9 | |
| Other | 3.1 | |
| Number of IUD users | 259 | |
| | Female sterilization | Male sterilization |
| No problems | 79.9 | 91.6 |
| Fever | 1.7 | -- |
| Pain/backache | 9.4 | 4.7 |
| Sepsis | 1.7 | 0.9 |
| Weakness/inability to work | 5.1 | 1.9 |
| Failure/woman got pregnant | 0.8 | 0.9 |
| Other | 7.4 | 0.9 |
| Number sterilized | 663 | 107 |

Note: Percentages may sum to more than 100.0 because multiple problems could be recorded.

-- Less than 0.05 percent

6.3 Source of Supply of Contraception

Family planning methods and services in Delhi are provided through a network of government hospitals, urban family welfare centres in urban areas and primary health centres and sub-centres in rural areas. Besides these government outlets, family planning services are also provided by a number of private hospitals and clinics as well as nongovernmental organizations. Sterilization operations and IUD insertions are carried out mostly in government hospitals and primary health centres. Sterilization camps, organized from time to time, also provide sterilization services. Modern spacing methods such as the IUD, pill and condom are available through both the government and private sectors.

In order to assess the relative importance of various sources of contraceptive methods, the NFHS included a question about where current users of contraception obtained their

Table 6.8 Timing of sterilization

Percent distribution of currently married sterilized women and wives of sterilized men by age at the time of sterilization, according to the number of years since the operation, Delhi, 1993

| Years since operation | Woman's age at the time of operation | | | | | Total percent | Number | Median age ¹ |
|--------------------------------|--------------------------------------|--------|--------|-------|-------|---------------|--------|-------------------------|
| | <25 | 25-29 | 30-34 | 35-39 | 40-44 | | | |
| STERILIZED WOMEN | | | | | | | | |
| <2 | 13.7 | 44.4 | 29.9 | 8.5 | 3.4 | 100.0 | 117 | 29.0 |
| 2-3 | 22.3 | 42.6 | 27.7 | 5.3 | 2.1 | 100.0 | 94 | 27.6 |
| 4-5 | 20.0 | 41.0 | 23.8 | 14.3 | 1.0 | 100.0 | 105 | 28.4 |
| 6-7 | 15.0 | 45.0 | 25.0 | 15.0 | -- | 100.0 | 80 | 28.3 |
| 8-9 | 28.6 | 37.7 | 22.1 | 11.7 | -- | 100.0 | 77 | 27.4 |
| 10+ | 21.6 | 45.8 | 28.9 | 3.7 | U | 100.0 | 190 | NC |
| Total | 20.1 | 43.3 | 26.8 | 8.7 | 1.1 | 100.0 | 663 | 28.2 |
| WIVES OF STERILIZED MEN | | | | | | | | |
| <10 | (15.4) | (50.0) | (26.9) | (7.7) | -- | 100.0 | 26 | 28.7 |
| 10+ | 24.7 | 42.0 | 33.3 | -- | U | 100.0 | 81 | NC |
| Total | 22.4 | 43.9 | 31.8 | 1.9 | -- | 100.0 | 107 | 28.2 |
| STERILIZED COUPLES | | | | | | | | |
| <2 | 13.4 | 45.4 | 29.4 | 8.4 | 3.4 | 100.0 | 119 | 29.0 |
| 2-3 | 22.4 | 42.9 | 27.6 | 5.1 | 2.0 | 100.0 | 98 | 27.6 |
| 4-5 | 21.1 | 40.4 | 22.9 | 14.7 | 0.9 | 100.0 | 109 | 28.4 |
| 6-7 | 14.4 | 45.6 | 25.6 | 14.4 | -- | 100.0 | 90 | 28.4 |
| 8-9 | 26.5 | 38.6 | 24.1 | 10.8 | -- | 100.0 | 83 | 27.7 |
| 10+ | 22.5 | 44.6 | 30.3 | 2.6 | U | 100.0 | 271 | NC |
| Total | 20.4 | 43.4 | 27.5 | 7.8 | 0.9 | 100.0 | 770 | 28.2 |

NC: Not calculated due to censoring

U: Not available

() Based on 25-49 cases

-- Less than 0.05 percent

¹Median ages are calculated only for persons sterilized at less than 40 years of age to avoid problems of censoring.

methods, and the responses are presented in Table 6.9 and Figure 6.2). Overall, the public sector, consisting of government/municipal hospitals, primary health centres and other governmental health infrastructure, supplies 45 percent of the current users of all modern methods, while the private medical sector, including private hospitals or clinics, private doctors and pharmacies/drug stores supplies 19 percent of current users. More than one-third of users (36 percent) obtain their methods from other nonmedical sources, such as shops, friends and relatives. The use of these sources is much higher in Delhi than in the country as a whole (54 percent) and in the urban areas (10.4 percent) of the country (International Institute for Population Sciences, 1994).

The mix of public and private sector sources varies according to the method used. For clinical methods (IUD and sterilization), the government is by far the major source of supply; more than 76 percent of female sterilization operations, 87 percent of male sterilization operations and 56 percent of IUD insertions are done at a government source. Supply methods

Table 6.9 Source of supply of modern contraceptive methods

Percent distribution of current users of modern contraceptive methods by most recent source of supply, according to specific method, Delhi, 1993

| Source of supply | Pill | Copper T/ IUD | Con- dom | Female steril- ization | Male steril- ization | All modern methods |
|-------------------------------|-------|------------------|-------------|------------------------------|----------------------------|--------------------------|
| Public sector | 21.9 | 56.0 | 7.7 | 76.2 | 86.9 | 45.2 |
| E.S.I. Hospital | -- | 12.0 | 1.2 | 0.9 | -- | 2.5 |
| Government/municipal hospital | 15.6 | 37.5 | 4.9 | 68.5 | 80.4 | 38.0 |
| Primary Health Centre | 2.1 | 3.1 | 0.6 | 1.7 | -- | 1.4 |
| Sub-centre | 1.0 | 0.4 | 0.6 | -- | -- | 0.3 |
| Family planning clinic | 1.0 | 2.7 | 0.4 | 1.2 | -- | 1.1 |
| Public mobile clinic | 1.0 | -- | -- | 0.2 | -- | 0.1 |
| Camp | -- | -- | -- | 3.8 | 6.5 | 1.8 |
| Government paramedic | 1.0 | 0.4 | -- | -- | -- | 0.1 |
| Private medical sector | 27.1 | 38.6 | 7.5 | 22.6 | 7.5 | 18.7 |
| Private hospital or clinic | 1.0 | 21.6 | 0.3 | 21.3 | 7.5 | 11.6 |
| Pharmacy/drugstore | 9.4 | -- | 6.8 | -- | -- | 3.0 |
| Private doctor | 16.7 | 17.0 | 0.4 | 1.2 | -- | 4.0 |
| Private mobile clinic | -- | -- | -- | 0.2 | -- | 0.1 |
| Other source | 51.0 | 5.4 | 84.8 | 1.2 | 5.6 | 36.1 |
| Shop | 47.9 | -- | 39.8 | -- | -- | 17.5 |
| Husband | -- | -- | 42.9 | -- | -- | 16.1 |
| Friend/relative | 1.0 | -- | 0.1 | -- | -- | 0.1 |
| Other | 2.1 | 5.4 | 1.9 | 1.2 | 5.6 | 2.4 |
| Total percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number | 96 | 259 | 678 | 663 | 107 | 1806 |

Note: Total includes 3 users of the injection, who are not shown separately.
 -- Less than 0.05 percent

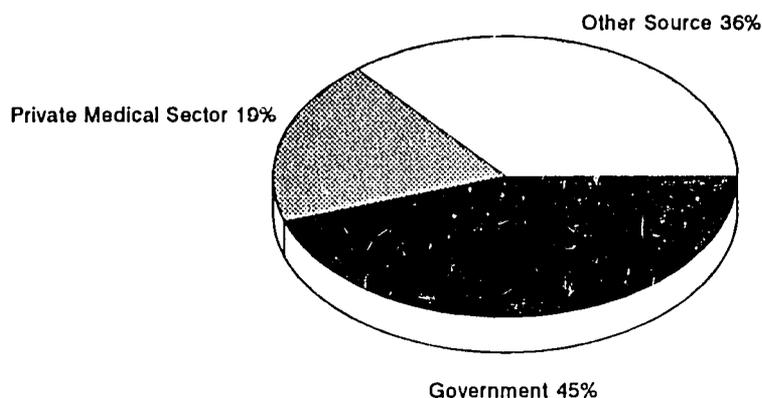
(pills and condoms) are provided primarily by the nonmedical sector (other source in the table). Only about one-fifth of pill users obtain their pills from a government source and only 8 percent of condom users rely on the public sector for their supply.

With regard to specific sources of contraception, government/municipal hospitals (the main institutions that provide contraceptive services) are the most important sources, serving 69 percent of female sterilization acceptors, 80 percent of male sterilization acceptors, 38 percent of IUD users, and 16 percent of pill users. Private shops are major sources for pills and condoms (48 percent of pill users and 40 percent of condom users). Twenty-two percent of IUD insertions are done by private hospitals and another 17 percent by private doctors. Only 7 percent of male and 4 percent of female sterilizations are done in sterilization camps.

6.4 Reasons for Discontinuation

All currently married women who had ever used contraception but who were not using any method at the time of the survey and were not pregnant, were asked why they had discontinued their use of contraception. Their responses to this question are presented in Table 6.10. A sizable proportion (15 percent) discontinued because they wanted to have a child. Health and menstrual problems were cited by 12 percent. Seven percent discontinued use

Figure 6.2
Sources of Family Planning Among Current Users of Modern Contraceptive Methods



NFHS, Delhi, 1993

because they did not like the method and 5 percent found the method inconvenient to use. With a little motivation and improvement in services, these women may be successfully brought under the programme.

Table 6.10 Reasons for discontinuation

Percent distribution of nonpregnant, currently married ever users who are not currently using a contraceptive method by main reason for stopping use, Delhi, 1993

| Reason for stopping use | Percent |
|--------------------------------|---------|
| Method failed/got pregnant | 1.4 |
| Lack of sexual satisfaction | 0.7 |
| Created menstrual problem | 2.9 |
| Created health problem | 9.0 |
| Inconvenient to use | 5.4 |
| Hard to get method | 1.4 |
| Did not like the method | 7.2 |
| Wanted to have a child | 15.4 |
| Wanted to replace a dead child | 0.4 |
| Other | 56.3 |
| Total percent | 100.0 |
| Number | 279 |

6.5 Intention to Use Family Planning in the Future

In the NFHS, all currently married pregnant women and nonpregnant women who were not using contraception at the time of the interview were asked about their future intentions regarding the use of family planning and their method preference if they intended to use contraception. If they did not intend to use family planning at any time in the future, they were asked why they did not intend to use it. This type of information can assist family planning programme administrators in identifying potential groups of users and in providing the types of contraception that are likely to be in demand. Information on the reasons for nonuse is crucial for designing successful information programmes and understanding the obstacles to increasing contraceptive prevalence.

Overall, nearly half (48 percent) of currently married nonusers reported that they did not intend to use contraception in the future (Table 6.11), 2 in 5 women (37 percent) said that they would use it in the future and the remaining women were not sure about their intentions. Almost two-thirds of the intended users said they would use contraception within the next 12 months. Almost 30 percent said they would use it at a later stage, and 5 percent were not sure

| Past use/ intention to use in future | Number of living children ¹ | | | | | Total |
|--|--|-------|-------|-------|-------|-------|
| | 0 | 1 | 2 | 3 | 4+ | |
| Never used contraception | | | | | | |
| Intends to use in next 12 months | 4.4 | 18.6 | 13.1 | 14.8 | 14.8 | 13.5 |
| Intends to use later | 11.5 | 11.2 | 3.8 | 5.7 | 3.6 | 7.0 |
| Intends to use, unsure when | 0.9 | 0.7 | 1.7 | 1.0 | 1.0 | 1.1 |
| Unsure as to intention | 12.4 | 12.3 | 12.1 | 7.7 | 8.6 | 10.7 |
| Does not intend to use | 65.5 | 36.1 | 29.3 | 28.2 | 30.3 | 37.1 |
| Missing | -- | 0.7 | 1.0 | -- | 1.3 | 0.7 |
| Previously used contraception | | | | | | |
| Intends to use in next 12 months | 0.4 | 6.0 | 13.1 | 13.9 | 19.4 | 11.0 |
| Intends to use later | 2.7 | 4.2 | 6.6 | 4.9 | 2.6 | 4.2 |
| Intends to use, unsure when | 0.4 | 0.4 | 1.4 | 1.0 | 0.7 | 0.8 |
| Unsure as to intention | 1.3 | 2.1 | 4.5 | 3.3 | 2.6 | 2.8 |
| Does not intend to use | 0.4 | 7.7 | 13.4 | 17.7 | 14.5 | 10.9 |
| Missing | -- | -- | -- | 1.9 | 0.7 | 0.5 |
| Total percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| All currently married nonusers | | | | | | |
| Intends to use in next 12 months | 4.9 | 24.6 | 26.2 | 28.7 | 34.2 | 24.4 |
| Intends to use later | 14.2 | 15.4 | 10.3 | 10.5 | 6.3 | 11.2 |
| Intends to use, unsure when | 1.3 | 1.1 | 3.1 | 1.9 | 1.6 | 1.8 |
| Unsure as to intention | 13.7 | 14.4 | 16.6 | 11.0 | 11.2 | 13.5 |
| Does not intend to use | 65.9 | 43.9 | 42.8 | 45.9 | 44.7 | 47.9 |
| Missing | -- | 0.7 | 1.0 | 1.9 | 2.0 | 1.1 |
| Total percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number | 226 | 285 | 290 | 209 | 304 | 1314 |

-- Less than 0.05 percent
¹Includes current pregnancy, if any

when they would start using contraception. Among women who have never used contraceptive methods before (70 percent of current nonusers), 53 percent reported that they did not intend to use them in the future, and 15 percent were not sure of their intentions. In contrast, 53 percent of those who have used contraception in the past (but are not currently using) intend to use contraception again in the future. Nine percent were not sure of their future intentions. The proportion of women who intend to use family planning in the future is lowest for women with no children and varies little among women who have children.

6.6 Reasons for Nonuse of Contraception

Currently married women who are not using any contraceptive method, and who say that they do not intend to use contraception at any time in the future were asked for the main reason for their future intentions. Reasons for not intending to use any method are indicated in Table 6.12. The largest proportion of women (44 percent) said they did not intend to use contraception because they want more children. This reason was given by 78 percent of women less than 30 years of age and 17 percent of women age 30 and over. The major reason given by older women for nonuse was their actual or perceived sterility (45 percent).

Two percent of married women reported that contraception was against their religion and another 3 percent said that they or their husbands or other relatives were against the use of family planning. Six percent of women do not intend to use family planning methods due to

Table 6.12 Reasons for nonuse

Percent distribution of currently married women who are not using any contraceptive method and who do not intend to use in the future by main reason for not intending to use, according to age, Delhi, 1993

| Reason | Age <30 | Age 30+ | Total |
|--------------------------------|---------|---------|-------|
| Wants children | 60.4 | 13.0 | 34.3 |
| Wants a son | 13.8 | 3.2 | 7.9 |
| Wants a daughter | 3.5 | 0.9 | 2.1 |
| Worry about side effects | 1.8 | 1.4 | 1.6 |
| Can't work after sterilization | -- | 0.3 | 0.2 |
| Lack of knowledge | 6.0 | 5.5 | 5.7 |
| Afraid of sterilization | -- | 0.3 | 0.2 |
| Hard to get methods | -- | 0.3 | 0.2 |
| Against religion | 2.5 | 2.3 | 2.4 |
| Opposed to family planning | 0.7 | 0.9 | 0.8 |
| Husband opposed | 1.8 | 1.2 | 1.4 |
| Other people opposed | 0.4 | 0.3 | 0.3 |
| Difficult to get pregnant | 2.1 | 9.2 | 6.0 |
| Menopausal/had hysterectomy | -- | 36.0 | 19.8 |
| Health does not permit | 1.8 | 2.6 | 2.2 |
| Inconvenient | 0.7 | 2.6 | 1.7 |
| Doesn't like existing methods | 2.1 | 5.8 | 4.1 |
| Other | 2.5 | 14.4 | 9.0 |
| Total percent | 100.0 | 100.0 | 100.0 |
| Number | 283 | 347 | 630 |

-- Less than 0.05 percent

lack of knowledge and 4 percent because they do not like the existing methods. Therefore, there is still substantial scope for the family planning programme to increase contraceptive use by providing contraceptive information.

6.7 Preferred Future Method of Family Planning

Women who said they intended to use a method in the future were asked to specify the method of family planning that they would like to use. Half (49 percent) of the women who reported their intention to use contraception in the future said they prefer to use modern spacing methods and a little more than one-third (35 percent) of women prefer terminal methods (Table 6.13). Female sterilization is the most preferred method (34 percent), followed by the pill and condom (17 percent each), IUD (12 percent) and injections (4 percent). The choice of preferred methods does not differ significantly for those who intend to use them within 12 months and for those who intend to use them later, except for the condom which is preferred by more women in the former group. One-fifth of women who intend to use contraception later were not sure of the method they would use. In Delhi, the pattern of the contraceptive method mix that intended future users say they would prefer is not the same as the mix used by current users. The pill and the copper T/IUD are preferred more by future users than current users.

| Table 6.13 Preferred method | | | |
|---|------------------------|-------|-----------|
| Percent distribution of currently married women who are not using a contraceptive method but who intend to use in the future by preferred method, according to whether they intend to use in the next 12 months or later, Delhi, 1993 | | | |
| Preferred method | Timing of intended use | | All women |
| | Next 12 months | Later | |
| Pill | 16.8 | 15.6 | 16.9 |
| Copper T/IUD | 12.5 | 10.9 | 11.7 |
| Injections | 4.0 | 3.4 | 3.8 |
| Condom | 18.4 | 12.9 | 16.7 |
| Female sterilization | 34.3 | 34.7 | 34.0 |
| Male sterilization | 0.9 | 0.7 | 1.0 |
| Periodic abstinence | 2.5 | 0.7 | 1.8 |
| Withdrawal | 1.2 | 0.7 | 1.0 |
| Other | 1.2 | -- | 1.0 |
| Unsure | 8.1 | 20.4 | 12.1 |
| Total percent | 100.0 | 100.0 | 100.0 |
| Number | 321 | 147 | 497 |

Note: The total for all women includes 24 women who are unsure about the timing of intended use and 5 women with missing information on timing of intended use, who are not shown separately.
 -- Less than 0.05 percent

6.8 Exposure to Family Planning Messages on Radio and Television

For many years, the family welfare programme has been utilizing the electronic mass media to promote family planning. In order to explore the spread of family planning messages through various mass media, respondents were asked whether they had heard such messages on

radio and/or television in the past month. Table 6.14 shows the variation in the percentage of women exposed to family planning messages according to various background characteristics. The effort to disseminate family planning information through the electronic mass media has succeeded in reaching to a large majority (79 percent) of ever-married women in Delhi. This is not surprising as 70 percent of households in Delhi own televisions and 65 percent own radios (see Table 3.9). Fifty-eight percent had heard a message on both radio and television in the month preceding the survey. Three percent had heard a family planning message only on radio and 18 percent had heard a family planning message only on television.

Women's exposure to family planning messages on radio and television is positively related to educational attainment. Thirty-nine percent of illiterate women reported that they had heard a family planning message on the radio and television, whereas 77 percent of women with at least a high school education had heard a message on both radio and television.

There are only small differences in the extent of exposure to family planning messages between Hindus and Sikhs. However, the percentage who had heard a family planning message

| Table 6.14 Exposure to family planning messages on radio and television | | | | | | | |
|--|--|------------|-----------------|-------------|------------|---------------|-------------|
| Percent distribution of ever-married women by whether they have heard a radio or television message about family planning in the month prior to the interview, according to selected background characteristics, Delhi, 1993 | | | | | | | |
| Background characteristic | Heard family planning message on radio or television | | | | | Total percent | Number |
| | Neither | Radio only | Television only | Both | Missing | | |
| Age | | | | | | | |
| 13-19 | 28.6 | 2.6 | 20.1 | 48.7 | -- | 100.0 | 154 |
| 20-29 | 20.6 | 3.6 | 17.5 | 58.2 | 0.1 | 100.0 | 1421 |
| 30-39 | 18.5 | 2.2 | 20.4 | 59.0 | -- | 100.0 | 1148 |
| 40-49 | 22.6 | 1.8 | 16.9 | 58.7 | -- | 100.0 | 734 |
| Education | | | | | | | |
| Illiterate | 35.7 | 4.5 | 21.3 | 38.5 | 0.1 | 100.0 | 1293 |
| Lit., < middle complete | 18.1 | 2.9 | 21.2 | 57.7 | 0.2 | 100.0 | 520 |
| Middle school complete | 14.2 | 1.9 | 20.2 | 63.7 | -- | 100.0 | 366 |
| High school and above | 8.5 | 1.0 | 13.9 | 76.6 | -- | 100.0 | 1278 |
| Religion | | | | | | | |
| Hindu | 19.8 | 2.4 | 18.4 | 59.4 | 0.1 | 100.0 | 2822 |
| Muslim | 34.9 | 4.9 | 18.4 | 41.8 | -- | 100.0 | 347 |
| Sikh | 13.7 | 2.9 | 21.6 | 61.8 | -- | 100.0 | 204 |
| Other | 9.5 | 2.4 | 11.9 | 76.2 | -- | 100.0 | 84 |
| Caste/tribe | | | | | | | |
| Scheduled caste | 32.3 | 1.0 | 22.2 | 44.4 | -- | 100.0 | 198 |
| Scheduled tribe | (20.0) | (6.7) | (10.0) | (63.3) | (--) | 100.0 | 30 |
| Other | 20.0 | 2.8 | 18.3 | 58.9 | 0.1 | 100.0 | 3229 |
| Use of contraception | | | | | | | |
| Ever used | 15.8 | 2.4 | 18.9 | 62.9 | -- | 100.0 | 2452 |
| Never used | 32.5 | 3.5 | 17.2 | 46.6 | 0.2 | 100.0 | 1005 |
| Total | 20.7 | 2.7 | 18.4 | 58.1 | 0.1 | 100.0 | 3457 |

() Based on 25-49 cases
 -- Less than 0.05 percent

on radio and television is lower among Muslim women than among Hindus and Sikhs. The exposure among scheduled caste women is lower than among other women.

6.9 Acceptability of Family Planning Messages on Radio and Television

Whether or not women had heard a family planning message on the radio or television, they were asked whether they considered it acceptable for family planning information to be provided on radio or television. More than three-fourths of women said it is acceptable to have family planning messages on radio and television, only 14 percent said it is not acceptable and the rest (9 percent) were not sure (Table 6.15). Older women (over age 39), illiterate women, Muslim women and women belonging to scheduled castes are slightly less likely than other women to consider broadcasting of family planning messages on radio or television acceptable. Attitudes toward the acceptability of family planning messages on the electronic media are highly favourable among literate and educated women and also among those in the 25-29 and 30-34 age groups (over 80 percent).

| Table 6.15 Acceptability of media messages on family planning | | | | | | |
|--|---------------------------------|----------------|------------|------------|---------------|-----------------|
| Percent distribution of ever-married women by their attitudes toward having messages about family planning on the radio or television, by selected background characteristics, Delhi, 1993 | | | | | | |
| Background characteristic | Acceptability of media messages | | | | Total percent | Number of women |
| | Acceptable | Not acceptable | Unsure | Missing | | |
| Age | | | | | | |
| 15-19 | 74.5 | 7.2 | 18.3 | -- | 100.0 | 153 |
| 20-24 | 77.7 | 10.0 | 12.4 | -- | 100.0 | 631 |
| 25-29 | 80.9 | 10.9 | 8.1 | 0.1 | 100.0 | 790 |
| 30-34 | 81.0 | 12.0 | 6.9 | 0.2 | 100.0 | 651 |
| 35-39 | 76.9 | 18.1 | 5.0 | -- | 100.0 | 497 |
| 40-44 | 67.2 | 22.9 | 9.6 | 0.3 | 100.0 | 354 |
| 45-49 | 64.2 | 23.4 | 12.4 | -- | 100.0 | 380 |
| Education | | | | | | |
| Illiterate | 65.7 | 13.1 | 21.0 | 0.2 | 100.0 | 1293 |
| Lit., < middle complete | 82.7 | 11.9 | 5.4 | -- | 100.0 | 520 |
| Middle school complete | 83.1 | 14.8 | 2.2 | -- | 100.0 | 366 |
| High school and above | 82.2 | 16.6 | 1.2 | -- | 100.0 | 1278 |
| Religion | | | | | | |
| Hindu | 76.8 | 14.2 | 8.9 | 0.1 | 100.0 | 2822 |
| Muslim | 72.0 | 12.1 | 15.9 | -- | 100.0 | 347 |
| Sikh | 77.0 | 17.6 | 5.4 | -- | 100.0 | 204 |
| Other | 72.6 | 22.6 | 4.8 | -- | 100.0 | 84 |
| Caste/tribe | | | | | | |
| Scheduled caste | 70.2 | 12.1 | 17.2 | 0.5 | 100.0 | 198 |
| Scheduled tribe | (76.7) | (3.3) | (20.0) | (--) | 100.0 | 30 |
| Other | 76.6 | 14.6 | 8.7 | 0.1 | 100.0 | 3229 |
| Total | 76.2 | 14.4 | 9.3 | 0.1 | 100.0 | 3457 |

Note: Total includes 1 woman age 13-14, who is not shown separately.
 () Based on 25-49 cases
 -- Less than 0.05 percent

6.10 Discussion of Family Planning Among Couples

Among nonsterilized couples, all currently married women who knew a contraceptive method were asked how often they had talked with their husbands about family planning in the past year. The extent of such communication was considerable in Delhi. Overall, 67 percent said they had discussed this topic with their husbands at least once in the previous year (Table 6.16). Forty-six percent discussed family planning once or twice and 21 percent discussed it more often. A relatively high percentage of women age 25-34 (75 percent) reported that they

| Table 6.16 Discussion of family planning with husband | | | | | | |
|--|---|---------------|-------------|------------|---------------|-----------------|
| Percent distribution of nonsterilized currently married women knowing a contraceptive method by the number of times they discussed family planning with their husbands in the past year, according to selected background characteristics, Delhi, 1993 | | | | | | |
| Background characteristic | Number of times family planning discussed | | | | Total percent | Number of women |
| | Never | Once or twice | More often | Missing | | |
| Age | | | | | | |
| 15-19 | 49.7 | 35.9 | 14.5 | -- | 100.0 | 145 |
| 20-24 | 33.2 | 45.9 | 20.9 | -- | 100.0 | 599 |
| 25-29 | 23.7 | 51.6 | 24.7 | -- | 100.0 | 657 |
| 30-34 | 27.2 | 51.8 | 20.8 | 0.2 | 100.0 | 427 |
| 35-39 | 30.4 | 43.2 | 24.8 | 1.7 | 100.0 | 303 |
| 40-44 | 42.0 | 39.8 | 18.2 | -- | 100.0 | 181 |
| 45-49 | 57.6 | 29.8 | 11.5 | 1.0 | 100.0 | 191 |
| Respondent's education | | | | | | |
| Illiterate | 40.3 | 41.2 | 18.0 | 0.5 | 100.0 | 865 |
| Lit., < middle complete | 30.9 | 48.2 | 20.3 | 0.6 | 100.0 | 330 |
| Middle school complete | 29.8 | 48.4 | 21.8 | -- | 100.0 | 252 |
| High school and above | 28.0 | 48.2 | 23.6 | 0.2 | 100.0 | 1057 |
| Religion | | | | | | |
| Hindu | 31.7 | 46.7 | 21.2 | 0.3 | 100.0 | 2000 |
| Muslim | 36.3 | 40.7 | 22.7 | 0.3 | 100.0 | 295 |
| Sikh | 42.8 | 42.1 | 15.1 | -- | 100.0 | 152 |
| Other | 26.3 | 49.1 | 22.8 | 1.8 | 100.0 | 57 |
| Caste/tribe | | | | | | |
| Scheduled caste | 41.5 | 36.6 | 22.0 | -- | 100.0 | 123 |
| Other (Non-SC/ST) | 32.4 | 46.4 | 20.9 | 0.3 | 100.0 | 2363 |
| Use of contraception | | | | | | |
| Ever used | 24.6 | 50.9 | 24.4 | 0.2 | 100.0 | 1620 |
| Never used | 48.0 | 36.5 | 14.9 | 0.6 | 100.0 | 884 |
| Husband's education | | | | | | |
| Illiterate | 46.1 | 35.7 | 17.7 | 0.6 | 100.0 | 345 |
| Lit., < primary complete | 37.9 | 47.4 | 13.7 | 1.1 | 100.0 | 95 |
| Primary school complete | 42.2 | 42.6 | 14.7 | 0.4 | 100.0 | 251 |
| Middle school complete | 29.6 | 49.4 | 21.0 | -- | 100.0 | 328 |
| High school complete | 29.8 | 45.9 | 24.0 | 0.3 | 100.0 | 775 |
| Above high school | 27.0 | 49.9 | 22.8 | 0.3 | 100.0 | 703 |
| Total | 32.8 | 45.8 | 21.0 | 0.3 | 100.0 | 2504 |

Note: Table excludes women who are sterilized or whose husbands are sterilized. Total includes 1 woman age 13-14, 18 scheduled tribe women and 7 women with missing information on husband's education, who are not shown separately.
 -- Less than 0.05 percent

had discussed family planning with their husbands. Women in the early and late reproductive years were less likely to have communicated with their husbands on family planning.

Differences are also observed according to the respondent's level of education, her husband's education, and the ever use of family planning. The extent of husband-wife communication about family planning varies little by level of education among literate women but is higher among literate than among illiterate women. However, husband's education is positively related to interspousal communication about family planning. Interspousal communication is more common among women whose husbands had studied beyond high school (73 percent) than among those whose husbands are illiterate (53 percent). Three-fourths of the women who had ever used a family planning method had discussed the topic with their husbands; half having discussed it once or twice and one-fourth having discussed it more often. Among those who had never used family planning, however, only half had discussed family planning with their husbands in the past year.

6.11 Attitudes of Couples Toward Family Planning

Information on attitudes toward family planning was obtained by asking women whether they and their husbands approve or disapprove of couples using a method to delay or avoid pregnancy. Table 6.17 shows the degree of consensus between women's attitudes and those of their husbands. Of course, women may not accurately report their husbands' actual attitudes toward contraception. However, a wife's perception of her husband's attitude is important since it may affect her own decisions.

Table 6.17 shows that 88 percent of currently married, nonsterilized women who knew of a contraceptive method approve of family planning use and 11 percent disapprove. Women perceived their husbands to be almost as favourable toward family planning as they are themselves. Twelve percent of women said they do not know their husband's attitude, and 9 percent thought their husbands disapprove of family planning. There is a substantial amount of consensus between individual husbands and wives regarding the approval of family planning. Seventy-six percent of female respondents reported that both they and their husbands approve of family planning and 6 percent said they both disapprove. The latter couples constitute a major problem for the family welfare programme since they are unlikely to accept family planning unless their attitudes change dramatically. No marked differentials are exhibited in percentage of women approving family planning by the age of the woman.

Education of women as well as their husbands is an important determinant of the approval of family planning by both husband and wife. Overall, 78 percent of illiterate women approve of family planning compared to 94 percent of women who had completed high school. Approval by both husband and wife is the lowest (59 percent) and lack of awareness about the husband's attitude is the highest (14 percent) among illiterate women. A similar relationship is observed with the level of husband's education. As education of the husband increases, the proportion of women who report that both they and their husbands approve of family planning increases from 53 percent in the case of illiterate husbands to 89 percent in the case of husbands with education above the high school level.

Table 6.17 Attitudes of couples toward family planning

For nonsterilized currently married women who know of a contraceptive method, the percentage who approve of family planning by their perception of their husband's attitude, according to selected background characteristics, Delhi, 1993

| Background characteristic | Respondent approves | | | Respondent disapproves | | | Respondent unsure | Total percent | Number of women |
|--|---------------------|---------------------|---|------------------------|---------------------|---|-------------------|---------------|-----------------|
| | Husband approves | Husband disapproves | Husband's attitude unknown ¹ | Husband approves | Husband disapproves | Husband's attitude unknown ¹ | | | |
| Respondent's age | | | | | | | | | |
| 15-19 | 62.8 | 4.1 | 17.2 | 2.1 | 6.2 | 6.9 | 0.7 | 100.0 | 145 |
| 20-24 | 74.3 | 4.0 | 8.7 | 1.3 | 4.7 | 6.0 | 1.0 | 100.0 | 599 |
| 25-29 | 80.2 | 2.7 | 6.7 | 1.2 | 4.7 | 3.5 | 0.9 | 100.0 | 657 |
| 30-34 | 81.0 | 3.3 | 4.7 | 0.7 | 5.6 | 2.6 | 2.1 | 100.0 | 427 |
| 35-39 | 80.2 | 4.3 | 3.3 | 1.3 | 7.6 | 2.3 | 1.0 | 100.0 | 303 |
| 40-44 | 71.8 | 4.4 | 7.7 | 2.8 | 8.8 | 3.3 | 1.1 | 100.0 | 181 |
| 45-49 | 69.1 | 3.1 | 11.5 | 1.6 | 5.2 | 7.9 | 1.6 | 100.0 | 191 |
| Respondent's education | | | | | | | | | |
| Illiterate | 58.8 | 5.0 | 14.3 | 1.7 | 8.8 | 9.8 | 1.5 | 100.0 | 865 |
| Lit., < primary complete | 77.9 | 3.3 | 7.6 | 1.2 | 5.8 | 3.3 | 0.9 | 100.0 | 330 |
| Middle school complete | 82.5 | 3.6 | 6.0 | 0.4 | 5.6 | 1.2 | 0.8 | 100.0 | 252 |
| High school and above | 88.9 | 2.5 | 2.3 | 1.3 | 3.0 | 0.9 | 1.1 | 100.0 | 1057 |
| Religion | | | | | | | | | |
| Hindu | 77.4 | 3.3 | 7.2 | 1.4 | 5.2 | 4.2 | 1.4 | 100.0 | 2000 |
| Muslim | 66.1 | 4.7 | 12.2 | 1.4 | 9.2 | 5.8 | 0.7 | 100.0 | 295 |
| Sikh | 83.6 | 3.9 | 3.9 | 1.3 | 4.6 | 2.6 | -- | 100.0 | 152 |
| Other | 77.2 | 5.3 | 5.3 | 1.8 | 5.3 | 3.5 | 1.8 | 100.0 | 57 |
| Caste/tribe | | | | | | | | | |
| Scheduled caste | 67.5 | 2.4 | 12.2 | 0.8 | 4.9 | 10.6 | 1.6 | 100.0 | 123 |
| Other (Non-SC/ST) | 76.9 | 3.6 | 7.2 | 1.4 | 5.7 | 4.0 | 1.2 | 100.0 | 2363 |
| Use of contraception | | | | | | | | | |
| Ever used | 86.8 | 2.3 | 4.3 | 1.2 | 3.5 | 1.0 | 0.8 | 100.0 | 1620 |
| Never used | 57.5 | 5.8 | 13.3 | 1.6 | 9.5 | 10.4 | 1.9 | 100.0 | 884 |
| Family planning discussed with husband in last year | | | | | | | | | |
| Never | 61.1 | 4.7 | 13.1 | 1.8 | 7.2 | 10.6 | 1.5 | 100.0 | 822 |
| Once or twice | 80.2 | 3.5 | 5.8 | 1.3 | 6.5 | 1.6 | 1.1 | 100.0 | 1147 |
| More often | 92.8 | 1.9 | 2.7 | 0.8 | 1.1 | 0.4 | 0.4 | 100.0 | 527 |
| Husband's education | | | | | | | | | |
| Illiterate | 53.0 | 4.3 | 17.1 | 2.3 | 10.4 | 11.0 | 1.7 | 100.0 | 345 |
| Lit., < primary complete | 60.0 | 7.4 | 9.5 | 3.2 | 6.3 | 7.4 | 6.3 | 100.0 | 95 |
| Primary school complete | 69.3 | 4.8 | 10.4 | 0.8 | 8.0 | 6.4 | 0.4 | 100.0 | 251 |
| Middle school complete | 71.0 | 5.5 | 10.4 | 1.2 | 6.1 | 4.9 | 0.9 | 100.0 | 328 |
| High school complete | 81.9 | 2.6 | 5.8 | 0.8 | 4.5 | 3.5 | 0.9 | 100.0 | 775 |
| Above high school | 89.2 | 2.4 | 2.1 | 1.6 | 3.3 | 0.4 | 1.0 | 100.0 | 703 |
| Total | 76.4 | 3.6 | 7.5 | 1.4 | 5.6 | 4.3 | 1.2 | 100.0 | 2504 |

Note: Table excludes women who are sterilized or whose husbands are sterilized. Total includes 1 woman age 13-14, 18 scheduled tribe women, 8 women with missing information on number of times family planning was discussed with husband and 7 women with missing information on husband's education, who are not shown separately.

-- Less than 0.5 percent

¹Respondent does not know her husband's attitude

The approval of family planning is lower among Muslim couples than among Hindus. It is highest among Sikh couples (84 percent). Approval is also lower among those belonging to scheduled castes than among non-SC/ST group. Eighty-seven percent of the women who had ever used family planning reported that both they and their husbands approve of family planning. Among never users who approve of family planning, only 6 percent said their husbands do not approve of family planning. Among the never users, however, only 22 percent of women do not approve of family planning.

Table 6.17 also reveals that, as expected, the approval of family planning by both the husband and wife is positively related to the number of times family planning was discussed between the husband and the wife in the past year. The percentage of women who report that both they and their husbands approve of family planning is 61 for those who had never discussed family planning, 80 for those who have discussed the topic once or twice and 93 for those who had more frequent discussions of family planning with their husbands. The percentage of women who were not aware of their husband's attitude is highest (24 percent) among those who did not discuss family planning with their husbands in the last year.

CHAPTER 7

FERTILITY PREFERENCES

In recent years, increasing attention is being paid to research in fertility preferences particularly in developing countries. Knowledge about fertility preferences also makes it possible to assess the unmet need for family planning. In the NFHS, women were asked several questions about their desire for children in the future. The questions dealt with: 1) whether the woman wanted another child, 2) if so, how soon she would like to have her next child, and 3) how many children she would want in her lifetime if she could start over again. In addition, several questions were asked to ascertain the extent of sex preference. Information was collected on the preferred sex of the next child and the ideal number of children by sex. Responses to these questions are analyzed in this chapter.

Interpretation of data on fertility preferences has always been the subject of controversy. Survey questions have been criticized on the grounds that answers may be misleading for a number of reasons. First, attitudes toward childbearing may not be fully formed, they may be held with little conviction and they may change over time. Moreover, the responses may not take into account the effect of social pressures or the attitudes of the husband and other family members, who may have a major influence on reproductive decisions. In addition, preferences for limiting family size can only be implemented if a woman has the means to fulfil her desires. Nevertheless, in the aggregate, data on fertility preferences can be useful as an indicator of general attitudes and the possible future course of fertility.

In this chapter, it is assumed that women who are sterilized (or whose husbands are sterilized) do not want any more children. Of course, some women may regret that the sterilization took place and they would in fact like to have another child. This issue can be explored by examining responses to the questions on sterilization by couples who regret that they are sterilized. Only 3 percent or 37 women who are sterilized or whose husbands are sterilized regret that the sterilization was performed (data not shown). However, that does not automatically mean that women who regret the sterilization would like to have more children, since they may regret the sterilization for some other reason (such as medical complications or side effects of the operation). Women who regret that the sterilization took place were further asked the reason for their regret. Overall, only 19 of these women say they regretted the sterilization because they, or their husbands, wanted to have another child. Therefore, the assumption that women who are sterilized (or whose husbands are sterilized) do not want any more children will only slightly underestimate preferences to have another child and overestimate desires to stop childbearing.

7.1 Desire for More Children

In the NFHS, currently married women were asked "Would you like to have another child or would you prefer not to have any more children?" Women who did not yet have any children were asked whether or not they wanted to have any children. If a woman was pregnant, she was asked whether or not she wanted another child after the one she was expecting. Women who want another child were then asked about the preferred timing and sex of their next child.

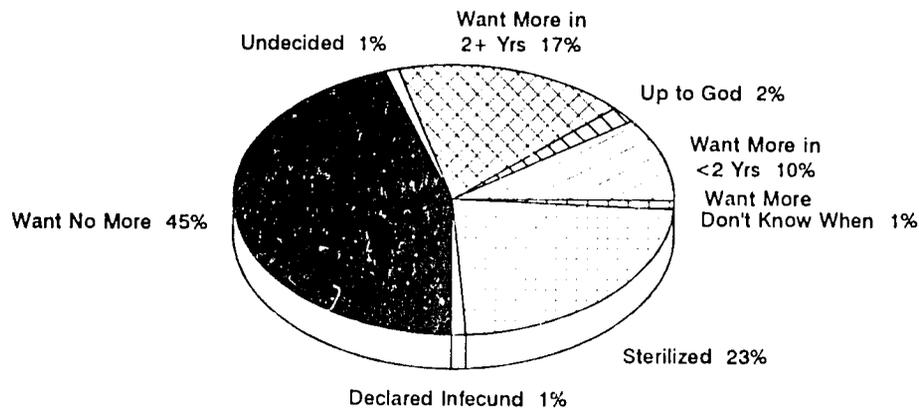
Table 7.1 and Figure 7.1 provide information about the fertility preferences of currently married women. Overall, only 27 percent of women say they want another child at some time in the future and more than three-fifths of these women say they would like to wait at least two years before having their next birth. Only 10 percent of women say they would like another child soon (that is, within two years). Less than 2 percent of women express the attitude that this matter is "up to God". Forty-five percent of women say they do not want any more children and 23 percent of women (or their husbands) are sterilized, so that they cannot have any more children. These two groups together constitute 69 percent of all currently married women in Delhi.

From the point of view of understanding the total demand for contraception, it is of interest to add together women who do not want any more children (including those who have already been sterilized) with women who want to delay their next birth for two years or longer. Overall, 85 percent of women fall into the category of potential users of contraception. Thus, in addition to the 23 percent who are already sterilized (or whose husbands are already sterilized), another 62 percent have fertility preferences that imply a desire to contracept.

Among women who want another child, there is a strong preference for having a son as the next child. One-third (33 percent) say they want a son, only 10 percent express a desire for

| Table 7.1 Fertility preferences | | | | | | | | |
|---|--|-------|-------|-------|-------|-------|-------|-------|
| Percent distribution of currently married women by desire for children and preferred sex of additional child, according to number of living children, Delhi, 1993 | | | | | | | | |
| Desire for children | Number of living children ¹ | | | | | | | Total |
| | 0 | 1 | 2 | 3 | 4 | 5 | 6+ | |
| Desire for additional child | | | | | | | | |
| Have another soon ² | 59.9 | 18.9 | 4.3 | 2.2 | 1.1 | -- | 0.5 | 9.8 |
| Have another later ³ | 24.6 | 56.1 | 13.1 | 5.0 | 3.0 | 2.6 | 1.6 | 16.6 |
| Have another, undecided when | 1.1 | 1.1 | 0.5 | 0.1 | -- | -- | -- | 0.5 |
| Undecided | 0.7 | 2.0 | 1.8 | 1.3 | 0.9 | -- | 1.1 | 1.4 |
| Up to God | 7.4 | 1.5 | 1.1 | 0.7 | 0.9 | 0.9 | 1.6 | 1.6 |
| Want no more | 2.2 | 17.6 | 64.7 | 51.4 | 49.2 | 44.9 | 61.7 | 45.4 |
| Sterilized | 0.7 | 1.3 | 13.5 | 38.0 | 44.0 | 48.5 | 32.4 | 23.3 |
| Declared infecund | 3.3 | 1.5 | 0.8 | 1.2 | 0.9 | 2.6 | 1.1 | 1.3 |
| Missing | -- | -- | 0.2 | 0.1 | -- | 0.4 | -- | 0.1 |
| Total percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number | 272 | 540 | 927 | 695 | 461 | 227 | 188 | 3310 |
| Preferred sex of additional child | | | | | | | | |
| Boy | 13.7 | 27.3 | 58.4 | 70.6 | * | * | * | 33.4 |
| Girl | 2.6 | 13.9 | 10.8 | 9.8 | * | * | * | 9.8 |
| Doesn't matter | 57.1 | 44.4 | 17.5 | 11.8 | * | * | * | 39.9 |
| Up to God | 26.6 | 14.4 | 13.3 | 7.8 | * | * | * | 16.9 |
| Total percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number wanting more | 233 | 410 | 166 | 51 | 19 | 6 | 4 | 889 |
| * Percentage not shown; based on fewer than 25 cases | | | | | | | | |
| -- Less than 0.05 percent | | | | | | | | |
| ¹ Includes current pregnancy, if any | | | | | | | | |
| ² Wants next birth within 2 years | | | | | | | | |
| ³ Wants to delay next birth for 2 or more years | | | | | | | | |

Figure 7.1
Fertility Preferences Among
Currently Married Women Age 13-49



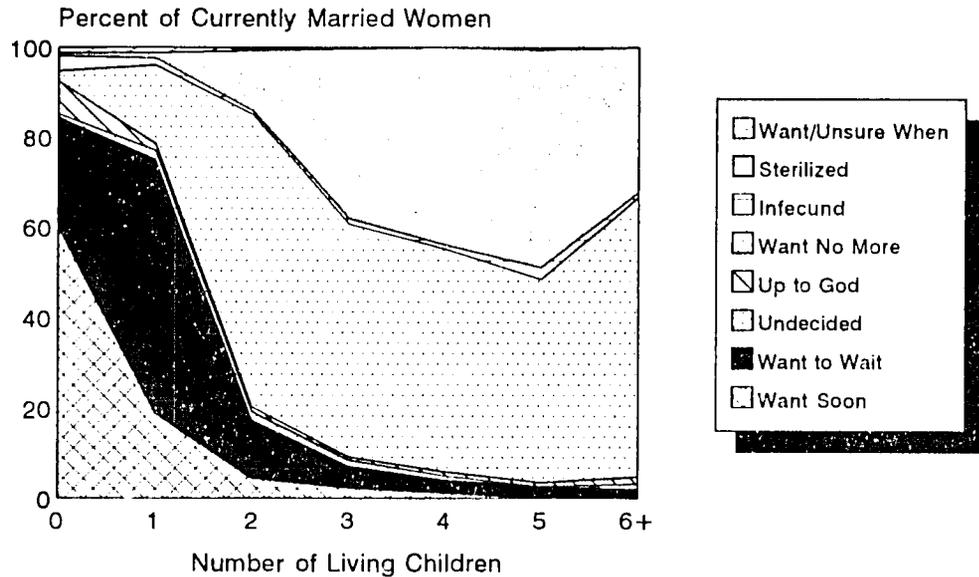
NFHS, Delhi, 1993

a daughter, and the rest say that the sex of the child does not matter (40 percent) or that it is up to God (17 percent). Women who do not have any children are unlikely to want a daughter for their first child; only 3 percent express a desire for a daughter, whereas 14 percent say they want a son. Generally, son preference increases as the number of living children increases. Thus, the relative indifference of couples without children towards their first child's sex would appear to reflect a willingness to wait for a son rather than a willingness not to have sons.

As expected, the desire for more children declines rapidly as the number of children increases (Table 7.1 and Figure 7.2). More than 85 percent of women with no children say they want a child and only 3 percent say they do not want any children or have been sterilized. The proportion who want another child drops dramatically to 18 percent for women who have two living children and to 7 percent for those with three living children. The desire to have a child within two years drops even more rapidly, from 60 percent for women without any living children to 4 percent or less for women with two or more living children. Interestingly, one-fourth of women with no children want to delay childbearing for two years or longer and the desire for spacing children is very strong among women who have one or two children. More than half (56 percent) of women with one child and 13 percent of women with two children would like to wait at least two years before having their next child.

The age pattern of fertility preferences shown in Table 7.2 is similar to the pattern by number of children discussed above. Almost half of currently married women age 15-24 want to space their next birth; and by age 30-34 about 86 percent of women want to stop childbearing

Figure 7.2
Fertility Preferences by Number of
Living Children



NFHS, Delhi, 1993

altogether. The preference for sons shows an upward trend with age.

Table 7.3 provides information about subgroup variations in the potential demand for family planning. As before, women who are sterilized (or whose husbands are sterilized) are added to those who say they want no more children to derive this measure. Age differences have already been discussed. Educational attainment is not strongly related to fertility desires for women who have no children. At higher parities, however, education is strongly related to the desire to have no more children. The differentials are particularly large for women who have exactly two children, suggesting that the two-child family is much more acceptable to educated women than to other women. Muslims are least likely to want to stop childbearing and Sikhs are most likely to want to stop. Differentials by the number of sons and daughters provide further evidence of son preference in Delhi. The proportion of women wanting no more children among those who have all sons is more than twice as high as among those who have all daughters.

7.2 Need for Family Planning Services

Currently married women who say that they do not want any more children or who want to wait two or more years before having another child, but are not using contraception, are defined as having an *unmet need* for family planning. Current users of family planning methods are said to have a *met need* for family planning. The total demand for family planning is the sum of the met need and the unmet need for family planning. Table 7.4 shows the unmet need,

Table 7.2 Fertility preferences by age

Percent distribution of currently married women by desire for children and preferred sex of additional child, according to age, Delhi, 1993

| Desire for children | Current age | | | | | | | Total |
|--|-------------|-------|-------|-------|--------|-------|-------|-------|
| | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 | |
| Desire for additional child | | | | | | | | |
| Have another soon ¹ | 26.0 | 19.5 | 12.7 | 6.5 | 4.2 | 0.9 | 0.6 | 9.8 |
| Have another later ² | 60.7 | 43.7 | 18.0 | 5.1 | 1.9 | 0.6 | -- | 16.6 |
| Have another, undecided when | 1.3 | 0.8 | 0.5 | 0.5 | 0.2 | -- | -- | 0.5 |
| Undecided | 2.0 | 2.1 | 2.9 | 0.3 | 0.2 | 0.3 | 0.6 | 1.4 |
| Up to God | 3.3 | 1.9 | 2.0 | 1.7 | 1.1 | 0.6 | 0.3 | 1.6 |
| Want no more | 5.3 | 29.1 | 48.5 | 54.4 | 55.2 | 52.1 | 49.5 | 45.4 |
| Sterilized | 1.3 | 2.7 | 15.1 | 31.1 | 35.3 | 43.6 | 40.2 | 23.3 |
| Declared infecund | -- | 0.2 | 0.3 | 0.3 | 1.5 | 1.8 | 8.1 | 1.3 |
| Missing | -- | -- | -- | -- | 0.4 | -- | 0.6 | 0.1 |
| Total percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number | 150 | 625 | 782 | 630 | 473 | 328 | 321 | 3310 |
| Preferred sex of additional child | | | | | | | | |
| Boy | 24.2 | 30.8 | 38.1 | 40.8 | (50.0) | * | * | 33.4 |
| Girl | 7.6 | 10.0 | 11.9 | 6.6 | (10.0) | * | * | 9.8 |
| Doesn't matter | 44.7 | 40.6 | 36.9 | 42.1 | (26.7) | * | * | 39.9 |
| Up to God | 23.5 | 18.5 | 13.1 | 10.5 | (13.3) | * | * | 16.9 |
| Total percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number wanting more | 132 | 399 | 244 | 76 | 30 | 5 | 2 | 889 |

Note: Total includes 1 woman age 13-14, who is not shown separately.

() Based on 25-49 cases

* Percentage not shown; based on fewer than 25 cases

-- Less than 0.05 percent

¹Wants next birth within 2 years

²Wants to delay next birth for 2 or more years

met need and total demand for family planning, according to whether there is a need for spacing or limiting births. The table notes give detailed definitions of these concepts.

Overall, only 15 percent of women in Delhi have an unmet need for family planning, according to the definitions being used. The unmet need is the same for spacing births as is for limiting births. Together with the 60 percent of currently married women who are using contraception, a total of 76 percent of currently married women have a demand for family planning. If all of the women who say they want to space or limit their births were to use family planning, the contraceptive prevalence rate would increase from 60 percent to 76 percent of married women. This means that 80 percent of the demand for family planning is being met by current programmes, as seen in the last column of Table 7.4.

The unmet need for limiting childbearing increases steadily until age 35-39 and decreases thereafter. The unmet need for spacing, on the other hand, is particularly strong for women under age 25. This is the segment of the population whose family planning needs are least likely to be met by current programmes. Around 30 percent of the total demand for family planning services is being met for married women age 15-19, a figure that rises to 65 percent for women age 20-24 and 78 percent for women age 25-29. If the level of unmet need indicated in the table

Table 7.3 Desire to have no more children by background characteristics

Percentage of currently married women who want no more children by number of living children and selected background characteristics, Delhi, 1993

| Background characteristic | Number of living children ¹ | | | | | | | Total |
|---|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6+ | |
| Age | | | | | | | | |
| 13-19 | -- | -- | * | NC | * | NC | NC | 6.0 |
| 20-29 | 1.9 | 10.9 | 64.6 | 81.7 | 84.9 | (90.6) | * | 49.5 |
| 30-39 | (5.7) | 44.7 | 92.6 | 93.3 | 96.0 | 96.1 | 91.2 | 87.6 |
| 40-49 | * | (85.3) | 93.8 | 95.3 | 97.0 | 91.3 | 96.0 | 92.8 |
| Education | | | | | | | | |
| Illiterate | 4.7 | 11.5 | 52.4 | 79.5 | 92.3 | 93.5 | 93.1 | 67.7 |
| Literate < middle complete | (--) | (6.3) | 76.5 | 92.2 | 93.7 | (91.7) | (93.3) | 72.6 |
| Middle school complete | (5.1) | 17.5 | 75.6 | 95.8 | 92.7 | * | * | 67.2 |
| High school and above | 1.0 | 24.7 | 89.2 | 95.9 | 96.1 | * | * | 68.5 |
| Religion | | | | | | | | |
| Hindu | 1.4 | 19.0 | 78.5 | 89.3 | 95.7 | 94.4 | 93.8 | 69.0 |
| Muslim | (--) | (6.5) | 56.9 | (78.7) | 76.9 | (86.1) | 92.7 | 59.3 |
| Sikh | * | (35.7) | 88.2 | (100.0) | (88.5) | * | * | 76.2 |
| Other | * | * | (89.3) | * | * | * | * | 77.5 |
| Caste/tribe | | | | | | | | |
| Scheduled caste | * | (9.4) | (61.8) | (88.6) | (96.6) | * | * | 66.3 |
| Scheduled tribe | * | * | * | * | * | * | * | (69.2) |
| Other | 2.7 | 19.4 | 79.0 | 89.3 | 93.0 | 94.0 | 92.8 | 68.8 |
| Number of living sons² | | | | | | | | |
| None | 2.6 | 13.2 | 43.8 | 49.1 | * | * | * | 19.7 |
| 1 | NA | 27.2 | 86.0 | 90.9 | 93.5 | (86.7) | * | 74.1 |
| 2 | NA | NA | 86.8 | 95.6 | 93.4 | 96.0 | (91.7) | 92.3 |
| 3+ | NA | NA | NA | 90.5 | 98.6 | 94.1 | 96.0 | 95.4 |
| Number of living daughters² | | | | | | | | |
| None | 2.6 | 27.2 | 86.8 | 90.5 | (97.0) | * | * | 45.1 |
| 1 | NA | 13.2 | 86.0 | 95.6 | 99.1 | (96.3) | * | 76.9 |
| 2 | NA | NA | 43.8 | 90.9 | 93.4 | 92.6 | (93.3) | 82.0 |
| 3+ | NA | NA | NA | 49.1 | 92.5 | 93.6 | 94.6 | 87.7 |
| Total | 2.6 | 18.9 | 78.2 | 89.4 | 93.3 | 93.4 | 93.6 | 68.7 |

Note: Women who have been sterilized, or whose husbands have been sterilized, are considered to want no more children.

NC: Not computed because there are no cases on which to base a percentage

NA: Not applicable

() Based on 25-49 cases

* Percentage not shown; based on fewer than 25 cases

-- Less than 0.05 percent

¹Includes current pregnancy, if any

²Excludes pregnant women

Table 7.4 Need for family planning services

Percent of currently married women with unmet need, met need, and total demand for family planning (FP) services by selected background characteristics, Delhi, 1993

| Background characteristic | Unmet need for FP ¹ | | | Met need-currently using ² | | | Total demand for FP | | | Percent of need satisfied |
|----------------------------------|--------------------------------|------------|-------------|---------------------------------------|-------------|-------------|---------------------|-------------|-------------|---------------------------|
| | To space | To limit | Total | To space | To limit | Total | To space | To limit | Total | |
| Age | | | | | | | | | | |
| 15-19 | 32.7 | 1.3 | 34.0 | 12.7 | 2.0 | 14.7 | 45.3 | 3.3 | 48.7 | 30.1 |
| 20-24 | 17.0 | 5.6 | 22.6 | 26.4 | 15.7 | 42.1 | 43.4 | 21.3 | 64.6 | 65.1 |
| 25-29 | 8.7 | 8.4 | 17.1 | 16.9 | 44.1 | 61.0 | 25.6 | 52.6 | 78.1 | 78.1 |
| 30-34 | 3.3 | 10.3 | 13.7 | 4.4 | 69.8 | 74.3 | 7.8 | 80.2 | 87.9 | 84.5 |
| 35-39 | 0.8 | 10.6 | 11.4 | 2.1 | 72.3 | 74.4 | 3.0 | 82.9 | 85.8 | 86.7 |
| 40-44 | 0.3 | 9.5 | 9.8 | -- | 72.0 | 72.0 | 0.3 | 81.4 | 81.7 | 88.1 |
| 45-49 | -- | 3.7 | 3.7 | -- | 55.5 | 55.5 | -- | 59.2 | 59.2 | 93.7 |
| Education | | | | | | | | | | |
| Illiterate | 8.6 | 11.3 | 19.8 | 7.7 | 42.5 | 50.2 | 16.3 | 53.8 | 70.1 | 71.7 |
| Lit., < middle complete | 9.1 | 6.6 | 15.7 | 5.8 | 54.9 | 60.8 | 14.9 | 61.6 | 76.5 | 79.5 |
| Middle school complete | 8.9 | 6.3 | 15.2 | 12.9 | 52.9 | 65.8 | 21.8 | 59.2 | 81.0 | 81.2 |
| High school and above | 5.6 | 5.5 | 11.1 | 14.9 | 53.5 | 68.4 | 20.5 | 59.0 | 79.5 | 86.0 |
| Religion | | | | | | | | | | |
| Hindu | 7.2 | 7.7 | 14.9 | 10.7 | 50.6 | 61.2 | 17.9 | 58.2 | 76.1 | 80.4 |
| Muslim | 12.2 | 11.9 | 24.0 | 12.8 | 34.7 | 47.4 | 24.9 | 46.5 | 71.4 | 66.4 |
| Sikh | 5.7 | 5.2 | 10.9 | 7.8 | 58.0 | 65.8 | 13.5 | 63.2 | 76.7 | 85.8 |
| Other | 5.0 | 5.0 | 10.0 | 10.0 | 58.7 | 68.8 | 15.0 | 63.7 | 78.7 | 87.3 |
| Caste/tribe | | | | | | | | | | |
| Scheduled caste | 10.2 | 9.1 | 19.3 | 11.8 | 47.1 | 58.8 | 21.9 | 56.1 | 78.1 | 75.3 |
| Scheduled tribe | (3.8) | (11.5) | (15.4) | (15.4) | (46.2) | (61.5) | (19.2) | (57.7) | (76.9) | (80.0) |
| Other | 7.4 | 7.8 | 15.2 | 10.6 | 49.8 | 60.4 | 18.0 | 57.6 | 75.6 | 79.9 |
| Number of living children | | | | | | | | | | |
| None | 15.1 | 0.6 | 15.7 | 12.5 | 0.6 | 13.1 | 27.6 | 1.1 | 28.8 | 45.5 |
| 1 | 18.3 | 3.2 | 21.5 | 34.9 | 12.7 | 47.6 | 53.2 | 15.9 | 69.0 | 68.9 |
| 2 | 5.3 | 7.0 | 12.3 | 9.1 | 61.7 | 70.8 | 14.4 | 68.7 | 83.1 | 85.2 |
| 3 | 4.6 | 9.7 | 14.2 | 4.6 | 66.8 | 71.4 | 9.1 | 76.5 | 85.4 | 83.4 |
| 4 | 2.7 | 9.7 | 12.4 | 1.8 | 71.2 | 73.0 | 4.5 | 80.9 | 85.4 | 85.5 |
| 5 | 1.4 | 16.1 | 17.5 | 0.5 | 67.7 | 68.2 | 1.8 | 83.9 | 85.7 | 79.6 |
| 6+ | 2.8 | 19.3 | 22.1 | 0.6 | 54.7 | 55.2 | 3.3 | 74.0 | 77.3 | 71.4 |
| Total | 7.6 | 7.9 | 15.4 | 10.7 | 49.6 | 60.3 | 18.2 | 57.5 | 75.7 | 79.6 |

Note: Total includes 1 woman age 13-14, who is not shown separately.

() Based on 25-49 cases

-- Less than 0.05 percent

¹Unmet need for spacing includes pregnant women whose pregnancy was mistimed, amenorrhoeic women whose last birth was mistimed, and women who are neither pregnant nor amenorrhoeic and who are not using any method of family planning and say they want to wait 2 or more years for their next birth. Also included in unmet need for spacing are women who are unsure whether they want another child or who want another child but are unsure when to have the birth. Unmet need for limiting refers to pregnant women whose pregnancy was unwanted, amenorrhoeic women whose last child was unwanted and women who are neither pregnant nor amenorrhoeic and who are not using any method of family planning and who want no more children.

²Using for spacing refers to women who are using some method of family planning and say they want to have another child or are undecided whether to have another. Using for limiting refers to women who are using and who want no more children. Note that the specific methods used are not taken into account here.

is assumed to reflect the needs of all currently married women age 13-49 in Delhi, then about 240,000 women in Delhi have an unmet need for family planning.

The unmet need for family planning increases as the level of education decreases. The illiterate women have a slightly greater unmet need for limiting births and their need is less likely to be satisfied by current family planning programmes than the needs of others. The final panel in Table 7.4 indicates that current family planning services are particularly inadequate for satisfying the child spacing and limiting needs of young women (under age 30), Muslim women and women with no children or only one child, as well as those who have six or more children.

7.3 Ideal Number of Children

The analysis so far has focused on the respondent's reproductive desires for the future, implicitly taking into account the number of sons and daughters that she already has. In determining the *ideal* number of children, on the other hand, the respondent is asked to perform the more difficult abstract task of stating the number of children she would like to have if she could start over again. In the NFHS, women who have no children were asked, "If you could choose exactly the number of children to have in your whole life, how many would that be?" Women who already had children were asked, "If you could go back to the time you did not have any children and could choose exactly the number of children to have in your whole life, how many would that be?" Some women had difficulty answering this hypothetical question and the question often had to be repeated to ensure that it was understood by the respondent. Nevertheless, 94 percent of respondents were able to give a numerical response when asked for their ideal number of children (see Table 7.5). The percentage who gave nonnumerical responses (such as "up to God", "How can I say", "It depends", etc.) is higher among women

| Table 7.5 Ideal and actual number of children | | | | | | | | |
|--|--|-------|-------|-------|-------|-------|-------|-------|
| Percent distribution of ever-married women by ideal number of children and mean ideal number of children for ever-married women and currently married women, according to number of living children, Delhi, 1993 | | | | | | | | |
| Ideal number of children | Number of living children ¹ | | | | | | | Total |
| | 0 | 1 | 2 | 3 | 4 | 5 | 6+ | |
| 0 | 0.3 | -- | -- | -- | -- | -- | -- | -- |
| 1 | 8.7 | 11.4 | 3.1 | 1.8 | 0.8 | 0.8 | -- | 4.0 |
| 2 | 61.2 | 66.0 | 75.8 | 41.7 | 30.2 | 20.6 | 12.1 | 51.8 |
| 3 | 17.0 | 16.2 | 15.3 | 45.3 | 35.8 | 39.5 | 31.6 | 27.4 |
| 4 | 3.8 | 2.3 | 3.1 | 5.0 | 21.6 | 19.8 | 22.3 | 8.3 |
| 5 | 0.7 | 0.5 | 0.5 | 0.6 | 2.5 | 8.2 | 7.8 | 1.8 |
| 6+ | 0.3 | 0.4 | 0.1 | 0.3 | 0.6 | 1.6 | 6.3 | 0.8 |
| Non-numeric responses | 8.0 | 3.2 | 2.0 | 5.5 | 8.4 | 9.5 | 19.9 | 5.9 |
| Total percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number of women | 289 | 562 | 953 | 727 | 477 | 243 | 206 | 3457 |
| Mean ideal number ² | | | | | | | | |
| Ever-married women | 2.2 | 2.1 | 2.2 | 2.6 | 3.0 | 3.2 | 3.6 | 2.5 |
| Currently married women | 2.2 | 2.1 | 2.2 | 2.6 | 3.0 | 3.2 | 3.6 | 2.5 |

-- Less than 0.05 percent
¹Includes current pregnancy, if any
²Means are calculated excluding the women giving non-numeric responses

with no living children and with four or more living children, and is highest among women with six or more living children.

Table 7.5 shows that a large majority of women (79 percent) consider two or three children as the ideal number. Only 4 percent of women consider one as the ideal number of children and only 11 percent think that more than three children would be ideal. For those who gave numeric responses, the average number of children considered ideal is 2.5. The mean ideal number of children increases with the number of living children and ranges from 2.2 for women with less than three children to 3.6 for those who already have six or more children.

Although it is thought that some women adjust their ideal family size upwards over time as their number of children increases by way of rationalization, it is evident from Table 7.5 that a large proportion of women report their ideal number of children lower than the number they already have. For example, among women who have five living children, 4 in 5 state that their ideal family would consist of fewer than the number of children they now have. Similarly, two-thirds of women with four children think that two or three children would be ideal. Thus, family size norms are quite moderate and often much lower than woman's actual family size. This is another indicator of surplus or unwanted fertility.

Table 7.6 shows the mean ideal number of children for ever-married women by age and selected background characteristics. The highest mean ideal family size of 2.8 is for women age 45-49. The mean varies little from the overall mean of 2.5 for other age groups. The stated ideal family size is more than half a child higher for Muslims than Hindus with little difference between Hindus and Sikhs. Scheduled caste and scheduled tribe women have a slightly higher ideal number of children than the others. The most pronounced differentials are by educational attainment, particularly the wife's education. The average ideal family size is almost one child higher for illiterate women than for women who have completed high school. There is little difference in the ideal number of children by the work status of the women.

Women who gave a numerical response to the question about the ideal number of children were further asked how many of these children they would like to be boys and how many they would like to be girls. The responses are shown in Table 7.7. The preference for sons over daughters is indicated by a mean ideal family size which consists of 1.2 sons and 0.9 daughters. The ideal number of sons generally increases with current family size, much more than that of daughters.

7.4 Fertility Planning

Another way to gauge the extent of unwanted fertility is to focus on recent fertility behaviour. For each child born in the four years before the survey and current pregnancy, if any, women were asked whether the pregnancy was wanted at that time (planned), wanted at a later time (mistimed), or not wanted at all (unwanted). Information from these questions may result in underestimation of unplanned childbearing due to rationalization. A woman may retrospectively declare an unplanned birth as one that was wanted at the time. Nevertheless, these questions provide another indication of the degree to which couples successfully control childbearing.

Table 7.6 Ideal number of children by background characteristics

Mean ideal number of children for ever-married women by age and selected background characteristics, Delhi, 1993

| Background characteristic | Current age | | | | | | | Total |
|---------------------------------|-------------|------------|------------|------------|------------|------------|------------|------------|
| | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 | |
| Education | | | | | | | | |
| Illiterate | 2.8 | 2.8 | 2.9 | 3.0 | 3.0 | 3.1 | 3.2 | 3.0 |
| Literate, < middle complete | (2.4) | 2.4 | 2.5 | 2.7 | 2.9 | 2.7 | 2.9 | 2.6 |
| Middle school complete | (2.3) | 2.2 | 2.3 | 2.4 | (2.8) | * | (3.0) | 2.4 |
| High school and above | * | 2.1 | 2.1 | 2.0 | 2.1 | 2.1 | 2.4 | 2.1 |
| Religion | | | | | | | | |
| Hindu | 2.4 | 2.4 | 2.4 | 2.4 | 2.5 | 2.6 | 2.8 | 2.5 |
| Muslim | (2.7) | 2.9 | 2.8 | 3.1 | (3.4) | (3.5) | * | 3.1 |
| Sikh | * | (2.1) | (2.3) | (2.4) | (2.5) | (2.2) | (2.5) | 2.4 |
| Other | NC | * | * | * | * | * | * | 2.3 |
| Caste/tribe | | | | | | | | |
| Scheduled caste | * | (2.3) | (2.5) | (2.8) | (2.8) | * | * | 2.7 |
| Scheduled tribe | * | * | * | * | * | * | * | (2.8) |
| Other | 2.4 | 2.4 | 2.4 | 2.5 | 2.6 | 2.6 | 2.8 | 2.5 |
| Work status | | | | | | | | |
| Not working | 2.5 | 2.4 | 2.4 | 2.5 | 2.6 | 2.6 | 2.9 | 2.5 |
| Working in family farm/business | * | * | * | * | * | * | * | 2.9 |
| Employed by someone else | * | (2.5) | 2.3 | 2.4 | 2.4 | (2.3) | 2.5 | 2.4 |
| Self employed | * | * | (2.2) | (2.4) | 2.6 | (2.7) | (2.7) | 2.5 |
| Husband's education | | | | | | | | |
| Illiterate | * | 2.9 | 3.0 | 3.2 | 3.1 | (3.5) | 3.5 | 3.1 |
| Literate, < primary complete | * | * | (2.8) | * | * | * | * | 2.9 |
| Primary school complete | (2.6) | 2.5 | 2.7 | 2.9 | (3.0) | (3.0) | (2.9) | 2.8 |
| Middle school complete | (2.5) | 2.5 | 2.5 | 2.7 | 2.8 | (2.7) | (3.0) | 2.6 |
| High school complete | (2.5) | 2.2 | 2.3 | 2.4 | 2.6 | 2.5 | 2.8 | 2.4 |
| Above school complete | * | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.5 | 2.1 |
| Total | 2.5 | 2.4 | 2.4 | 2.5 | 2.6 | 2.6 | 2.8 | 2.5 |

Note: Means are calculated excluding women who gave non-numeric responses. Total means are based on all women including 9 women with missing information on husband's education, the means for whom are not shown separately.

NC: Not calculated because there are no cases on which to base a mean.

() Based on 25-49 cases

* Mean not shown; based on fewer than 25 cases

Table 7.8 shows that 29 percent of all current pregnancies and the pregnancies that resulted in live births in the four years before the survey were either mistimed (16 percent) or unwanted (13 percent). Differentials in fertility planning by religion and caste are not very substantial. More educated women are less likely to have an unplanned pregnancy but mistimed pregnancies are more common among literate than illiterate women. Major differences are apparent by birth order and the age of the mother at the time of the birth. Among the births in the last four years, first births are relatively well planned, second births are more likely to be mistimed, third order births are equally likely to be unplanned and unwanted. The fourth and higher order births are particularly likely to be unwanted (36 percent). The percentage of pregnancies that were planned decreases steadily with increasing age. More than three-fourths of pregnancies were wanted when they occurred for mothers age under 25. One-third of all pregnancies to women age 25-29 are reported to be mistimed or unwanted whereas 40 percent

Table 7.7 Ideal sex composition of children by actual sex composition of living children

Mean ideal number of sons and daughters for ever-married women by sex composition of the living children, Delhi, 1993

| Sex composition of living children | Mean ideal number | | Gender doesn't matter |
|------------------------------------|-------------------|-----------|-----------------------|
| | Sons | Daughters | |
| None | 0.9 | 0.7 | 0.7 |
| 1 child | 0.9 | 0.7 | 0.6 |
| 1 son | 0.9 | 0.6 | 0.6 |
| No sons | 0.9 | 0.7 | 0.5 |
| 2 children | 1.0 | 0.8 | 0.4 |
| 2 sons | 0.9 | 0.7 | 0.6 |
| 1 son | 1.0 | 0.8 | 0.4 |
| No sons | 1.0 | 0.9 | 0.4 |
| 3 children | 1.4 | 0.9 | 0.3 |
| 3 sons | 1.6 | 0.8 | 0.4 |
| 2 sons | 1.4 | 0.9 | 0.4 |
| 1 son | 1.3 | 0.9 | 0.3 |
| No sons | 1.2 | 1.0 | 0.4 |
| 4+ children | 1.6 | 1.1 | 0.5 |
| 2 or more sons | 1.7 | 1.1 | 0.5 |
| 1 son | 1.4 | 1.2 | 0.3 |
| Total | 1.2 | 0.9 | 0.5 |

Note: Table excludes women who gave non-numeric responses to the questions on the ideal number of sons and daughters. Total means are based on all women including 23 women with 4 or more children but no sons, the means for whom are not shown separately.

of pregnancies to women age 35-39 are unwanted.

The impact of unwanted fertility can be estimated by comparing *wanted fertility rates* with the total fertility rates presented in Chapter 5. The wanted fertility rate is calculated in the same way as the total fertility rate, except that unwanted births are excluded from the numerator. A birth was considered unwanted if the number of living children at the time of conception was greater than or equal to the current ideal number of children, as reported by the respondent. (Women who gave a non-numeric response to the question on the ideal number of children were assumed to want all their births). The wanted fertility rate represents the level of fertility that theoretically would result if all unwanted births were prevented. A comparison of the total fertility rate with the total wanted fertility rate indicates the potential demographic impact of the elimination of all unwanted births.

Table 7.9 shows the total wanted fertility rates and total fertility rates for the three years preceding the survey by selected background characteristics. The wanted TFR is 2.2 which is 0.8 child lower than the actual TFR of 3.0. Thus, the total wanted fertility is 27 percent lower than the actual TFR. The difference between the wanted TFR and the actual TFR by education

Table 7.8 Fertility planning

Percent distribution of births during the four years preceding the survey and current pregnancies by fertility planning status, according to selected background characteristics, Delhi, 1993

| Background characteristic | Planning status of pregnancy | | | | Total percent | Number of births |
|--|------------------------------|--------------|----------------|------------|---------------|------------------|
| | Wanted then | Wanted later | Wanted no more | Missing | | |
| Education | | | | | | |
| Illiterate | 69.0 | 13.1 | 17.6 | 0.3 | 100.0 | 954 |
| Lit., < middle complete | 63.9 | 19.9 | 15.9 | 0.3 | 100.0 | 327 |
| Middle school complete | 71.6 | 18.8 | 9.6 | -- | 100.0 | 218 |
| High school and above | 76.7 | 16.3 | 6.7 | 0.3 | 100.0 | 658 |
| Religion | | | | | | |
| Hindu | 72.0 | 15.3 | 12.5 | 0.3 | 100.0 | 1734 |
| Muslim | 64.2 | 16.6 | 18.9 | 0.3 | 100.0 | 307 |
| Sikh | 72.0 | 19.5 | 8.5 | -- | 100.0 | 82 |
| Other | (70.6) | (17.6) | (11.8) | (--) | 100.0 | 34 |
| Caste/tribe | | | | | | |
| Scheduled caste | 72.0 | 13.6 | 13.6 | 0.8 | 100.0 | 132 |
| Other (Non-SC/ST) | 71.1 | 15.7 | 13.0 | 0.2 | 100.0 | 2006 |
| Birth order¹ | | | | | | |
| 1 | 89.0 | 11.0 | -- | -- | 100.0 | 608 |
| 2 | 75.9 | 22.6 | 1.4 | 0.2 | 100.0 | 589 |
| 3 | 63.9 | 16.4 | 18.9 | 0.8 | 100.0 | 396 |
| 4+ | 50.9 | 12.9 | 35.8 | 0.4 | 100.0 | 564 |
| Mother's age at birth² | | | | | | |
| 15-19 | 77.6 | 20.8 | 1.6 | -- | 100.0 | 255 |
| 20-24 | 76.6 | 17.4 | 5.8 | 0.2 | 100.0 | 926 |
| 25-29 | 66.9 | 16.3 | 16.7 | 0.2 | 100.0 | 652 |
| 30-34 | 59.3 | 6.2 | 34.0 | 0.4 | 100.0 | 241 |
| 35-39 | 55.6 | 2.8 | 40.3 | 1.4 | 100.0 | 72 |
| Total | 70.8 | 15.7 | 13.2 | 0.3 | 100.0 | 2157 |

Note: Total includes 19 births to scheduled tribe women, 2 births to women who were <15 and 9 births to women who were age 40-44 at the time of birth, which are not shown separately. There were no births to women age 45-49 during the last four years.

() Based on 25-49 cases

-- Less than 0.05 percent

¹Includes current pregnancy, if any

²For current pregnancy, estimated maternal age at birth

is the smallest for the women with at least a high school education. The actual TFR is 21 percent higher than wanted TFR for women who have at least completed high school and over 40 percent higher for those with lower education. The biggest difference between actual and wanted fertility is for Muslims and scheduled caste women -- the actual TFR is around 60 percent higher than the wanted TFR.

Table 7.9 Wanted fertility rates

Total wanted fertility rates and total fertility rates for the three years preceding the survey, by selected background characteristics, Delhi, 1993

| Background characteristic | Total wanted fertility rate | Total fertility rate |
|-----------------------------|-----------------------------|----------------------|
| Education | | |
| Illiterate | 3.18 | 4.47 |
| Literate, < middle complete | 2.21 | 3.27 |
| Middle school complete | 1.86 | 2.63 |
| High school and above | 1.72 | 2.09 |
| Religion | | |
| Hindu | 2.13 | 2.90 |
| Muslim | 2.99 | 4.76 |
| Sikh | 1.81 | 2.18 |
| Other | 1.82 | 2.06 |
| Caste/tribe | | |
| Scheduled caste | 2.28 | 3.62 |
| Other (Non-SC/ST) | 2.18 | 2.97 |
| Total | 2.20 | 3.02 |

Note: Rates are calculated based on births in the period 1-36 months before the interview to women age 15-49. The total fertility rates are the same as those presented in Table 5.2. Total rates based on all women including the scheduled tribe women, the rates for whom are not shown separately.

CHAPTER 8

MORBIDITY AND MORTALITY

This chapter presents data on the prevalence of certain diseases as well as mortality rates, especially for infants and young children. Such information is relevant both to the demographic assessment of the population and to health policies and programmes. The mortality estimates are useful for projecting the future size of the population. Information on the mortality of children can also be used to identify sectors of the population which are at high risk and in need of health services.

The National Family Health Survey collected information on mortality and morbidity from both Household and Woman's Questionnaire. The Household Questionnaire includes questions on individuals in the household suffering from blindness, tuberculosis, leprosy, physical impairment of the limbs, and malaria. The Household Questionnaire also includes a question on deaths occurring in the household during the past two years and the Woman's Questionnaire collects information on the survival status of all births, the age at death if the child died, and the prevalence of common childhood diseases for children under 4 years of age. The prevalence and treatment of childhood diseases are discussed in Chapter 9.

8.1 Morbidity

Because demographic sample surveys generally do not include questions on the incidence and prevalence of diseases, there is no way to assess the validity and reliability of such data. However, the morbidity patterns observed in this section are generally plausible, suggesting that the NFHS has provided useful information on morbidity. At the same time, there is little to indicate whether the overall morbidity levels are correct. It is certainly possible that the results of the survey substantially understate the prevalence of these conditions because some survey respondents fail to report them.

It is worth noting some of the plausible reasons for response errors in reporting of specific health conditions. Conditions carrying a stigma, such as leprosy, may be underreported due to intentional concealment by respondents or embarrassment on the part of some interviewers about asking these questions. Respondents are often aware of certain conditions, such as complete blindness and visible physical impairment, but may be unaware of others unless they have been diagnosed by medical personnel. Moreover, given the linguistic diversity in India, locally as well as nationally, respondents may know that a household member suffers from a given condition but fail to report it because they use some other name for the illness and are not familiar with the words used by the interviewer in asking the question.

Table 8.1 shows the prevalence in the household population of the five health conditions by age and by sex. The data show that the prevalence of these conditions is comparatively low in Delhi. Of the five, partial blindness has the highest prevalence, 13 per 1,000 population. Occurrence of malaria during the three months prior to survey was reported for only 6 persons per 1,000 population. Prevalence of physical impairment of limbs, leprosy and tuberculosis was reported for only 1-2 persons per 1,000 population.

Table 8.1 Morbidity

Number of persons per 1,000 usual residents in the household suffering from blindness, tuberculosis, leprosy, physical impairment of the limbs, and malaria according to age and sex, Delhi, 1993

| Demographic characteristic | Number of persons per 1,000 household population suffering from: | | | | | | Number of usual residents |
|----------------------------|--|------------|--------------|------------|------------------------------|--------------------------------------|---------------------------|
| | Blindness | | Tuberculosis | Leprosy | Physical impairment of limbs | Malaria during the last three months | |
| | Partial | Complete | | | | | |
| Age | | | | | | | |
| 0 -14 | 2.1 | 2.7 | 0.9 | 0.9 | 2.0 | 3.3 | 6580 |
| 15-59 | 12.7 | 1.1 | 2.4 | 0.9 | 2.2 | 6.9 | 11284 |
| 60+ | 90.5 | 10.1 | 3.4 | 3.4 | 7.8 | 4.5 | 895 |
| Sex | | | | | | | |
| Male | 10.2 | 2.3 | 2.1 | 1.2 | 3.2 | 5.1 | 10286 |
| Female | 15.7 | 1.8 | 1.7 | 0.8 | 1.4 | 6.1 | 8473 |
| Total | 12.7 | 2.1 | 1.9 | 1.0 | 2.4 | 5.5 | 18759 |

Partial and Complete Blindness

The overall prevalence of partial blindness is 13 per 1,000 population. Partial blindness increases sharply with age. Prevalence rates are 2 per 1,000 for persons age 0-14, 13 for persons age 15-59 and 91 for persons age 60 and over. The high prevalence among older persons, by far the largest differential displayed for any of these morbidity data, is particularly striking, probably reflecting the tendency for blindness to increase with age at all periods in history. Further, females are substantially more prone to partial blindness than males. The prevalence for females is 16 per 1,000, compared with 10 per 1,000 males.

The overall level of complete blindness is 2 per 1,000. The NFHS estimate of total blindness is considerably higher than the 1981 Census estimate of 0.3 per 1,000 (Office of the Registrar General and Census Commissioner, 1983). This is probably indicative of relatively high underenumeration in the census rather than a substantial increase in blindness in Delhi between 1981 and 1993.

Complete blindness is ten times as prevalent among persons over age 60 as among persons age 15-59. Complete blindness is slightly higher among persons age 0-14 than among persons age 15-59. Prevalence of complete blindness is slightly higher for males than females.

Malaria

The overall level of malaria in the three months prior to the survey was 6 per 1,000 population. Prevalence is slightly higher for females than for males. There are also differences in prevalence among age groups. The younger and older persons are slightly less susceptible to malaria than those in the middle age category, but the differences are too small to merit further examination. Because the prevalence of malaria is known to vary considerably by season, the NFHS estimates should not be taken to represent the typical level throughout the year. The NFHS fieldwork was conducted during the dry season when incidence of malaria is

relatively low.

Tuberculosis, Leprosy and Physical Impairment of Limbs

The overall prevalence of tuberculosis is 2 per 1,000, of leprosy only 1 per 1,000 and of physical impairment of limbs 2 per 1,000. Prevalence of these conditions is comparatively higher in older ages and among males but the differentials are small.

8.2 Crude Death Rates and Age-Specific Death Rates

Table 8.2 shows crude death rates (CDR) and age-specific death rates by sex for the usual resident population in Delhi. The crude death rate is based on deaths occurring to usual residents of the household during the two years preceding the survey as obtained from the Household Questionnaire. The CDR is calculated as the annual number of deaths in the two-year period before the date of interview per 1,000 usual residents. The denominator of this measure is calculated by projecting the number of usual residents at the time of the survey backwards to the mid-point of the time period on the basis of the intercensal population growth rate in Delhi. The intercensal growth rate is assumed to be the same for all age and sex groups.

Questions on the number of deaths occurring to the usual residents in each household during a particular time period have been included in demographic surveys in many countries and have generally resulted in a substantial underreporting of deaths. We, therefore, begin by considering the evidence on the completeness of reporting of deaths. The Sample Registration System (SRS) provides most useful comparison. The most recent report available for Delhi is for 1992 (Office of the Registrar General, 1994). However, the SRS does not provide mortality estimates by age for Delhi, and hence only the crude death rates from the SRS and the NFHS can be compared.

Table 8.2 shows an average annual crude death rate for the usually resident population of Delhi of 7.7 per 1,000 for the two years before the NFHS (roughly 1991-92). The Sample Registration System (SRS) crude death rate for Delhi is 6.3 per 1,000 for both 1991 and 1992

| Table 8.2 Crude death rates and age-sex specific death rates | | | | | | |
|--|------------|--------|-------|---------------------------|--------|-------|
| Crude death rates (CDR) and age-sex specific death rates, Delhi, 1991-92 | | | | | | |
| Age | Death rate | | | Number of usual residents | | |
| | Male | Female | Total | Male | Female | Total |
| 0 - 4 | 17.7 | 19.5 | 18.6 | 1177 | 1071 | 2248 |
| 5 -14 | 0.7 | 2.3 | 1.5 | 2298 | 2034 | 4332 |
| 15-49 | 3.1 | 2.7 | 3.0 | 5794 | 4552 | 10346 |
| 50+ | 39.5 | 29.4 | 35.0 | 1016 | 816 | 1832 |
| CDR | 7.9 | 7.6 | 7.7 | 10286 | 8473 | 18759 |

Note: Crude death rates and age-sex specific death rates from the NFHS are based on the annual number of deaths reported for the *de jure* population during the two years prior to the survey.

(Office of the Registrar General, 1993b, 1994).

In most countries, male death rates are higher than female death rates at nearly all ages. South Asia generally has been an exception in this respect, with higher death rates for females over much of the age span (Preston, 1990; Ghosh, 1987). Sex-specific mortality differentials can be analyzed by computing the ratio of female to male rates in each age group. For Delhi, these ratios are 1.10, 3.29, 0.87 and 0.74 for the 0-4, 5-14, 15-49 and 50+ age groups, respectively. The very high value for the 5-14 age group is particularly notable.

8.3 Infant and Child Mortality

Definitions of Infant and Child Mortality

All respondents in the NFHS were asked to give a complete history of their births, including the sex, date of birth, survival status, and age at the time of the survey or age at death for each live birth. For children who had died, age at death was recorded in days for children dying in the first month of life, in months for children dying before their second birthday, and in years for children dying at later ages. This information was used to calculate the following direct estimates of infant and child mortality¹:

| | |
|--|--|
| Neonatal mortality: | the probability of dying in the first month of life; |
| Postneonatal mortality: | the difference between infant and neonatal mortality; |
| Infant mortality (${}_1q_0$): | the probability of dying before the first birthday; |
| Child mortality (${}_5q_1$): | the probability of dying between the first and fifth birthday; |
| Under-five mortality(${}_5q_0$): | the probability of dying before the fifth birthday. |

Assessment of Data Quality

The reliability of mortality estimates calculated from retrospective birth histories depends upon the completeness with which deaths of children are reported and the extent to which birth dates and ages at deaths are accurately reported and recorded. Estimated rates of infant and child mortality are subject to both sampling and nonsampling errors. While the sampling errors for various mortality estimates are provided in Table A.2 in Appendix A, this section describes the results of various checks for nonsampling errors -- in particular, underreporting of deaths in early childhood (which would result in an underestimate of mortality) and misreporting the

¹ A detailed description of the method for calculating the probabilities presented here is given in Rutstein (1984). The mortality estimates are not rates, but are true probabilities, calculated according to the conventional life table approach. For any calendar period, deaths and exposure in that period are first tabulated for the age intervals 0, 1-2, 3-5, 6-11, 12-23, 24-35, 36-47, and 48-59 months. Then age interval specific probabilities of survival are calculated. Finally, probabilities of mortality for larger age segments are produced by multiplying the relevant age interval survival probabilities together and subtracting the product from 1.00:

$${}_nq_x = 1 - \prod_i (1 - q_i)$$

date of birth or age at death (which could distort the age pattern of under-five mortality). Both problems are likely to be more pronounced for children born long before the survey than for children born recently. Failure to report deaths will result in mortality figures that are too low. If underreporting is more severe for children born longer ago the estimates will tend to understate any decline in mortality that might have occurred.

Underreporting of infant deaths, in particular, is usually most severe for deaths which occur very early in infancy. If deaths in the early neonatal period are selectively underreported, then there will be an abnormally low ratio of deaths under seven days to all neonatal deaths and an abnormally low ratio of neonatal to infant mortality. Changes in these ratios over time can be examined to test the hypothesis that underreporting of early infant deaths is more common for births that occurred further back in time. Results from Table B.5 (see Appendix B) suggest that early infant deaths have *not* been underreported in the NFHS in Delhi, since the ratios of deaths under seven days to all neonatal deaths are quite high (a ratio of less than 25 percent is often used as a guideline to indicate underreporting of early neonatal deaths). The ratios are almost the same for 0-4 years (72) and 5-9 years (67) prior to the survey. However, the ratio for the period 10-14 years prior to the survey is slightly lower (59) indicating that some early infant deaths may not have been reported by older women. The ratios of infant deaths that occurred during the neonatal period (see Appendix Table B.6) are also quite high. These ratios show a slight decrease over time from 60 to 55.

One problem that is inherent in most retrospective surveys is heaping of the age at death on certain digits, e.g., 6, 12 and 18 months. Misreporting of age at death will bias estimates of the age pattern of mortality if the net result of misreporting is the transference of deaths between age segments for which the rates are calculated. For example, an overestimate of child mortality relative to infant mortality may result if children dying during the first year of life are reported as having died at age one or sometime later. Thus, heaping at 12 months can bias the mortality estimates because a certain fraction of these deaths, which are reported to have occurred after infancy (i.e., at ages 12-23 months), may have actually occurred during infancy (i.e., at ages 0-11 months). In this case, heaping would bias the infant mortality rate (${}_1q_0$) downward and child mortality (${}_4q_1$) upward.

In Delhi, there was some misreporting of age at death due to preference for reporting age at death at 6, 8, 10 and 15 days (see Appendix Table B.5). Examination of the distribution of deaths under age two years during the 15 years prior to the survey by month of death (Appendix Table B.6) indicates that the calculated infant mortality rates for the population of Delhi as a whole are not likely to be understated by misreporting of age at death due to preference for certain digit. There was surprisingly little "heaping" on particular *months* of death. Due to strong emphasis during training² on obtaining as accurate as possible information on age at death, there were few deaths reported to have occurred at age one year, making any adjustment in the infant and child mortality rates unnecessary.

² Interviewers in the NFHS were instructed to probe for the exact number of months lived by the child if the age at death was reported as "1 year".

The brief check described above on internal consistency of the NFHS childhood mortality data suggests no serious underreporting of deaths during the time periods for which the mortality rates are estimated and shows no evidence of heaping in age at death at certain ages. The bias in infant and child mortality rates arising from any heaping is almost nonexistent.

It is seldom possible to establish, with confidence, mortality levels for a period more than 15 years before a survey. Even within the recent 15-year period considered here, apparent trends in mortality rates should be interpreted with caution, for several reasons. First, there may exist differences in the completeness of death reporting related to the length of time before the survey. Second, the accuracy of reports of age at death and of date of birth may deteriorate systematically with time. Third, sampling variability for mortality rates is relatively high (see Appendix A). The fourth reason relates to truncation of mortality rates further back in time, because women age 50 and over who were bearing children during these periods were not included in the survey. This truncation particularly affects mortality trends. For example, for the period 10-14 years before the survey, the rates do not include any births for women age 40-49 since these women were over age 50 at the time of the survey and not eligible to be interviewed. Since these excluded births to older women were likely to be at a somewhat greater risk of dying than births to younger women, the mortality levels for the period may be slightly underestimated. However, the estimates for later periods are less affected by the truncation bias since fewer older women are excluded. The extent of this bias depends on the proportion of births omitted, however, Table 8.6 shows that among children born in the five years prior to the survey, only 3.4 percent were born to women over age 34 years. Given this small proportion of births excluded, selection bias for infant and child mortality statistics as far as 15 years back from the survey should be minor.

Levels and Trends in Infant and Child Mortality

Table 8.3 shows various measures of infant and child mortality for the three quinquennial periods preceding the survey. Infant mortality rates declined in Delhi during the 15 years prior to the NFHS in 1993, although there is no consistent trend. The infant mortality rate declined from 75 per 1,000 births during 1978-82 (10-14 years prior to the survey) to 59 per 1,000 births during 1982-87 (5-9 years prior to the survey), and then in the subsequent five-year period (1988-92) increased to 65 per 1,000 births. However, differences in the infant mortality rates for different time periods may not be statistically significant because the sampling errors are

| Years prior to survey | Neonatal mortality (NN) | Postneonatal mortality ¹ (PNN) | Infant mortality (${}_1q_0$) | Child mortality (${}_4q_1$) | Under-five mortality (${}_5q_0$) |
|-----------------------|-------------------------|---|--------------------------------|-------------------------------|------------------------------------|
| 0-4 years | 34.9 | 30.5 | 65.4 | 19.0 | 83.1 |
| 5-9 years | 31.9 | 27.2 | 59.1 | 15.3 | 73.5 |
| 10-14 years | 44.8 | 30.1 | 74.9 | 21.2 | 94.6 |

¹Computed as the difference between the infant and neonatal mortality rates

quite large (see Table A.2 in Appendix A). The confidence interval for the infant mortality rate for Delhi for the 0-4 years before the survey (53.9 to 76.8) includes all the infant mortality estimates shown in the table. A similar trend can be observed in other measures of mortality, but the percentage decline in mortality from 10-14 years to 0-4 years before the survey is not the same in all five measures. The greatest decline is observed for neonatal mortality (22 percent) and the lowest is for postneonatal mortality, which remained unchanged. Infant, child, and under-five mortality declined at the same pace (11-13 percent).

Although the infant mortality rate is lower than the rate for India as whole, one in every 12 children dies before reaching age five. Child survival programmes in Delhi need to be intensified to produce further reduction in the level of infant and child mortality.

The estimated NFHS infant mortality rate of 65 in 1988-92 is high compared with the SRS 1989-91 value of 48 infant deaths per 1,000 births (Office of the Registrar General, 1994). One plausible reason for this pattern is that the NFHS is a *de facto* sample whereas the SRS is a *de jure* sample. It is possible that some women with complications in pregnancy who have a higher risk of infant mortality visit Delhi for special care. Another reason could be better coverage of births and consequent infant deaths in NFHS. While data in the SRS are collected by enumeration in a reference period from the household heads, the NFHS obtained these data from mothers' reproductive histories.

Socioeconomic Differentials in Infant and Child Mortality

Table 8.4 and Figure 8.1 show infant and child mortality statistics for the 10-year period preceding the survey, by selected background characteristics. The infant mortality rate declines sharply with increasing education of women, as expected, ranging from a high of 82 per 1,000 births for illiterate women to a low of 29 per 1,000 births for women with at least a high school education. Similar variation is displayed by the other mortality indicators shown in the table. Mortality differentials by religion show that Muslims have higher mortality rates than Hindus for all measures except child mortality, which does not include the first year of life. Although results are based on a rather small sample, they indicate that scheduled castes have slightly higher mortality rate than others according to four of the five measures. Children born to mothers who had neither antenatal care nor delivery in a health facility have a lower chance of survival than those who had one or the other, or both.

Demographic Differentials in Infant and Child Mortality

This section examines differentials in infant and child mortality by various demographic characteristics of both the child and the mother. Table 8.5 and Figure 8.2 present mortality rates for the 10 years preceding the survey by sex of the child, age of the mother at the time of the child's birth, birth order, length of the previous birth interval and size of the child at birth.

The pattern of sex differentials in Table 8.5 provides evidence of differential treatment of male and female children that leads to higher mortality risks for females. Neonatal mortality, which reflects a substantial component of congenital conditions, is slightly higher for males than for females. The ratio of female to male postneonatal mortality is 1.41, which is higher than the ratio for all deaths under age five (1.15). By far the largest differential, however, is in the

Table 8.4 Infant and child mortality by background characteristics

Neonatal, postneonatal, infant, child and under-five mortality by selected background characteristics for the 10-year period preceding the survey, Delhi, 1993

| Background characteristic | Neonatal mortality (NN) | Postneonatal mortality ¹ (PNN) | Infant mortality (I _q) | Child mortality (C _q) | Under-five mortality (U _q) |
|---|-------------------------|---|------------------------------------|-----------------------------------|--|
| Mother's education | | | | | |
| Illiterate | 42.4 | 39.9 | 82.3 | 26.7 | 106.8 |
| Literate, < middle complete | 32.0 | 39.0 | 71.1 | 16.7 | 86.6 |
| Middle school complete | (21.3) | (28.1) | (49.4) | (4.7) | (53.9) |
| High school and above | 23.7 | 5.5 | 29.2 | 6.4 | 35.4 |
| Religion | | | | | |
| Hindu | 31.7 | 29.6 | 61.3 | 18.4 | 78.6 |
| Muslim | 47.3 | 33.0 | 80.2 | 15.3 | 94.4 |
| Caste/Tribe | | | | | |
| Scheduled caste | (29.4) | (36.7) | (66.1) | (17.7) | (82.7) |
| Other (Non-SC/ST) | 34.0 | 28.1 | 62.1 | 17.1 | 78.1 |
| Medical maternity care² | | | | | |
| No antenatal or delivery care | (60.2) | (72.6) | (132.8) | * | (155.5) |
| Either antenatal or delivery care | 21.0 | (25.6) | (46.6) | * | 60.8 |
| Both antenatal and delivery care | 31.7 | 24.8 | 56.5 | 3.4 | 59.7 |
| Total | 33.4 | 28.8 | 62.2 | 17.2 | 78.4 |

Note: Total includes the mortality experience of Sikh and "Other" religions, which is based on fewer than 250 births and is not shown separately.

() Based on 250-499 children surviving to the beginning of the age interval

* Rates not shown; based on fewer than 250 children surviving to the beginning of the age interval

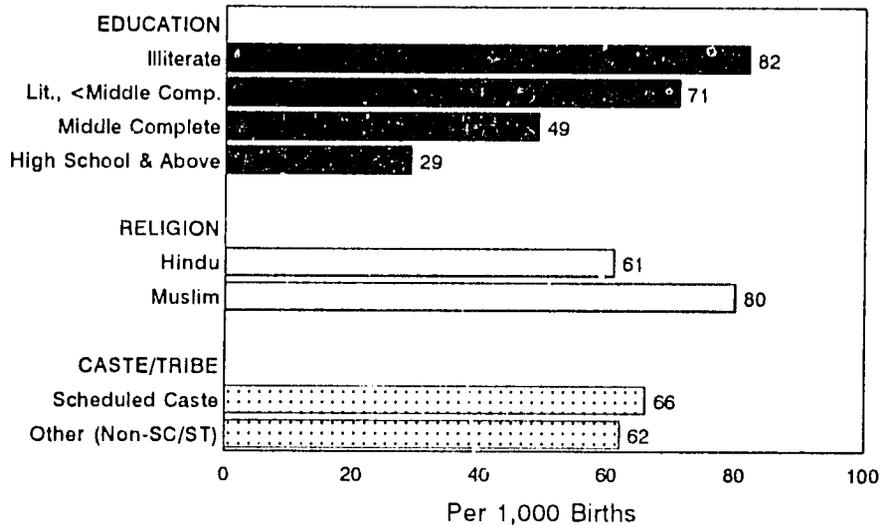
¹Computed as the difference between the infant and neonatal mortality rates

²Rates for the four-year period preceding the survey. Medical care is that given by a doctor, nurse, trained midwife, or other health professional in a hospital, clinic, or health centre or care received at home from a health worker.

child mortality rate, reflecting mortality risks between ages one and five. The female to male ratio for child mortality is 1.56. Female infants (under one year of age) may be less disadvantaged relative to males because children of both sexes tend to be breastfed throughout infancy (see Chapter 10). Once breastfeeding ceases, however, the potential for differential treatment of males and females increases. The sharp disadvantage of female children age one to five is indicative of such differential treatment.

The postneonatal and child mortality estimates exhibit the expected U-shaped pattern with respect to the mother's age at the time of the birth, with children of both younger and older mothers more at risk. Infant mortality is highest for children of mothers under age 20 (93 per 1,000 births) and declines to 57 per 1,000 births for mothers age 20-29 and 53 per 1,000 births for mothers age 30-39. The high mortality for the offspring of young mothers (under age 20) and a steep decline for mothers 30-39 is particularly evident for neonatal mortality. Infants born to young mothers are more likely to be of low birth weight, which is probably an important factor contributing to their higher neonatal mortality rate. Under-five mortality levels are

Figure 8.1
 Infant Mortality Rates by Selected
 Background Characteristics



Note: Based on births in the
 10 years preceding the survey

NFHS, Delhi, 1993

virtually the same for these two age groups, 20-29 and 30-39.

Differentials by birth order again show that, with the exception of neonatal mortality, the rates are higher for higher order births. The neonatal mortality shows a declining trend with increasing birth order. The steady increase of postneonatal mortality with birth order may reflect the more intense competition for nutritious food faced by higher birth order children once they are weaned. No differences are observed in infant, child and under-five mortality between first order births and 2nd-3rd order births.

Child spacing patterns have a powerful effect on the survival chances of children in Delhi. Infant mortality risks increase sharply as the length of the preceding birth interval decreases. Infant mortality is almost three and a half times as high for children with a preceding interval of less than 24 months as for children with a preceding interval of 48 months or more (103 compared with 30 per 1,000 births). Lengthening the birth interval from less than 24 months to 24-47 months has only a slightly greater impact on child survival than does lengthening the interval from 24-47 months to 48 months and over. Note, however, that although the length of the preceding birth interval is likely to affect mortality risks directly, a substantial portion of the observed association between birth intervals and mortality risks may reflect other risk factors that are correlated with birth intervals. Nevertheless, multivariate analyses of birth intervals and child survival commonly find short intervals (less than 24 months) to be damaging to a child's survival chances.

Table 8.5 Infant and child mortality by demographic characteristics

Neonatal, postneonatal, infant, child and under-five mortality by selected demographic characteristics for the 10-year period preceding the survey, Delhi, 1993

| Demographic characteristic | Neonatal mortality (NN) | Postneonatal mortality ¹ (PNN) | Infant mortality (₁ q ₀) | Child mortality (₄ q ₁) | Under-five mortality (₅ q ₀) |
|--------------------------------|-------------------------|---|--|---|--|
| Sex of child | | | | | |
| Male | 36.2 | 24.1 | 60.3 | 13.6 | 73.1 |
| Female | 30.3 | 34.1 | 64.3 | 21.2 | 84.2 |
| Mother's age at birth | | | | | |
| < 20 | 61.7 | 30.8 | 92.5 | 25.1 | 115.3 |
| 20-29 | 29.4 | 27.3 | 56.7 | 14.7 | 70.6 |
| 30-39 | 19.5 | 33.6 | 53.1 | 18.2 | 70.3 |
| Birth order | | | | | |
| 1 | 40.9 | 19.0 | 59.8 | 12.9 | 71.9 |
| 2-3 | 30.6 | 28.7 | 59.3 | 14.1 | 72.5 |
| 4-6 | 27.1 | 38.2 | 65.3 | 26.1 | 89.7 |
| Previous birth interval | | | | | |
| < 24 | 46.5 | 57.0 | 103.4 | 29.7 | 130.1 |
| 24-47 | 24.5 | 23.2 | 47.7 | 15.5 | 62.5 |
| 48+ | 14.7 | 15.0 | 29.7 | 6.3 | 35.8 |
| Birth size² | | | | | |
| Average | 24.7 | 23.0 | 47.8 | 9.4 | 56.7 |
| Small | (61.5) | (74.4) | (135.8) | * | (148.7) |

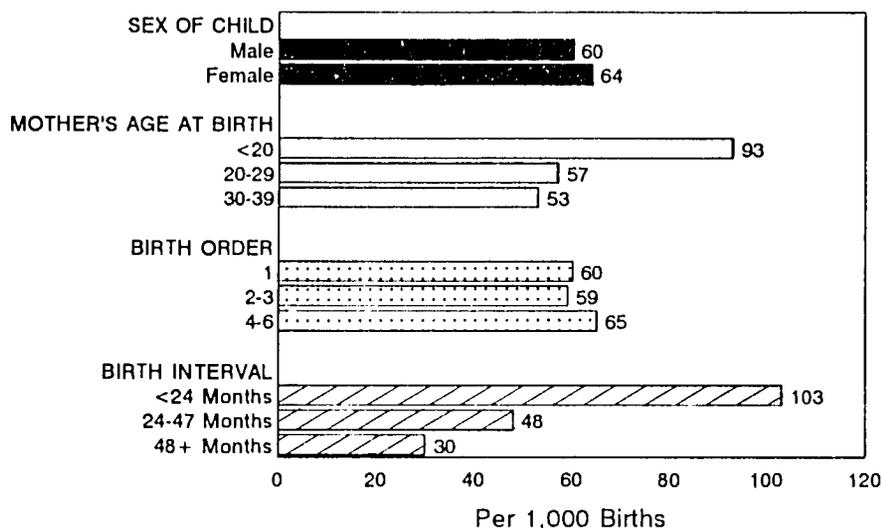
() Based on 250-499 person-years of exposure
* Rate not shown; based on fewer than 250 children surviving to the beginning of the age interval
¹Computed as the difference between the infant and neonatal mortality rates
²Birth size as reported by the mother; rates for the four-year period preceding the survey

Another important determinant of the survival chances of children is the baby's weight at the time of birth. Many studies have found that low birth weight babies (under 2,500 grams) have a substantially increased risk of mortality. Because most babies in Delhi are not weighed at the time of birth, mothers were asked the size of their babies at birth, for each child born during the four years preceding the interview. Women were asked whether the child was "large, average, or small". The last panel of Table 8.5 shows infant and child mortality statistics for births classified in this way. Children who are perceived by their mothers to be smaller than average at birth experience higher mortality rates than children perceived to be average.

8.4 High-Risk Fertility Behaviour

In theory, the mother's age at birth, the interval between births, and the order of a birth (parity) can all be controlled by parents if adequate family planning services and supplies are made available to them. Understanding the prevalence of high-risk births in Delhi is therefore of interest to health and family planning policymakers and programme managers. Table 8.6 shows sharply higher mortality risks for children of very young mothers, of higher order births and for births occurring within 24 months of a previous birth. It is possible for couples to reduce these risks of mortality to their children by adopting family planning.

Figure 8.2
Infant Mortality Rates by Selected
Demographic Characteristics



Note: Based on births in the 10 years preceding the survey

NFHS, Delhi, 1993

Table 8.6 shows the percentages of births in the five years preceding the interview that fall into different child survival risk categories, as well as the distribution of all currently married women across these categories. The purpose of this table is to identify areas in which changes in women's behaviour may bring about a reduction in infant and child mortality. Mortality risks are represented here by the proportion of children born during the five years prior to the survey who had died by the time of the survey. The "risk ratio" is the ratio of this proportion of deceased children in the given "high-risk" category to the proportion for children not in any "high-risk" category.

The figures in Table 8.6 may be considered either from the point of view of a prospective mother or from the point of view of the health and family planning policy maker. For the prospective parent, the critical issue is magnitude of each relative risk, since parents will presumably want to avoid having births under circumstances that are likely to result in the child's death. For policymakers, not only is the magnitude of each risk important; so, too, is the percentage of births or of women in each of the high-risk categories. The latter is important because it determines whether certain types of high-risk births are likely to occur frequently or only rarely; presumably, policymakers will want to target their efforts toward types of high-risk births that occur most frequently.

In terms of the magnitudes of the risks associated with a single risk factor, Table 8.6 suggests that maternal age under 18 is the most dangerous condition under which a birth can occur (risk ratio of 2.49), followed by a birth interval of less than 24 months (risk ratio of 1.97).

Table 8.6 High-risk fertility behaviour

Percentage of children born in the last five years at elevated risk of mortality and percentage of currently married women at risk of conceiving a child with an elevated risk of mortality, according to category of increased risk, Delhi, 1993

| High-risk category | Births in last 5 years | | Percentage of currently married women ^a |
|--|------------------------|------------|--|
| | Percent of births | Risk ratio | |
| Not in any high-risk category | 57.1 | 1.00 | 48.5 ^b |
| Single high-risk category | | | |
| Age<18: Age under 18 years at birth | 3.2 | (2.49) | 0.4 |
| Age>34: Age over 34 years at birth | 0.4 | * | 8.3 |
| BI<24 : Birth interval under 24 months | 13.3 | 1.97 | 9.5 |
| BO>3 : Birth order higher than 3 | 14.9 | 1.17 | 11.0 |
| Subtotal | 31.8 | 1.65 | 29.1 |
| Multiple high-risk category | | | |
| Age<18 & BI<24 ^c | 0.6 | * | 0.1 |
| Age>34 & BI<24 | -- | -- | 0.2 |
| Age>34 & BO>3 | 2.5 | (0.63) | 15.6 |
| Age>34 & BI<24 & BO>3 | 0.5 | * | 0.9 |
| BI<24 & BO>3 | 7.4 | 2.47 | 5.6 |
| Subtotal | 11.0 | 2.16 | 22.4 |
| In any high-risk category | 42.9 | 1.78 | 51.5 |
| Total percent | 100.0 | NA | 100.0 |
| Number | 2357 | NA | 3310 |

Note: The risk ratio is the ratio of the proportion dead of births in a specific high-risk category to the proportion dead of births in the "not in any high-risk" category.

NA: Not applicable

() Denominator of the upper proportion in the risk ratio is between 50 and 99 births.

* Risk ratio not shown; denominator of the upper proportion in the risk ratio is less than 50 births.

-- Less than 0.05 percent

^aWomen are placed into the categories according to the status they would have at the birth of a child if they were to conceive at the current time: current age less than 17 years and 3 months or older than 34 years and 2 months, last birth occurred less than 15 months ago, or last birth was order 3 or higher

^bIncludes sterilized women and women whose husbands are sterilized

^cAlso includes category age under 18 and birth order greater than 3

The combination of short birth interval and birth order higher than three is particularly dangerous (ratio of 2.47). In terms of the proportion of births falling into the different risk categories, however, higher order births, although less risky in absolute terms than births to women under age 18, constitute a far higher proportion (25 percent) of births than do births to women under age 18 (4 percent). One-fifth of births had a previous birth interval of less than 24 months. Discouraging childbearing among women under age 18 is, therefore, likely to have a comparatively less impact on overall mortality levels. Probably the greatest reduction in mortality could be attained by reducing or eliminating births that occur less than 24 months apart or births of order 4 and higher since a large proportion of all births fall in either of these categories that include short birth intervals and higher birth order and all of those categories

have high risk ratios.

The last column of Table 8.6 shows the proportion of currently married women who would fall in each of the risk categories if they were to become pregnant at the present time. Four-fifths of these women are in categories with risk ratios greater than one, implying that a pregnancy at the present time would subject their child to a relatively high risk of dying.

While mortality risks to children can undoubtedly be reduced by changing women's childbearing behaviour, the risk ratios shown in Table 8.6 almost certainly overstate the magnitude of the potential effect. This is because a mother's demographic characteristics are not the only causal factors influencing the risks of mortality experienced by her children. Women who have many children at short birth intervals almost certainly tend, for example, to have little or no education which will raise mortality risks to their children independently of their childbearing behaviour. The analysis of the causative role of these various factors required to adjust the risk ratios shown in Table 8.6 is beyond the scope of this report.

CHAPTER 9

MATERNAL AND CHILD HEALTH

The importance of safe motherhood practices and child survival cannot be exaggerated in a country which has experienced high infant and child mortality and maternal mortality. Realizing the importance of maternal and child health care services, the Ministry of Health, Government of India, took concrete steps to strengthen maternal and child health services in the First and Second Five Year Plans (1951-56 and 1956-61). The integration of family planning services with maternal and child health services and nutrition services was introduced as a part of the Minimum Needs Programme during the Fifth Five Year Plan (1974-79). The primary objective was to provide basic public health services to vulnerable groups of pregnant women, lactating mothers and preschool children (Kanitkar, 1979). Since then, the promotion of health of mothers and children has been one of the most important aspects of the Family Welfare Programme in India, which has now been further strengthened by introducing the Child Survival and Safe Motherhood Programme (Ministry of Health and Family Welfare, 1993a). The Ministry of Health and Family Welfare has also sponsored special schemes, under the Maternal and Child Health Programme, including the programme of Oral Rehydration Therapy (ORT), development of Regional Institutes of Maternal and Child Health in states where infant mortality rates are high, the Universal Immunization Programme, and the Maternal and Child Health Supplemental Programme within the Post-Partum Programme (Ministry of Health and Family Welfare, 1992).

In the rural areas of India, maternal and child health services are delivered mainly by government-run Primary Health Centres and sub-centres. Services for pregnant women and children can also be obtained from private and public maternity homes or hospitals, as well as private practitioners. In urban areas, maternal and child health services are available mainly through government or municipal hospitals, urban health posts, hospitals and nursing homes operated by nongovernmental voluntary organizations, and various private nursing homes or maternity homes.

The Village Health Guide is a link between the community and MCH services in rural areas. The Female Health Worker, who is an Auxiliary Nurse Midwife (ANM), renders maternal and child health and family welfare services (Ministry of Health and Family Welfare, 1978). The Female Health Worker is assigned to assist the Medical Officer and Female Health Assistant in providing maternal and child health services. She is responsible for registering pregnant women and assessing their health throughout pregnancy in their homes or in the antenatal clinic. Another responsibility of the Female Health Worker is to refer pregnant women who have signs and symptoms of abnormal pregnancy or labour or gynaecological problems that are beyond her level of competence, to the Primary Health Centre. The basic maternal and child services offered at Primary Health Centres are antenatal and postnatal care of mothers as well as care of infants and children.

A major objective of the NFHS is to provide information on maternal and child health care practices. The relevant information was collected in the Woman's Questionnaire from the mothers of all children born since 1 January 1989. The information covered matters related to pregnancy and childbirth; infant and child feeding practices, including breastfeeding;

immunizations; episodes of illnesses such as acute respiratory infection, fever and diarrhoea and the treatment received for these ailments; mothers' knowledge and use of Oral Rehydration Salts (ORS); and the level of child nutrition assessed by measuring the weight and height of children.

The present chapter analyzes the data collected on antenatal and delivery care, immunization coverage, prevalence of acute respiratory infection, fever and diarrhoea and their treatment, and mothers' knowledge and use of ORS. Chapter 10 deals with infant feeding and child nutrition.

Although information was obtained for each child born since January 1989, the analysis carried out in this chapter is restricted to the children born exactly four years before the interview. If a woman had more than one live birth during the four year period, the information was collected for the three most recent live births; all of these births are included in the current analysis.

9.1 Maternal Care Indicators

Antenatal Care

Antenatal care (ANC) refers to pregnancy-related health care provided by a doctor or a health worker in a medical facility or at home. The Safe Motherhood Initiative proclaims that all pregnant women must receive basic but professional antenatal care (Harrison, 1990). Antenatal care can contribute significantly to the reduction of maternal morbidity and mortality because it also includes advice on the correct diet and the provision of iron and folic acid tablets to pregnant women. Improved nutritional status, coupled with improved antenatal care, can help lower the incidence of low birth weight babies and thus reduce perinatal, neonatal and infant mortality.

A pregnant woman can obtain antenatal care either by visiting a doctor or some other health professional in a medical facility, or by receiving a home visit from a health worker, or both. In the NFHS, each woman who had a live birth during the four years prior to the survey was initially asked whether any health worker visited her at home for an antenatal check-up when she was pregnant and, if so, at which month of pregnancy the first visit was made and how many such visits were made in all. Next she was asked whether she had gone for an antenatal check-up outside the home and whom she saw for the check-up. If she saw more than one person, information was collected on all persons seen. She was asked at which month of pregnancy she first went for an antenatal check-up and how many such visits she made.

Table 9.1 and Figure 9.1 show the percent distribution of live births in the last four years by the source of antenatal care received during pregnancy. Although the interviewer was instructed to record all responses if more than one source of outside the home was mentioned for the pregnancy, for the purpose of analysis, only the provider with the highest qualification is considered. Only 17 percent of births were to mothers who did not receive any antenatal care in Delhi which is not unexpected because of the urban character of Delhi.

For 73 percent of births in Delhi, allopathic doctors provided antenatal care compared with 40 percent in the country as a whole and 70 percent in the urban areas of the country

Table 9.1 Antenatal care

Percent distribution of live births during the four years preceding the survey by source of antenatal care (ANC) during pregnancy, according to selected background characteristics, Delhi, 1993

| Background characteristic | ANC only at home from health worker | Antenatal care provider (outside home) ¹ | | | No ANC | Missing | Total percent | Number of births |
|------------------------------|-------------------------------------|---|---------------------------|---|-------------|------------|---------------|------------------|
| | | Doctor | Other health professional | Traditional birth attendant, other ² | | | | |
| Mother's age at birth | | | | | | | | |
| < 20 | 3.0 | 67.8 | 9.6 | 0.4 | 19.1 | -- | 100.0 | 230 |
| 20-34 | 1.8 | 74.1 | 6.2 | 0.6 | 16.5 | 0.8 | 100.0 | 1582 |
| 35+ | 3.1 | 68.8 | 7.8 | -- | 18.8 | 1.6 | 100.0 | 64 |
| Birth order | | | | | | | | |
| 1 | 1.5 | 81.1 | 6.9 | 0.4 | 9.5 | 0.6 | 100.0 | 524 |
| 2-3 | 1.9 | 75.8 | 5.7 | 0.3 | 15.3 | 1.0 | 100.0 | 863 |
| 4-5 | 1.7 | 63.3 | 8.1 | 0.8 | 25.8 | 0.3 | 100.0 | 360 |
| 6+ | 5.4 | 50.4 | 8.5 | 2.3 | 32.6 | 0.8 | 100.0 | 129 |
| Mother's Education | | | | | | | | |
| Illiterate | 3.5 | 54.8 | 9.4 | 1.0 | 30.4 | 0.7 | 100.0 | 831 |
| Literate, < middle complete | 0.7 | 75.9 | 8.9 | -- | 14.2 | 0.4 | 100.0 | 282 |
| Middle school complete | 1.0 | 86.6 | 5.9 | 0.5 | 5.4 | 0.5 | 100.0 | 202 |
| High school and above | 0.7 | 94.1 | 1.8 | -- | 2.3 | 1.1 | 100.0 | 561 |
| Religion | | | | | | | | |
| Hindu | 1.7 | 74.2 | 6.7 | 0.7 | 16.2 | 0.5 | 100.0 | 1510 |
| Muslim | 3.4 | 61.9 | 7.1 | -- | 26.5 | 1.1 | 100.0 | 268 |
| Sikh | 2.9 | 81.2 | 7.2 | -- | 2.9 | 5.8 | 100.0 | 69 |
| Other | (--) | (100.0) | (--) | (--) | (--) | (--) | 100.0 | 29 |
| Caste/tribe | | | | | | | | |
| Scheduled caste | 0.9 | 65.2 | 11.3 | 1.7 | 19.1 | 1.7 | 100.0 | 115 |
| Other (Non-SC/ST) | 2.1 | 73.6 | 6.4 | 0.5 | 16.7 | 0.7 | 100.0 | 1741 |
| Total³ | 2.0 | 73.1 | 6.7 | 0.6 | 16.9 | 0.7 | 100.0 | 1876 |

Note: ANC refers to pregnancy-related health care provided by a doctor or health worker in a medical facility or at home.

() Based on 25-49 cases

-- Less than 0.05 percent

¹Includes women who received ANC outside the home, whether or not they also received ANC at home from a health worker. If more than one source of ANC was mentioned, only the provider with the highest qualifications is considered.

²Includes hakim and "Don't know"

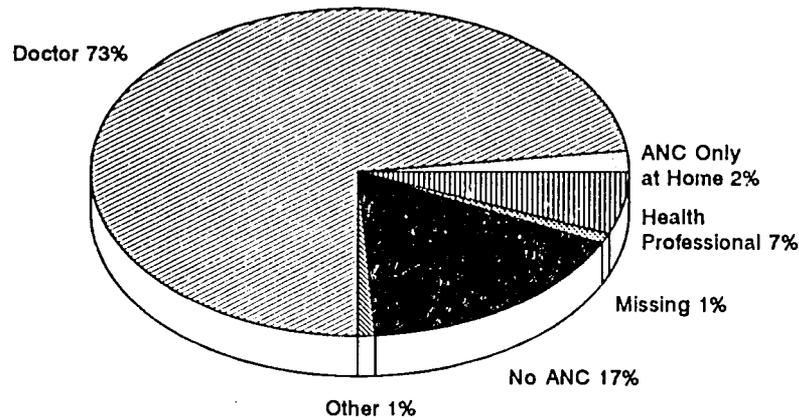
³Births in the period 1-47 months prior to the survey. Total includes 20 births to scheduled tribe women, which are not shown separately.

(International Institute for Population Sciences, 1994). Antenatal care was given by other health professionals, such as nurse/midwives, ayurvedic doctors and homoeopathic doctors for 7 percent of births. For a small proportion of births (less than 1 percent), the mothers received antenatal care outside the home from traditional birth attendants. For only 2 percent of births, the mothers received antenatal care only at home.

By age of the mother, the coverage of antenatal care is highest (84 percent) among births to mothers age 20-34¹. It is a little lower among births to mothers in the younger and older age

¹ Percentages exclude cases with missing information on antenatal care.

Figure 9.1
Sources of Antenatal Care (ANC)
During Pregnancy



Note: Based on births in the four years preceding the survey

NFHS, Delhi, 1993

groups. There is a negative relationship between the order of births and coverage of antenatal care. The mothers of lower order births are more likely to receive antenatal care than those of higher order births. Mothers of lower parity are also more likely to receive antenatal care from doctors. The proportion of births whose mothers received antenatal care increases sharply with an increase in the educational level of the mother, from 70 percent for illiterate mothers to 95 percent for mothers who had completed middle school and 98 percent for mothers who had completed high school and beyond. As expected, educated women are more likely to receive antenatal care from doctors. Muslim mothers are least covered, Sikhs the highest and Hindus fall in between in respect of antenatal coverage. Muslim mothers do not receive antenatal care for more than one-fourth of births compared with 16 percent of births to Hindus and 3 percent of births to Sikhs. Scheduled castes are less likely to receive antenatal care than the non-SC/ST group.

Number and Timing of Antenatal Care Visits

The number of antenatal care visits and the timing of the first antenatal check-up are important for the health of the mother and the outcome of the pregnancy. Ideally, for normal cases antenatal care visits after confirmation of pregnancy should be scheduled at intervals of four weeks throughout the first seven months, then every two weeks until the last month and weekly thereafter (MacDonald and Pritchard, 1980). However, working women from lower socioeconomic groups may find it difficult to attend an antenatal clinic that often since they may face the loss of wages for taking time to receive antenatal care. Under similar circumstances,

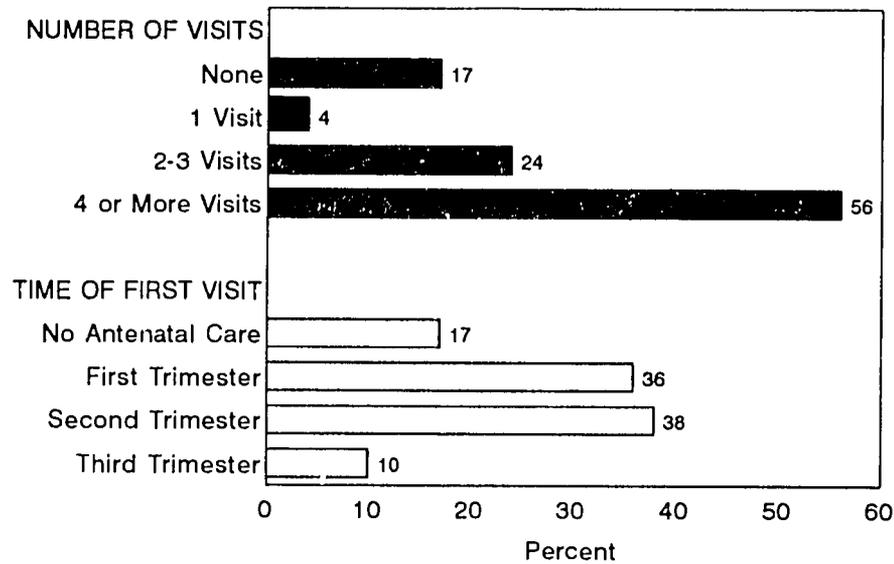
a minimum of four antenatal visits are recommended, during the third, sixth, eighth and ninth months of the pregnancy (Park and Park, 1989).

Table 9.2 and Figure 9.2 show the percent distribution of live births in the last four years by number and timing of antenatal care visits. The median frequency of antenatal care visits is 5.4 for any type of visit (3.2 home visits and 5.3 visits outside the home). The comparative nearness of antenatal care services and the easy availability of transport in Delhi could be important reasons for the larger number of outside visits in Delhi.

Obstetricians advise that antenatal care should begin, at the latest, six weeks after the last menstrual period. However, studies undertaken to measure the impact of the initial antenatal visit show that, even when antenatal care is initiated as late as the third trimester, there is a substantial reduction in perinatal mortality (Ramachandran, 1992). In the NFHS, the median gestational age for the first antenatal care visit of either type (home or outside) is, among births receiving any antenatal care, 4.5 months: the median age of gestation is slightly higher for home visits (5.1 months) than outside visits (4.5 months). Among women who had received antenatal care, 43 percent of births were to women who had received antenatal care for the first time in the first trimester and 45 percent were to those who received it in the second trimester. The majority of women in Delhi received antenatal care at a late stage of their pregnancy, consequently the median number of antenatal visits are fewer than the desired number.

| Table 9.2 Number of antenatal care visits and stage of pregnancy | | | |
|--|-------------|----------------|----------|
| Percent distribution of live births during the four years preceding the survey by number of antenatal care (ANC) visits, and by the stage of pregnancy at the time of the first visit, Delhi, 1993 | | | |
| ANC visits/ months pregnant | Home visits | Outside visits | Any type |
| Number of ANC visits | | | |
| None | 96.5 | 18.9 | 16.9 |
| 1 visit | 0.6 | 3.4 | 3.7 |
| 2-3 visits | 1.7 | 23.1 | 23.6 |
| 4 or more visits | 1.1 | 54.5 | 55.7 |
| Don't know/missing | 0.1 | 0.1 | 0.2 |
| Total percent | 100.0 | 100.0 | 100.0 |
| Median number of visits (for those with ANC) | 3.2 | 5.3 | 5.4 |
| Months pregnant at the time of the first ANC visit | | | |
| No antenatal care | 96.5 | 18.9 | 16.9 |
| First trimester | 1.1 | 35.1 | 35.9 |
| Second trimester | 1.5 | 37.0 | 37.6 |
| Third trimester | 0.9 | 9.0 | 9.5 |
| Don't know/missing | 0.1 | 0.1 | 0.1 |
| Total percent | 100.0 | 100.0 | 100.0 |
| Median months pregnant at first visit (for those with ANC) | 5.1 | 4.5 | 4.5 |
| Number of live births ¹ | 1876 | 1876 | 1876 |
| ¹ Births in the period 1-47 months prior to the survey | | | |

Figure 9.2
Number and Timing of Antenatal Visits



Note: Based on births in the four years preceding the survey

NFHS, Delhi, 1993

Tetanus Toxoid Vaccination

Neonatal tetanus is caused by infection of the newborn (usually at the umbilical stump) with tetanus organisms. Neonatal tetanus is most common when the delivery takes place in an unhygienic environment and nonsterilized instruments are used for cutting the umbilical cord. Tetanus typically develops during the first or second week of life and is fatal in 70 to 90 percent of cases (Foster, 1984). Neonatal tetanus is a preventable disease, however. Two doses of tetanus toxoid vaccine given one month apart during early pregnancy are nearly 100 percent effective in preventing tetanus among newborns (and mothers). Immune protection is transferred to the baby through the placenta when the mother is immunized.

In India, the tetanus immunization programme for expectant mothers was initiated in 1975-76 and was integrated with the Expanded Programme on Immunization (EPI) in 1978 (Ministry of Health and Family Welfare, 1991). In order to hasten implementation of the immunization programme, the Government of India started a special programme called the Universal Immunization Programme (UIP) in 1985-86. In 1986 the UIP was recognized as one of the seven Technology Missions. An important objective of the UIP was to protect all pregnant women against tetanus by 1990. According to the National Immunization Schedule, a pregnant woman should receive two doses of tetanus toxoid injection; the first injection when she is 16 weeks pregnant and the second when she is 20 weeks pregnant. Reinoculation is recommended every three years. If the initial doses were received three years ago, a single, booster injection is recommended (Central Bureau of Health Intelligence, 1991).

In the NFHS, each mother who had a live birth during the past four years was asked whether she was given an injection in the arm to prevent her and her baby from getting tetanus and, if so, how many times she received such an injection. The distribution of births by the number of tetanus toxoid injections given to mothers, according to selected background characteristics, is shown in Table 9.3. It is notable that tetanus toxoid coverage is fairly good in Delhi compared with many other states in India, but is the same for all the urban areas of India combined (International Institute for Population Sciences, 1994). For almost three-fourths of births (73 percent) mothers received two or more doses of tetanus toxoid vaccine, one dose for 8 percent of births and none for 19 percent of births.

Compared with overall tetanus toxoid coverage, lower coverage is observed for births to young mothers, mothers with lower educational attainment, and mothers belonging to scheduled castes. The proportion of births covered declines steadily with increasing birth order.

| Background characteristic | Number of tetanus toxoid injections | | | | Total percent | Percent given iron/folic tablets | Number of births |
|---|-------------------------------------|------------|-------------------|--------------------|---------------|----------------------------------|------------------|
| | None | One dose | Two doses or more | Don't know/missing | | | |
| Table 9.3 Tetanus toxoid vaccinations | | | | | | | |
| Percent distribution of live births during the four years preceding the survey by number of tetanus toxoid injections and whether the respondent was given iron/folic tablets during pregnancy, according to selected background characteristics, Delhi, 1993 | | | | | | | |
| Mother's age at birth | | | | | | | |
| < 20 | 25.2 | 6.5 | 67.4 | 0.9 | 100.0 | 70.0 | 230 |
| 20-34 | 17.7 | 8.5 | 73.4 | 0.4 | 100.0 | 75.9 | 1582 |
| 35+ | 21.9 | 9.4 | 68.8 | -- | 100.0 | 68.8 | 64 |
| Birth order | | | | | | | |
| 1 | 11.8 | 5.9 | 81.7 | 0.6 | 100.0 | 84.2 | 524 |
| 2 | 16.4 | 7.9 | 75.1 | 0.6 | 100.0 | 78.6 | 518 |
| 3 | 18.3 | 9.0 | 72.8 | -- | 100.0 | 74.2 | 345 |
| 4 | 24.2 | 11.4 | 64.0 | 0.4 | 100.0 | 65.7 | 236 |
| 5 | 27.4 | 13.7 | 58.9 | -- | 100.0 | 62.9 | 124 |
| 6+ | 39.5 | 7.0 | 52.7 | 0.8 | 100.0 | 52.7 | 129 |
| Mother's Education | | | | | | | |
| Illiterate | 34.5 | 8.9 | 56.0 | 0.6 | 100.0 | 59.9 | 831 |
| Lit., < middle complete | 14.2 | 9.6 | 76.2 | -- | 100.0 | 77.0 | 282 |
| Middle school complete | 6.9 | 8.9 | 83.2 | 1.0 | 100.0 | 86.6 | 202 |
| High school and above | 2.0 | 6.6 | 91.3 | 0.2 | 100.0 | 91.8 | 561 |
| Religion | | | | | | | |
| Hindu | 17.9 | 9.2 | 72.5 | 0.4 | 100.0 | 75.8 | 1510 |
| Muslim | 28.7 | 6.0 | 64.6 | 0.7 | 100.0 | 64.9 | 268 |
| Sikh | 4.3 | 1.4 | 94.2 | -- | 100.0 | 85.5 | 69 |
| Other | (3.4) | (--) | (96.6) | (--) | 100.0 | (93.1) | 29 |
| Caste/tribe | | | | | | | |
| Scheduled caste | 21.7 | 13.0 | 63.5 | 1.7 | 100.0 | 74.8 | 115 |
| Other (Non-SC/ST) | 18.6 | 7.9 | 73.2 | 0.3 | 100.0 | 75.0 | 1741 |
| Total¹ | 18.8 | 8.3 | 72.5 | 0.4 | 100.0 | 74.9 | 1876 |
| () Based on 25-49 cases -- Less than 0.05 percent ¹ Births in the period 1-47 months prior to the survey. Total includes 20 births to scheduled tribe women, which are not shown separately. | | | | | | | |

Women age 20-34 are more likely to have received tetanus toxoid injections than older or younger cohorts. A marked positive relationship is revealed between the educational attainment of mother and the coverage rate for tetanus toxoid vaccination. The proportion of births whose mothers received two doses of tetanus toxoid vaccine increases steadily from 56 percent for percent for illiterate mothers to 91 percent for mothers with at least a high school education. The coverage rate for two-dose immunization against tetanus by religion is highest for births to Sikhs (94 percent) followed by Hindus (73 percent) and Muslims (65 percent).

Iron and Folic Acid Tablets

Proper maternal nutritional care is important for the healthy intrauterine growth of a baby and may affect the baby's birth weight. Various studies in different parts of India have indicated that the percentage of low birth weight babies (weighing less than 2,500 grams) ranged from 15 in Thiruvananthapuram to 46 in Vadodara (Nutrition Foundation of India, 1993). Overall, around one-third of babies in India are low birth weight, suggesting a nutritional deficiency among many expectant mothers. Improved nutrition (coupled with improved health care in pregnancy) has, however, substantially improved birth weights in India (Ramachandran, 1992). The provision of iron and folic acid tablets as a prophylaxis against nutritional anaemia among pregnant women forms an integral part of MCH activities in the Indian Family Welfare Programme (Ministry of Health and Family Welfare, 1991). It is recommended that a pregnant woman should take 100 tablets of iron and folic acid during pregnancy, and health workers are instructed accordingly.

In the NFHS, information was collected on whether the mother had received iron and folic acid tablets during each pregnancy resulting in a live birth during the last four years. The results are presented in Table 9.3. Three-fourths of births were to mothers who had received iron and folic acid tablets, a coverage rate that exceeds that for the country as whole and for the urban areas of the country (International Institute for Population Sciences, 1994). The pattern of differentials in the distribution of iron and folic acid tablets is almost the same as the pattern for tetanus toxoid injections, except that the rate among scheduled caste births is the same as that for the non-SC/ST group.

Place of Delivery and Assistance During Delivery

From the standpoint of child survival and the health of the mother, it is advantageous for babies to be born under proper hygienic conditions with the assistance of a trained medical practitioner. Table 9.4 and Figure 9.3 present the percent distribution of live births occurring during the four years preceding the survey according to place of delivery and selected background characteristics. Of the 1,876 live births in Delhi, 44 percent occurred in medical institutions, with 24 percent in public institutions and 20 percent in private medical institutions.

Births to women age 20-34 years, to women having first order births, to women with higher educational attainment and Sikhs are more likely to occur in medical institutions. Births to Muslim women and women from scheduled caste are less likely to take place in medical institutions.

Table 9.4 Place of delivery

Percent distribution of live births during the four years preceding the survey by place of delivery, according to selected background characteristics, Delhi, 1993

| Background characteristic | Place of delivery | | | | | Total percent | Number of live births ¹ |
|------------------------------|-----------------------------|-------------|-------------|---------------|------------|---------------|------------------------------------|
| | Health facility/institution | | Home | | | | |
| | Public | Private | Own home | Parents' home | Other | | |
| Mother's age at birth | | | | | | | |
| < 20 | 23.9 | 9.6 | 59.6 | 5.7 | 1.3 | 100.0 | 230 |
| 20-34 | 24.8 | 21.4 | 50.4 | 1.9 | 1.4 | 100.0 | 1582 |
| 35+ | 15.6 | 20.3 | 60.9 | 3.1 | -- | 100.0 | 64 |
| Birth order | | | | | | | |
| 1 | 29.2 | 31.1 | 36.1 | 2.9 | 0.8 | 100.0 | 524 |
| 2-3 | 26.8 | 19.8 | 49.0 | 2.5 | 1.9 | 100.0 | 863 |
| 4-5 | 17.8 | 9.4 | 69.7 | 1.9 | 1.1 | 100.0 | 360 |
| 6+ | 7.8 | 4.7 | 86.0 | 0.8 | 0.8 | 100.0 | 129 |
| Mother's Education | | | | | | | |
| Illiterate | 16.5 | 4.6 | 74.1 | 2.8 | 2.0 | 100.0 | 831 |
| Lit., < middle complete | 26.6 | 10.3 | 59.6 | 2.5 | 1.1 | 100.0 | 282 |
| Middle school complete | 33.2 | 20.3 | 43.6 | 2.5 | 0.5 | 100.0 | 202 |
| High school and above | 31.9 | 47.4 | 18.2 | 1.8 | 0.7 | 100.0 | 561 |
| Religion | | | | | | | |
| Hindu | 25.8 | 20.2 | 50.4 | 2.2 | 1.4 | 100.0 | 1510 |
| Muslim | 14.6 | 11.2 | 69.0 | 3.7 | 1.5 | 100.0 | 268 |
| Sikh | 26.1 | 34.8 | 36.2 | 2.9 | -- | 100.0 | 69 |
| Other | (37.9) | (51.7) | (10.3) | (--) | (--) | 100.0 | 29 |
| Caste/tribe | | | | | | | |
| Scheduled caste | 19.1 | 5.2 | 71.3 | 0.9 | 3.5 | 100.0 | 115 |
| Other (Non-SC/ST) | 24.8 | 21.1 | 50.4 | 2.5 | 1.1 | 100.0 | 1741 |
| Antenatal care visits | | | | | | | |
| None | 5.7 | 2.8 | 83.3 | 6.0 | 2.2 | 100.0 | 317 |
| 1-3 visits | 17.2 | 6.8 | 74.4 | 0.8 | 0.8 | 100.0 | 511 |
| 4+ visits | 33.6 | 31.5 | 31.4 | 2.1 | 1.3 | 100.0 | 1044 |
| Total¹ | 24.4 | 19.9 | 51.9 | 2.4 | 1.3 | 100.0 | 1876 |

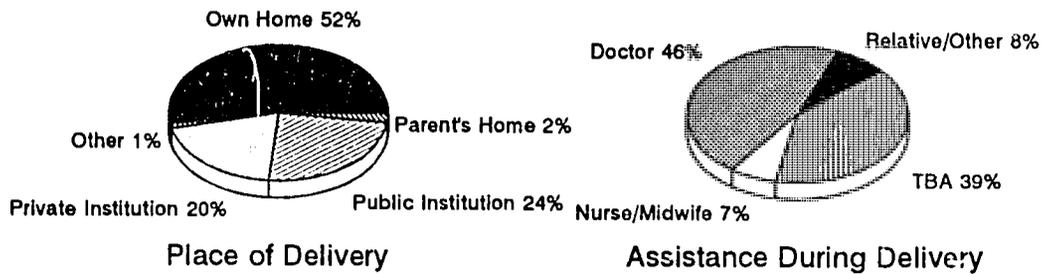
() Based on 25-49 cases

-- Less than 0.05 percent

¹Births in the period 1-47 months prior to the survey. Total includes 20 births to scheduled tribe women and 4 births to women with missing information on antenatal care visits, which are not shown separately.

In Delhi, delivery in medical institutions (44 percent) is less common than antenatal care (83 percent), and although it is higher than in the country as a whole, it is lower than in the urban areas of the country (International Institute for Population Sciences, 1994). Slightly more than half (52 percent) of births to women who had received antenatal care took place in a health facility. The percentage of institutional deliveries is higher among those who had four or more antenatal visits (65 percent) than among those who had 1-3 antenatal visits (24 percent). This could be due to the availability of services for both antenatal care and delivery in the same settings. It might also reflect complications during pregnancy which often lead women to seek antenatal care and deliver in an institutional setting. It is also possible that pregnant women receiving antenatal care outside the home are encouraged by the antenatal care provider to have medical assistance during delivery.

**Figure 9.3
Place of Delivery and
Assistance During Delivery**



Note: Based on births in the four years preceding the survey

NFHS, Delhi, 1993

Table 9.5 and Figure 9.3 present information on assistance during delivery according to selected background characteristics. As in the case of antenatal care, the interviewer was instructed to record all responses if more than one person was reported to have assisted during delivery. However, in Table 9.5 and Figure 9.3, only the most highly qualified attendant is considered if there is more than one attendant. In all, 53 percent of the births were attended by a doctor (46 percent) or a nurse/midwife (7 percent). The percentage of deliveries attended by a doctor is twice as high in Delhi as in the country as a whole, but almost the same as in the urban areas of the country (International Institute for Population Sciences, 1994). Almost 40 percent of all the births were attended by traditional birth attendants and only 8 percent were attended by relatives, friends or neighbours. Among the institutional deliveries in private health facilities over 95 percent were attended by doctors and 2 percent by nurse/midwives, whereas among deliveries in public health institutions, 94 percent were attended by doctors and 5 percent by nurse/midwives. In contrast, of deliveries taking place in the respondent's home, 70 percent were attended by traditional birth attendants (TBA), 15 percent by relatives, and only 15 percent by medical professionals (10 percent by nurse/midwives and 5 percent by doctors). Births to women who had four or more antenatal visits were much more likely to be assisted by a doctor at the time of delivery than births to women with fewer visits or no antenatal care visit.

The patterns of assistance during deliveries by medical personnel (doctors or nurse/midwives) by background characteristics are similar to that observed for deliveries in institutions/health facilities, with higher assistance by medical personnel for births to women in the age group 20-34, to women delivering first order births and to more educated mothers. The

Table 9.5 Assistance during delivery

Percent distribution of live births during the four years preceding the survey by type of assistance during delivery, according to selected background characteristics, Delhi, 1993

| Background characteristic | Attendant assisting during delivery ¹ | | | | | Total percent | Number of live births ² |
|------------------------------|--|----------------|-----------------------------|-----------------|------------|---------------|------------------------------------|
| | Doctor | Nurse/ midwife | Traditional birth attendant | Relative/ other | None | | |
| Mother's age at birth | | | | | | | |
| < 20 | 31.3 | 11.7 | 47.4 | 9.6 | -- | 100.0 | 230 |
| 20-34 | 48.2 | 6.6 | 37.0 | 8.2 | -- | 100.0 | 1582 |
| 35+ | 35.9 | 9.4 | 45.3 | 6.3 | 3.1 | 100.0 | 64 |
| Birth order | | | | | | | |
| 1 | 59.7 | 5.7 | 28.6 | 5.9 | -- | 100.0 | 524 |
| 2-3 | 48.9 | 7.5 | 34.8 | 8.8 | -- | 100.0 | 863 |
| 4-5 | 28.3 | 6.7 | 55.0 | 9.7 | 0.3 | 100.0 | 360 |
| 6+ | 15.5 | 14.0 | 58.9 | 10.9 | 0.8 | 100.0 | 129 |
| Mother's education | | | | | | | |
| Illiterate | 22.4 | 8.7 | 55.1 | 13.6 | 0.2 | 100.0 | 831 |
| Lit., < middle complete | 39.0 | 6.4 | 47.9 | 6.7 | -- | 100.0 | 282 |
| Middle school complete | 54.0 | 8.9 | 31.2 | 5.9 | -- | 100.0 | 202 |
| High school and above | 80.6 | 5.2 | 12.1 | 2.1 | -- | 100.0 | 561 |
| Religion | | | | | | | |
| Hindu | 46.9 | 7.6 | 37.1 | 8.3 | 0.1 | 100.0 | 1510 |
| Muslim | 29.9 | 6.0 | 53.4 | 10.8 | -- | 100.0 | 268 |
| Sikh | 62.3 | 8.7 | 26.1 | 2.9 | -- | 100.0 | 69 |
| Other | (89.7) | (--) | (10.3) | (--) | (--) | 100.0 | 29 |
| Caste/tribe | | | | | | | |
| Scheduled caste | 24.3 | 17.4 | 53.0 | 5.2 | -- | 100.0 | 115 |
| Other (Non-SC/ST) | 47.3 | 6.4 | 37.6 | 8.6 | 0.1 | 100.0 | 1741 |
| Antenatal care | | | | | | | |
| None | 7.9 | 6.6 | 63.7 | 21.5 | 0.3 | 100.0 | 317 |
| 1-3 visits | 25.8 | 12.3 | 51.3 | 10.4 | 0.2 | 100.0 | 511 |
| 4+ visits | 66.9 | 5.0 | 24.8 | 3.4 | -- | 100.0 | 1044 |
| Place of delivery | | | | | | | |
| Public health facility | 94.1 | 5.2 | 0.2 | 0.4 | -- | 100.0 | 458 |
| Private health facility | 97.1 | 2.4 | 0.5 | -- | -- | 100.0 | 374 |
| Own home | 5.3 | 9.9 | 69.8 | 14.8 | 0.2 | 100.0 | 974 |
| Parents' home | (13.3) | (8.9) | (62.2) | (15.6) | (--) | 100.0 | 45 |
| Other | (20.0) | (16.0) | (52.0) | (12.0) | (--) | 100.0 | 25 |
| Total² | 45.7 | 7.3 | 38.6 | 8.3 | 0.1 | 100.0 | 1876 |

() Based on 25-49 cases

-- Less than 0.05 percent

¹If the respondent mentioned more than one attendant, only the most qualified attendant is considered.

²Births in the period 1-47 months prior to the survey. Total includes 20 births to scheduled tribe women and 4 births to women with missing information about antenatal care visits, which are not shown separately.

assistance by medical personnel is highest among births to Sikhs and lowest among births to Muslims. Births to scheduled caste women are also less likely to be assisted by medical personnel in comparison to the non-SC/ST group.

Delivery Characteristics

The percent distribution of live births in the last four years according to complications during delivery, prematurity, birth weight and mothers' estimate of the baby's size at birth are presented in Table 9.6. As reported by mothers, 86 percent of the deliveries had no complications, 6 percent were characterized by a long period of labour. Five percent of births were by Caesarian section (C-section). A very small percentage of live births (4 percent) were reported as premature.

A majority of babies were not weighed at birth (57 percent), which is to be expected given that the majority of the deliveries took place at home. Moreover, for 13 percent of births

| Table 9.6 Delivery characteristics | |
|---|---------|
| Percent distribution of live births during the four years preceding the survey by whether the delivery had complications, whether premature, and by birth weight and the mother's estimate of the baby's size at birth, Delhi, 1993 | |
| Delivery characteristic | Percent |
| Complications at delivery¹ | |
| No complications | 86.2 |
| Caesarian section | 4.6 |
| Use of forceps | 1.1 |
| Excessive bleeding | 1.2 |
| Long period of labour | 6.1 |
| Delayed delivery of placenta | 0.6 |
| Other | 0.9 |
| Premature birth | |
| Yes | 3.9 |
| No | 95.7 |
| Don't know/missing | 0.4 |
| Total percent | 100.0 |
| Birth weight | |
| Less than 2.5 kg | 8.2 |
| 2.5 kg or more | 21.6 |
| Don't know/missing | 13.1 |
| Not weighed | 57.1 |
| Total percent | 100.0 |
| Size at birth | |
| Large | 8.0 |
| Average | 71.8 |
| Small | 19.8 |
| Don't know/missing | 0.4 |
| Total percent | 100.0 |
| Number of births² | 1876 |
| ¹ Percentages may sum to more than 100.0 because multiple complications could be recorded. | |
| ² Births in the period 1-47 months prior to the survey | |

the baby was weighed but information on birth weight was unavailable at the time of the interview. Thus, the resulting sample of birth weights is small and subject to substantial selection bias. More than one-quarter of babies (28 percent) whose weight at birth was known had low birth weight (less than 2.5 kg).

Because most deliveries in India take place at home where it is difficult to weigh newborns, a question on the size of the baby at birth (small, average or large) was asked in the NFHS. Experience has shown that the mother can give useful information about the size of their newborns. Almost one in five births were reported to be small in size.

Table 9.7 shows differentials in delivery characteristics by the type of antenatal care, length of the previous birth intervals and mother's age at birth. Complications were more

Table 9.7 Delivery characteristics by background characteristics

Percent distribution of live births during the four years preceding the survey by whether the delivery had complications, whether premature, and by birth weight and the mother's estimate of the baby's size at birth according to antenatal care, birth interval, and mother's age, Delhi, 1993

| Delivery characteristic | Antenatal care | | | Previous birth interval | | | | Age of mother at birth | | |
|--|----------------|------------|-----------|-------------------------|-----------|----------|-------------|------------------------|-------|-------|
| | None | 1-3 visits | 4+ visits | Under 2 years | 2-3 years | 4+ years | First birth | < 20 | 20-34 | 35+ |
| Complications at delivery¹ | | | | | | | | | | |
| No complications | 93.1 | 92.4 | 81.1 | 87.6 | 88.6 | 88.1 | 81.3 | 86.1 | 86.0 | 92.2 |
| Caesarian section | 0.9 | 0.6 | 7.8 | 2.8 | 3.4 | 3.5 | 8.1 | 2.6 | 4.9 | 4.7 |
| Use of forceps | -- | 0.4 | 1.7 | 1.0 | 0.6 | 0.7 | 1.9 | 0.4 | 1.2 | -- |
| Excessive bleeding | 1.6 | 1.0 | 1.2 | 1.6 | 1.2 | 1.4 | 0.9 | 0.9 | 1.3 | -- |
| Long period of labour | 4.1 | 4.7 | 7.4 | 5.2 | 5.8 | 6.6 | 6.8 | 9.1 | 5.8 | 3.1 |
| Delayed delivery of placenta | 0.6 | 0.6 | 0.6 | 0.8 | 0.4 | 0.3 | 0.8 | 0.9 | 0.6 | -- |
| Other | -- | 1.0 | 1.1 | 1.0 | 0.7 | 1.0 | 0.9 | 0.9 | 0.9 | 1.6 |
| Premature birth | | | | | | | | | | |
| Yes | 2.8 | 2.2 | 5.1 | 4.7 | 3.0 | 3.5 | 4.7 | 2.6 | 4.2 | 1.6 |
| No | 95.6 | 97.3 | 94.9 | 95.1 | 96.6 | 95.5 | 95.1 | 97.0 | 95.4 | 98.4 |
| Don't know/missing | 1.6 | 0.6 | -- | 0.3 | 0.4 | 1.0 | 0.2 | 0.4 | 0.4 | -- |
| Total percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Birth weight | | | | | | | | | | |
| Less than 2.5 kg | 0.6 | 3.3 | 12.7 | 6.7 | 4.5 | 11.2 | 12.3 | 7.0 | 8.5 | 4.7 |
| 2.5 kg or more | 0.6 | 8.0 | 34.7 | 16.1 | 16.5 | 24.8 | 30.6 | 12.2 | 23.2 | 17.2 |
| Don't know/missing | 5.0 | 11.4 | 16.4 | 13.5 | 13.1 | 10.5 | 14.2 | 13.0 | 13.1 | 12.5 |
| Not weighed | 93.7 | 77.3 | 36.2 | 63.7 | 66.0 | 53.5 | 43.0 | 67.8 | 55.2 | 65.6 |
| Total percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Size at birth | | | | | | | | | | |
| Large | 7.6 | 7.2 | 8.5 | 8.8 | 8.9 | 4.9 | 7.9 | 8.3 | 8.0 | 6.3 |
| Average | 68.5 | 68.3 | 74.4 | 66.1 | 73.9 | 75.9 | 71.1 | 65.7 | 72.6 | 75.0 |
| Small | 22.7 | 24.3 | 16.9 | 24.9 | 16.9 | 18.5 | 20.6 | 25.7 | 19.0 | 18.8 |
| Don't know/missing | 1.3 | 0.2 | 0.2 | 0.3 | 0.3 | 0.7 | 0.4 | 0.4 | 0.4 | -- |
| Total percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number of births ² | 317 | 511 | 1044 | 386 | 674 | 286 | 530 | 230 | 1582 | 64 |

-- Less than 0.05 percent
¹Percentages may sum to more than 100.0 because multiple complications could be recorded.
²Births in the period 1-47 months prior to the survey

common for births to mothers who had four or more antenatal visits compared with mothers who had fewer or no visits. So, too, were premature births. This suggests that there is a tendency among pregnant women having complications to obtain antenatal care.

Not surprisingly, antenatal care is also related to newborn babies being weighed. The proportion of newborns who were weighed is 6 percent for those whose mothers did not receive antenatal care, 23 percent for those whose mothers who had 1-3 antenatal check-ups and 64 percent for those whose mother had four or more antenatal visits. As Table 9.4 shows, 65 percent of births to mothers who had four or more antenatal visits were delivered in institutions, where the possibility of weighing children is very high.

There is no relationship between the previous birth interval and complications at delivery, but C-sections were carried out more often for first births than other births. The first order births as well as births occurring within two years of previous birth were more likely to be small. Births to young mothers (less than 20 years of age at the time of delivery) had a slight disadvantage, specifically in terms of a long period of labour, not being weighed and being of small size. Overall, however, a large majority of all births in Delhi took place without any complications, were not premature and the babies were of average or large size.

9.2 Child Care Indicators

Immunization of Children

The immunization of children against six serious but preventable diseases (namely, tuberculosis, diphtheria, pertussis, tetanus, polio, and measles) has been an important cornerstone of the child health care system in India. As part of the National Health Policy, the National Immunization Programme is being implemented in India on a priority basis (Gupta and Murli, 1989). The Expanded Programme on Immunization (EPI) was started by the Government of India in 1978 with the objective of reducing morbidity, mortality, and disabilities due to these six diseases by making free vaccinations easily available to all eligible children. Immunization against polio was introduced to the programme in 1979-80 and tetanus toxoid for school children was added in 1980-81. BCG was brought under the EPI in 1981-82. The latest addition to the Programme is vaccination against measles, introduced in 1985-86 (Ministry of Health and Family Welfare, 1991).

In order to accelerate implementation of the immunization scheme, the Government of India started a special programme called the Universal Immunization Programme (UIP) in 1985-86. The UIP was designated as one of the seven Technology Missions and was charged with two objectives: 1) to vaccinate at least 85 percent of all infants by 1990 against the six vaccine-preventable diseases; and 2) to achieve self-sufficiency in vaccine production and manufacture of cold chain equipment (Ministry of Health and Family Welfare, 1991).

The standard immunization schedule developed for the immunization programme for children specifies the age at which each vaccine is administered, the number of doses to be given, and the route of vaccination (intramuscular, oral or subcutaneous). Vaccinations received by infants and children are usually recorded on a vaccination card, which is given to the mother of each child.

In the NFHS, every mother was asked whether she had a vaccination card for each living child born since 1 January 1989. If a card was available, the interviewer was required to copy carefully the dates on which the child received vaccinations against each disease. When the mother could not produce the vaccination card she was asked whether the child had received any vaccinations. If any vaccination had been received, the mother was then asked whether the child had received a vaccination against tuberculosis (BCG); diphtheria, whooping cough (pertussis) and tetanus (DPT); polio; and measles. For DPT and polio, information was obtained on the number of injections or oral doses given.

Table 9.8 presents the percentage of children age 12-23 months who received each vaccine at any time before the interview and the percentage who received each vaccine before 12 months of age, by source of information (i.e., vaccination card or mother's report). The below-12 months age group is chosen for analysis because international guidelines specify that children should be fully immunized by the time they complete their first year of life. The denominator for any given row in the table is the number of children age 12-23 months. The numerator of each percentage in the row labelled "Vaccination card" is the number of children who received the specific vaccination (or dose of specific vaccination) any time prior to the survey, as indicated in the vaccination card seen by the interviewer. The numerator for this row also includes those cases where a card was shown but (1) there was an indication on the card that the vaccination was given but the actual date was either missing or inconsistent or (2) there was no record of receipt of the vaccination on the card, but the mother reported that the vaccination was given. The numerator for each entry in the row labelled "Mother's report" is the number of children whose mothers did not show a card to the interviewer but reported that the child had received the vaccination. The numerator for each entry in the row labelled "Either source" is the sum of the numerators in the preceding two rows for the vaccination under consideration. The numerator for each entry in the fourth row, "Vaccinated by 12 months of

Table 9.8 Vaccinations by source of information

Among children age 12-23 months, the percentage who have received each vaccine at any time before the interview and before 12 months of age, according to whether the information is from the vaccination card or from the mother, Delhi, 1993

| Source of information | Percentage vaccinated among children age 12-23 months | | | | | | | | | | | Number of children |
|---|---|---------|------|------|------|-------|------|------|---------|------------------|------|--------------------|
| | BCG | Polio 0 | DPT | | | Polio | | | Measles | All ¹ | None | |
| | | | 1 | 2 | 3 | 1 | 2 | 3 | | | | |
| Vaccinated at any time before interview | | | | | | | | | | | | |
| Vaccination card | 96.7 | 13.7 | 99.5 | 97.6 | 91.9 | 98.6 | 96.7 | 91.5 | 81.5 | 76.8 | -- | 211 |
| Mother's report | 84.6 | 11.1 | 80.2 | 68.8 | 54.5 | 80.6 | 75.5 | 61.3 | 59.7 | 41.9 | 12.3 | 253 |
| Either source | 90.1 | 12.3 | 89.0 | 81.9 | 71.6 | 88.8 | 85.1 | 75.0 | 69.6 | 57.8 | 6.7 | 464 |
| Vaccinated by 12 months of age² | | | | | | | | | | | | |
| | 88.0 | 12.3 | 85.5 | 79.4 | 68.0 | 85.7 | 82.0 | 70.2 | 58.4 | 49.5 | 10.7 | 464 |

-- Less than 0.05 percent

¹Children who are fully vaccinated, i.e., those who have received BCG, measles and three doses of DPT and polio vaccines (excluding polio 0).

²For children whose information was based on the mother's report, the proportion of vaccinations given during the first year of life was assumed to be the same as for children with a written record of vaccination.

age," is the sum of two quantities: (1) children vaccinated during the first year of life (0-11 months) as indicated on vaccination card (including cases where there was no date on the card or the specific vaccine was not recorded on the card) and (2) children vaccinated by 12 months of age according to the mother's report. Because the date of immunization was not asked of the mother if she could not show the card, the proportion of vaccinations given during the first year of life among children whose information is based on the mother's report is assumed to be the same as the proportion of vaccinations given during the first year of life among children with a written record of vaccination.

Of the 464 children in the age group 12-23 months, vaccination cards were available for only 46 percent of children in Delhi, a percentage that is, however, substantially higher than the nationwide average of 31 percent (International Institute for Population Sciences, 1994). Based on the information either recorded on a card or reported by the mother, 58 percent of children age 12-23 months in Delhi were fully vaccinated² compared with 51 percent in the combined urban areas of the country and 7 percent had not received any vaccinations compared with 16 percent in the urban areas of the country (International Institute for Population Sciences, 1994). A substantial minority of children (35 percent) have been partially vaccinated. The vaccination rate in Delhi although higher than the average rate for the whole country, falls short of the achievement of the goal of universal immunization of children.

Analysis of vaccine-specific data shows that most of the children received BCG vaccine (90 percent), the first dose of DPT, and the first polio vaccine dose (89 percent, each). About three-fourths of children received three doses of DPT (72 percent) and polio vaccines (75 percent) and 70 percent have been vaccinated against measles. The DPT and polio coverage rates are about the same because both vaccines are normally administered simultaneously. The continuation rate from the first to the third dose of DPT and polio vaccine indicate a sizeable dropout (20 percent in the case of DPT and 16 percent in the case of polio). As expected, levels of coverage were much higher for children with a vaccination card than those without a card. The drop out was also much lower for children with a vaccination card.

According to the immunization schedule, all primary vaccinations, including measles, should be completed by the time a child is 12 months old. The data presented in Table 9.8 indicate that most vaccinations are given within the first year of life. For example, while half of children (50 percent) had been fully vaccinated by age 12 months, 58 percent were fully vaccinated by the time of the survey. The gap between on-time and late vaccination is generally small but is particularly wide for measles. Sixteen percent of children who were vaccinated against measles received the vaccination after their first birthday.

Table 9.9 and Figure 9.4 present vaccination coverage rates among children age 12-23 months by selected background characteristics. The proportion of children for whom the mother showed a vaccination card varies by background characteristics. The vaccination cards were seen for a higher percentage of male children (49 percent) than female children (42 percent), for

² They have received BCG, measles, and three doses of DPT and polio (excluding polio 0). Polio 0 has been introduced only recently and because it is a vaccination given at the time of birth, mothers may not remember whether the first dose of the polio vaccine was given just after birth or later. Therefore, the coverage of polio 0 reported in the NFHS may be subject to response errors.

Table 9.9 Vaccinations by background characteristics

Among children age 12-23 months, the percentage who had received each vaccine by the time of the survey (according to the vaccination card or the mother) and the percentage with a vaccination card which was shown to the interviewer, by selected background characteristics, Delhi, 1993

| Background characteristic | Percentage vaccinated | | | | | | | | | | Percentage showing vaccination card | Number of children | |
|---------------------------|-----------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------------------|-------------------------------------|--------------------|------------|
| | BCG | Polio 0 | DPT | | | Polio | | | Measles | All ¹ | | | None |
| | | | 1 | 2 | 3 | 1 | 2 | 3 | | | | | |
| Sex | | | | | | | | | | | | | |
| Male | 93.5 | 13.9 | 91.8 | 85.7 | 73.9 | 92.2 | 89.0 | 77.6 | 78.4 | 64.9 | 3.7 | 48.6 | 245 |
| Female | 86.3 | 10.5 | 85.8 | 77.6 | 68.9 | 84.9 | 80.8 | 72.1 | 59.8 | 49.8 | 10.0 | 42.0 | 219 |
| Birth order | | | | | | | | | | | | | |
| 1 | 91.9 | 13.7 | 92.7 | 87.9 | 77.4 | 93.5 | 91.9 | 83.1 | 79.8 | 68.5 | 6.5 | 50.0 | 124 |
| 2-3 | 91.5 | 14.2 | 89.6 | 82.0 | 73.9 | 90.0 | 86.3 | 76.8 | 71.6 | 60.2 | 6.2 | 47.9 | 211 |
| 4-5 | 88.2 | 9.7 | 83.9 | 75.3 | 61.3 | 79.6 | 75.3 | 64.5 | 59.1 | 46.2 | 7.5 | 40.9 | 93 |
| 6+ | (80.6) | (2.8) | (86.1) | (77.8) | (63.9) | (88.9) | (80.6) | (63.9) | (50.0) | (36.1) | (8.3) | (27.8) | 36 |
| Mother's education | | | | | | | | | | | | | |
| Illiterate | 81.7 | 6.9 | 78.2 | 69.3 | 55.4 | 78.7 | 72.8 | 59.9 | 57.9 | 43.1 | 13.9 | 32.2 | 202 |
| Lit., < middle complete | 92.4 | 4.5 | 92.4 | 80.3 | 72.7 | 90.9 | 86.4 | 81.8 | 66.7 | 56.1 | 3.0 | 47.0 | 66 |
| Middle school complete | (95.8) | (20.8) | (97.9) | (93.8) | (81.3) | (97.9) | (97.9) | (85.4) | (77.1) | (64.6) | (2.1) | (60.4) | 48 |
| High school and above | 98.6 | 20.3 | 99.3 | 95.9 | 89.9 | 98.6 | 97.3 | 89.2 | 84.5 | 76.4 | -- | 58.1 | 148 |
| Religion | | | | | | | | | | | | | |
| Hindu | 91.5 | 14.5 | 90.4 | 83.1 | 72.7 | 89.6 | 86.1 | 75.4 | 71.9 | 59.6 | 6.0 | 48.4 | 366 |
| Muslim | 80.3 | 1.4 | 77.5 | 71.8 | 62.0 | 80.3 | 74.6 | 66.2 | 53.5 | 46.5 | 12.7 | 32.4 | 71 |
| Caste/tribe | | | | | | | | | | | | | |
| Scheduled caste | (80.8) | (7.7) | (73.1) | (65.4) | (46.2) | (73.1) | (69.2) | (50.0) | (53.8) | (42.3) | (19.2) | (42.3) | 26 |
| Other (Non-SC/ST) | 90.5 | 12.6 | 90.0 | 83.3 | 73.3 | 89.5 | 85.8 | 76.0 | 70.5 | 58.8 | 6.0 | 46.0 | 430 |
| Total | 90.1 | 12.3 | 89.0 | 81.9 | 71.6 | 88.8 | 85.1 | 75.0 | 69.6 | 57.8 | 6.7 | 45.5 | 464 |

Note: Total includes 20 Sikh children, 7 children belonging to other religions and 8 scheduled tribe children, who are not shown separately.

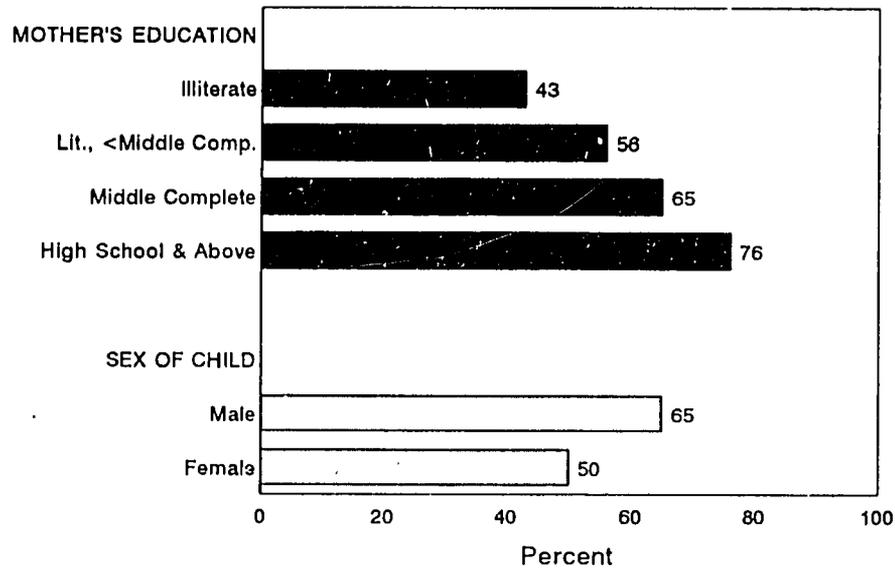
() Based on 25-49 cases

-- Less than 0.05 percent

¹Children who are fully vaccinated, i.e., those who have received BCG, measles and three doses of DPT and polio vaccines (excluding polio 0)

first order births, and for children of educated mothers (at least middle school complete). A lower proportion of mothers showed cards for scheduled caste children, Muslim children and for births of parity six or higher. Even in the last three groups, the initiation of vaccination is fairly high as indicated by BCG vaccination rates (80 percent and higher). For every type of vaccination, coverage is higher among male children than among female children. For example, two-thirds of male children were fully vaccinated compared with half of female children. The difference in coverage rates for male and female children is 5-9 points for all specific-vaccines except for measles where the difference is substantial, 19 percentage points. Thus, while there appears to be discrimination against female children with regard to vaccination, the level of the discrimination before age nine months, that is, before measles vaccination is scheduled to be given, is modest. Sex differentials in vaccination could nevertheless be an important factor underlying higher female than male mortality in childhood observed in Table 8.5.

Figure 9.4
Percentage of Children 12-23 Months
Who Have Received All Vaccinations



NFHS, Delhi, 1993

The relationship between vaccination coverage and birth order is consistently negative for all vaccinations except polio 0. First-order babies are in an advantageous position with respect to the possession of vaccination cards and vaccination coverage levels. The differences between first-order and 2nd-3rd order births are minimal. The majority of higher order births occur to older and less educated women who have been observed to have a lower propensity for utilization of health care services, such as antenatal and natal services. As seen in the case of the utilization of maternal health care services, there is a consistent positive relationship between the educational level of the mother and vaccination of children. The percentage of children who are fully vaccinated increases from 43 percent for children whose mothers are illiterate to 76 percent for children whose mothers have completed high school. Muslim children and children from scheduled castes are much less likely to have been vaccinated against childhood diseases than other children.

Table 9.10 shows the percentage of children one to three years of age with vaccination cards shown to the interviewer and the percentage receiving various vaccinations in the first year of life, according to the current age of the child. The table illustrates changes in vaccination coverage over time. The method of estimating vaccination coverage by 12 months of age is the same as that used in Table 9.8. Among children in many cases the vaccination cards of older children are discarded once they have completed their vaccinations or the cards are increasing lost with passage of time. The decline in the proportion of cards shown by current age of the child may be a reflection of the increased use of vaccination cards in recent years. It does not indicate an increased overall coverage of vaccinations in the first year of life because the

Table 9.10 Vaccinations in the first year of life by current age

Among children one to three years of age, the percentage with a vaccination card which was shown to the interviewer and the percentage who had received each vaccine during the first year of life, according to the current age of the child, Delhi, 1993

| Vaccination status | Current age of child in months | | | Total |
|--|--------------------------------|-------|-------|-------|
| | 12-23 | 24-35 | 36-47 | |
| Vaccination card shown to interviewer | 45.5 | 34.3 | 23.3 | 34.6 |
| Percent vaccinated at 0-11 months¹ | | | | |
| BCG | 88.0 | 86.1 | 87.7 | 87.3 |
| Polio 0 | 12.3 | 8.3 | 12.2 | 11.0 |
| DPT | | | | |
| 1 | 85.5 | 83.3 | 82.3 | 83.7 |
| 2 | 79.4 | 77.2 | 73.0 | 76.6 |
| 3 | 68.0 | 67.3 | 63.6 | 66.3 |
| Polio | | | | |
| 1 | 85.7 | 83.2 | 81.2 | 83.4 |
| 2 | 82.0 | 78.7 | 77.6 | 79.5 |
| 3 | 70.2 | 70.4 | 64.8 | 68.5 |
| Measles | 58.4 | 54.9 | 54.9 | 56.1 |
| All vaccinations ² | 49.5 | 46.9 | 44.2 | 46.9 |
| No vaccinations | 10.7 | 14.4 | 16.1 | 13.7 |
| Number of children | 464 | 423 | 433 | 1320 |

¹Information was obtained either from the vaccination card or from the mother if there was no written record. For children whose information was based on the mother's report, the proportion of vaccinations given during the first year of life was assumed to be the same as for children with a written record of vaccinations.

²Children who have received BCG, measles and three doses of DPT and polio vaccines (excluding polio 0)

vaccination coverage for each vaccine in Delhi by age shows only small differences.

Child Morbidity and Treatment Patterns

Because the two major causes of death among infants and children in India are acute respiratory infection and diarrhoea (Central Bureau of Health Intelligence, 1991), the NFHS collected information on the occurrence of the symptoms of these two diseases. Acute respiratory tract infection, primarily pneumonia, is a common cause of illness and death in infancy and childhood. Early diagnosis and treatment with antibiotics can prevent a large proportion of these ARI/pneumonia deaths. Fever is a major manifestation of malaria, although it also accompanies various other illnesses. The mothers of children born during the past four years were asked a series of questions on the prevalence of cough, fever, and diarrhoea during the period of two weeks before the survey and the type of treatment given to the children.

Table 9.11 shows the percentage of children with cough accompanied by rapid breathing (i.e., acute respiratory infection or ARI), fever, and diarrhoea during the two weeks prior to the

| Table 9.11 Prevalence of acute respiratory infection, fever and diarrhoea | | | | | | |
|--|--|-------------|------------------------|------------|---|--------------------|
| Among all children under four years of age, the percentage who were ill with a cough accompanied by fast breathing, fever and diarrhoea during the two weeks before the survey, and the percentage with diarrhoea in the 24 hours before the survey, according to selected background characteristics, Delhi, 1993 | | | | | | |
| Background characteristic | Percentage of children suffering in previous two weeks from: | | | | | Number of children |
| | Cough accompanied by fast breathing | Fever | Diarrhoea ¹ | | Any diarrhoea in previous 24 hours ² | |
| | | | Any | Bloody | | |
| Child's age | | | | | | |
| < 6 months | 7.6 | 9.2 | 13.6 | -- | 8.7 | 184 |
| 6 -11 months | 7.5 | 18.4 | 15.1 | 0.8 | 7.5 | 239 |
| 12-23 months | 4.1 | 14.0 | 12.3 | 0.6 | 5.4 | 464 |
| 24-35 months | 3.5 | 8.7 | 7.1 | 0.2 | 3.1 | 423 |
| 36-47 months | 3.9 | 8.1 | 5.1 | 1.2 | 1.6 | 433 |
| Sex | | | | | | |
| Male | 4.9 | 11.8 | 10.5 | 0.6 | 4.9 | 926 |
| Female | 4.7 | 10.9 | 8.9 | 0.6 | 4.2 | 817 |
| Birth order | | | | | | |
| 1 | 4.5 | 12.9 | 10.1 | 0.6 | 4.1 | 487 |
| 2-3 | 5.3 | 10.1 | 9.4 | 0.7 | 4.2 | 810 |
| 4-5 | 3.7 | 12.8 | 10.1 | 0.3 | 6.1 | 328 |
| 6+ | 5.1 | 9.3 | 10.2 | 0.8 | 4.2 | 118 |
| Mother's education | | | | | | |
| Illiterate | 4.5 | 10.5 | 8.4 | 0.8 | 4.5 | 754 |
| Lit., < middle complete | 5.7 | 16.5 | 12.6 | 0.8 | 7.3 | 261 |
| Middle school complete | 3.7 | 13.8 | 12.2 | 1.1 | 5.8 | 189 |
| High school and above | 5.0 | 9.3 | 9.5 | 0.2 | 2.8 | 539 |
| Religion | | | | | | |
| Hindu | 4.6 | 10.9 | 10.1 | 0.8 | 4.6 | 1401 |
| Muslim | 6.5 | 14.6 | 8.9 | -- | 4.5 | 246 |
| Sikh | 2.9 | 8.8 | 7.4 | -- | 2.9 | 68 |
| Other | (3.6) | (10.7) | (3.6) | (--) | (3.6) | 28 |
| Caste/tribe | | | | | | |
| Scheduled caste | 4.6 | 18.3 | 9.2 | -- | 4.6 | 109 |
| Other (Non-SC/ST) | 4.8 | 10.8 | 9.6 | 0.6 | 4.5 | 1616 |
| Source of drinking water | | | | | | |
| Piped water | U | U | 9.9 | 0.4 | 4.7 | 1392 |
| Ground water | U | U | 8.7 | 1.5 | 3.6 | 332 |
| Total | 4.8 | 11.4 | 9.8 | 0.6 | 4.5 | 1743 |

Note: Figures are for children born in the 1-47 months prior to the survey. Total includes 18 scheduled tribe children, 12 and 7 children with source of drinking water as "well water" and "Other", respectively, who are not shown separately.
U: Not available
() Based on 25-49 cases
-- Less than 0.05 percent
¹Includes diarrhoea in the past 24 hours
²Includes diarrhoea with blood

survey and the percentage with diarrhoea in the 24 hours before the survey by selected background characteristics. Only 1 in 21 (4.8 percent) children suffered from the symptoms of ARI during the two weeks preceding the survey. The most vulnerable for ARI were children who had not yet completed the first year of life (8 percent). Very small differences are observed according to the gender and birth order of the child and the mother's educational level. The children of Muslim women were more likely to suffer from the symptoms of ARI.

Fever was the most prevalent of the three conditions examined. Still only 11 percent of the children suffered from fever during the two weeks prior to the survey. Children age 6-23 months were somewhat more prone to fever. The children of scheduled caste mothers also had slightly higher rates of fever. No consistent relationship is observed between the prevalence of fever and the education of the mother. Again, children of Muslim mothers were more prone to fever than children of Hindus or Sikhs.

The incidence of diarrhoea during the two weeks before the survey was slightly lower than prevalence of fever (10 percent for any type of diarrhoea and less than 1 percent for bloody diarrhoea). Five percent of children had diarrhoea during the preceding 24 hours. Due to seasonal variations in the incidence of diarrhoea, these estimates may not reflect the average situation throughout the year. The incidence of diarrhoea like other childhood diseases was the highest (15 percent) among children age 6-11 months, after which it declined with increasing age. The highest incidence of the diseases peaks at age 6-11 months probably because most children are weaned during this stage of their life. Incidence of bloody diarrhoea was three times higher in children who resided in households who did not use piped drinking water as in children who lived in household who used piped water for drinking. The differentials in the incidence of diarrhoea with respect to mother's education and caste are erratic and do not conform to the pattern usually observed.

Treatment of Acute Respiratory Infection (ARI)

Table 9.12 presents information on the type of treatment received by children suffering from ARI. Eighty-eight percent of the children who suffered from ARI during the two weeks before the interview were taken to a health facility for treatment or were treated by a doctor or other health professional. Only 7 percent of children with ARI did not receive any treatment. Sick children were most often treated with cough syrup, antibiotic pills or syrup, or injections. A home remedy was used in less than 5 percent of the cases. The differentials in the treatment of ARI are based on a small number of cases.

Treatment of Fever

Table 9.13 shows treatment patterns for children suffering from fever during the two weeks before the survey. Nearly 85 percent of the children with fever were taken to a health facility or provider for treatment. Nearly one-third of the children (30 percent) were treated with antibiotics in the form of pills or syrup and 16 percent were given injections. Antimalarial medication was given to 14 percent of the children. Only small differences are observed in the treatment of fever by different background characteristics.

Table 9.12 Treatment of acute respiratory infection

Among all children under four years of age who had cough accompanied by fast breathing during the two weeks before the survey, the percentage taken to a health facility or provider and the percentage given treatment, according to selected background characteristics, Delhi, 1993

| Background characteristic | Among children with cough and fast breathing | | | | | | | Number of children |
|---------------------------|--|--------------------------|-------------|-------------|------------------------------|-------------|------------|--------------------|
| | Percentage taken to a health facility or provider ¹ | Percentage treated with | | | | | None | |
| | | Antibiotic pill or syrup | Injection | Cough syrup | Home remedy/ herbal medicine | Other | | |
| Child's age | | | | | | | | |
| < 12 months | (87.5) | (25.0) | (9.4) | (34.4) | (--) | (50.0) | (6.3) | 32 |
| 12+ months | 88.2 | 31.3 | 15.7 | 35.3 | 7.8 | 51.0 | 7.9 | 51 |
| Sex | | | | | | | | |
| Male | (84.4) | (31.1) | (8.9) | (35.6) | (2.2) | (48.9) | (8.9) | 45 |
| Female | (92.1) | (26.3) | (18.4) | (34.2) | (7.9) | (52.6) | (5.3) | 38 |
| Mother's Education | | | | | | | | |
| Illiterate | (91.2) | (29.4) | (17.6) | (35.3) | (5.9) | (50.0) | (5.9) | 34 |
| Literate | (85.7) | (28.6) | (10.2) | (34.7) | (4.1) | (51.0) | (8.2) | 49 |
| Total | 88.0 | 28.9 | 13.3 | 34.9 | 4.8 | 50.6 | 7.2 | 83 |

() Based on 25-49 cases
 -- Less than 0.05 percent
¹ Includes government/municipal hospital, private hospital/clinic, Primary Health Centre, sub-centre, doctor, or other health professional

Treatment of Diarrhoea

Deaths from acute diarrhoea are most often due to the dehydration that results from the loss of water and electrolytes (Black, 1984). Nearly all deaths due to diarrhoea can be prevented by prompt administration of rehydration solutions. Because deaths due to diarrhoea are a significant proportion of all deaths of children, the government has launched the Oral Rehydration Therapy Programme as one of its priority activity for child survival. A major purpose of this programme is to increase awareness among women and in the community about the cause and treatment of diarrhoea. Mothers are instructed how to use of Oral Rehydration Salt (ORS) packets, which are widely available. The programme promotes the use of a home-made solution made from sugar, salt and water, which is known as Recommended Home Solution (RHS). The instruction regarding rehydration therapy is given mostly through the electronic and print media, and in adult literacy classes. Documentaries on diarrhoea among children and the use of ORS and preparation of RHS are regularly shown in cinema theatres. Such announcements are also shown on television, and All India Radio frequently airs messages on ORS and RHS.

In order to gauge the extent of knowledge and use of oral rehydration, the NFHS asked mothers of children born during the last four years a series of questions regarding the knowledge and use of ORS and RHS. Table 9.14 shows that 74 percent of mothers know about ORS and 45 percent had ever used ORS packets. Levels of knowledge and use of ORS are positively related to the educational attainment of mothers. Muslim mothers and those from scheduled

Table 9.13 Treatment of fever

Among all children under four years of age suffering from fever during the two weeks before the survey, the percentage taken to a health facility or provider and type of treatment given, according to selected background characteristics, Delhi, 1993

| Background characteristic | Among children with fever | | | | | | | | Number of children |
|---------------------------|--|-------------------------|---------------------------|-------------|-----------------------------|-------------|------------|--------------------|--------------------|
| | Percentage taken to a health facility or provider ¹ | Percentage treated with | | | | | | Don't know/missing | |
| | | Anti-malarial | Anti-biotic pill or syrup | Injection | Home remedy/herbal medicine | Other | None | | |
| Child's age | | | | | | | | | |
| < 12 months | 88.5 | 9.8 | 34.4 | 18.0 | 1.6 | 65.6 | 6.6 | 1.6 | 61 |
| 12-23 months | 83.1 | 13.8 | 30.8 | 13.8 | 4.6 | 63.1 | 7.7 | -- | 65 |
| 24+ months | 83.3 | 18.1 | 26.4 | 15.3 | 4.2 | 62.5 | 4.2 | 1.4 | 72 |
| Sex | | | | | | | | | |
| Male | 88.1 | 18.3 | 31.2 | 15.6 | 2.8 | 65.1 | 4.6 | 0.9 | 109 |
| Female | 80.9 | 9.0 | 29.2 | 15.7 | 4.5 | 61.8 | 7.9 | 1.1 | 89 |
| Birth order | | | | | | | | | |
| 1 | 87.3 | 11.1 | 20.6 | 17.5 | 3.2 | 73.0 | 1.6 | 1.6 | 63 |
| 2-3 | 85.4 | 13.4 | 34.1 | 17.1 | -- | 59.8 | 9.8 | 1.2 | 82 |
| 4 + | 81.1 | 18.9 | 35.8 | 11.3 | 9.4 | 58.5 | 5.7 | -- | 53 |
| Mother's education | | | | | | | | | |
| Illiterate | 81.0 | 11.4 | 32.9 | 17.7 | 3.8 | 60.8 | 8.9 | -- | 79 |
| Literate | 87.4 | 16.0 | 28.6 | 14.3 | 3.4 | 65.5 | 4.2 | 1.7 | 119 |
| Religion | | | | | | | | | |
| Hindu | 82.4 | 15.0 | 25.5 | 15.0 | 4.6 | 64.7 | 6.5 | 1.3 | 153 |
| Muslim | (91.7) | (8.3) | (50.0) | (19.4) | (--) | (55.6) | (5.6) | (--) | 36 |
| Total | 84.8 | 14.1 | 30.3 | 15.7 | 3.5 | 63.6 | 6.1 | 1.0 | 198 |

Note: Total includes 6 and 3 children belonging to Sikh and other religions, respectively, who are not shown separately.
 () Based on 25-49 cases
 -- Less than 0.05 percent
¹Includes government/municipal hospital, private hospital/clinic, Primary Health Centre, sub-centre, doctor, or other health professional

castes have less knowledge about ORS. Sikh mothers have better knowledge and experience in use of ORS. Mass media can evidently play an important role in oral rehydration programmes. Both knowledge and use of ORS are considerably higher among mothers exposed to electronic mass media compared with those with no such exposure.

Table 9.15 shows the type of treatment obtained for children who had diarrhoea during the two weeks before the survey. Nearly two-thirds of all the children who suffered from diarrhoea were taken to a health facility or provider for treatment. Treatment at a health facility or by a health provider was more common for male children and those of literate mothers. Children under two years of age and first order births are more likely to be taken to a health facility or provider than older children and those of higher birth order. Table 9.15 also shows the percentage of children suffering from diarrhoea who received various types of treatment. Twenty-one percent of children were treated with ORS packets and 28 percent received an RSH.

Table 9.14 Knowledge and ever use of ORS packets

Percentage of mothers with births during the four years preceding the survey who know about and have ever used ORS packets, according to selected background characteristics, Delhi, 1993

| Background characteristic | Know about ORS packets | Have ever used ORS packets | Number of mothers |
|-----------------------------------|------------------------|----------------------------|-------------------|
| Mother's age | | | |
| 15-19 | 62.9 | 22.9 | 70 |
| 20-24 | 74.1 | 41.6 | 464 |
| 25-29 | 74.5 | 47.1 | 541 |
| 30-34 | 77.3 | 51.2 | 256 |
| 35+ | 72.8 | 52.4 | 103 |
| Mother's education | | | |
| Illiterate | 60.9 | 36.7 | 596 |
| Literate, < middle complete | 78.6 | 44.7 | 206 |
| Middle school complete | 78.4 | 46.4 | 153 |
| High school and above | 87.5 | 55.7 | 479 |
| Religion | | | |
| Hindu | 74.3 | 45.0 | 1157 |
| Muslim | 69.2 | 46.2 | 195 |
| Sikh | 87.3 | 47.3 | 55 |
| Other | (77.8) | (44.4) | 27 |
| Caste/tribe | | | |
| Scheduled caste | 60.7 | 30.3 | 89 |
| Other (Non-SC/ST) | 75.2 | 46.3 | 1332 |
| Mother's exposure to media | | | |
| Exposed to media | 78.3 | 47.7 | 1182 |
| Watches television weekly | 79.1 | 47.7 | 1100 |
| Listens to radio weekly | 82.4 | 50.4 | 846 |
| Visits cinema/theatre monthly | 92.8 | 55.4 | 83 |
| Not exposed to any of the media | 55.2 | 33.7 | 252 |
| Total | 74.2 | 45.3 | 1434 |

Note: Total includes 13 scheduled tribe women, who are not shown separately.
() Based on 25-49 cases

In order to reduce dehydration due to diarrhoea, mothers are also advised to increase the supply of fluids to children with diarrhoea. Only 17 percent of children received an increased supply of fluids, such as water, lemon and sugar water drink, milk, juice, soup, coconut water, tea, barley water, or breast milk. Nevertheless, 55 percent of the children received neither ORT treatment nor increased fluids.

Although fluid therapy alone may be useful in preventing deaths from acute dehydration, treatment with antibiotics may be useful in reducing the duration and severity of diarrhoea. Overall, 16 percent of children with diarrhoea were given antibiotic pill or syrup, 7 percent received injections and 63 percent were treated at home.

When a child has diarrhoea, it is inappropriate to reduce for the frequency of breastfeeding or the total intake of breast milk or other fluids. In the NFHS, the mothers of the children who suffered from diarrhoea were asked about changes in feeding practices of those

Table 9.15 Treatment of diarrhoea

Among children under four years who had diarrhoea in the past two weeks, the percentage taken for treatment to a health facility or provider, the percentage who received increased fluids and oral rehydration therapy (ORT), either an oral rehydration solution made from a packet (ORS) or a recommended home solution (RHS), the percentage who received neither ORT nor increased fluids, and the percentage given other treatments, according to selected background characteristics, Delhi, 1993

| Background characteristic | Percent taken to a health facility or provider ¹ | Oral Rehydration | | | | | | | Number of children with diarrhoea | | | |
|---------------------------|---|------------------|-------------|-------------------|-------------------|---|--------------|------------|-----------------------------------|--------|--------------------|------|
| | | ORS packets | RHS at home | Either ORS or RHS | In-creased fluids | Not given ORS, RHS or in-creased fluids | Anti-biotics | Injec-tion | | | Home remedy, other | None |
| Child's age | | | | | | | | | | | | |
| < 12 months | 65.6 | 11.5 | 26.2 | 34.4 | 18.0 | 57.4 | 11.5 | 3.3 | 68.9 | 9.8 | 61 | |
| 12-23 months | 66.7 | 21.1 | 28.1 | 40.4 | 21.1 | 52.6 | 22.8 | 8.8 | 57.9 | 15.8 | 57 | |
| 24-47 months | 61.5 | 30.8 | 30.8 | 44.2 | 11.5 | 55.8 | 13.5 | 9.6 | 61.5 | 7.7 | 52 | |
| Sex | | | | | | | | | | | | |
| Male | 67.0 | 20.6 | 25.8 | 38.1 | 12.4 | 58.8 | 17.5 | 10.3 | 62.9 | 8.2 | 97 | |
| Female | 61.6 | 20.5 | 31.5 | 41.1 | 23.3 | 50.7 | 13.7 | 2.7 | 63.0 | 15.1 | 73 | |
| Birth order | | | | | | | | | | | | |
| 1 | (75.5) | (32.7) | (38.8) | (53.1) | (22.4) | (42.9) | (12.2) | (2.0) | (73.5) | (2.0) | 49 | |
| 2-3 | 57.9 | 13.2 | 22.4 | 30.3 | 15.8 | 63.2 | 17.1 | 9.2 | 59.2 | 13.2 | 76 | |
| 4+ | (64.4) | (20.0) | (26.7) | (40.0) | (13.3) | (55.6) | (17.8) | (8.9) | (57.8) | (17.8) | 45 | |
| Mother's education | | | | | | | | | | | | |
| Illiterate | 58.7 | 17.5 | 25.4 | 33.3 | 14.3 | 61.9 | 15.9 | 4.8 | 54.0 | 22.2 | 63 | |
| Literate | 68.2 | 22.4 | 29.9 | 43.0 | 18.7 | 51.4 | 15.9 | 8.4 | 68.2 | 4.7 | 107 | |
| Total | 64.7 | 20.6 | 28.2 | 39.4 | 17.1 | 55.3 | 15.9 | 7.1 | 62.9 | 11.2 | 170 | |

Note: Figures are for children born in the period 1-47 months prior to the survey.

() Based on 25-49 cases

¹Includes government/municipal hospital, private hospital/clinic, Primary Health Centre, sub-centre, doctor, or other health professional

children during the diarrhoea. Table 9.16 provides information on feeding practices during diarrhoea for children of different ages. For a large majority of children (81 percent), the frequency of breastfeeding was unchanged. It increased during the diarrhoea in 10 percent of children and decreased in 7 percent. The frequency of breastfeeding was the same for a larger proportion of children age 1-3 than for those less than age one. The amount of other fluids given to the children was also not maintained at the same level or increased in the majority of children. Almost 1 in 5 children with diarrhoea were given less fluids than they received before the diarrhoea began. The percentage of children who were given less fluids was almost the same among those who were under one year and those who were older.

Table 9.16 Feeding practices during diarrhoea

Percent distribution of children under four years who had diarrhoea in the past two weeks, according to feeding practices during diarrhoea and age, Delhi, 1993

| Feeding practices during diarrhoea | Age of the child | | |
|--|-----------------------|-----------|--------------------|
| | < 1 year ¹ | 1-3 years | Total ² |
| Breastfeeding frequency³ | | | |
| Same as usual | 78.6 | 83.1 | 81.0 |
| Increased | 12.5 | 7.7 | 9.9 |
| Reduced | 7.1 | 6.2 | 6.6 |
| Don't know/ missing | 1.8 | 3.1 | 2.5 |
| Total percent | 100.0 | 100.0 | 100.0 |
| Number of children | 56 | 65 | 121 |
| Amount of fluids given | | | |
| Same as usual | 72.1 | 61.5 | 65.3 |
| More | 6.6 | 15.6 | 12.4 |
| Less | 16.4 | 18.3 | 17.6 |
| Don't know | 4.9 | 4.6 | 4.7 |
| Total percent | 100.0 | 100.0 | 100.0 |
| Number of children with diarrhoea | 61 | 109 | 170 |

¹Children born in the period 1-11 months prior to the survey

²Children born in the period 1-47 months prior to the survey

³Applies only to children who are still breastfed

CHAPTER 10

INFANT FEEDING AND CHILD NUTRITION

Infant feeding practices and child nutrition have significant effects on child survival, maternal health and fertility. Breastfeeding improves the nutritional status of young children and reduces morbidity and mortality. Breast milk not only provides the child with important nutrients but also protects the child against certain infections. The timing and type of supplementary foods introduced in the infant's diet also are related to the nutritional status of the child. The duration and intensity of (i.e., frequency) of breastfeeding have additional effects on duration of postpartum amenorrhoea, birth intervals and fertility. This chapter discusses the information collected on infant feeding, both breastfeeding and supplementary feeding. Also included is a brief discussion of the nutritional status of children under four years of age as measured by height and weight.

10.1 Breastfeeding and Supplementation

The Innocenti Declaration on the Protection, Promotion and Support of Breastfeeding (1990) and the WHO Working Group on Infant Feeding (World Health Organization, 1991) have made several recommendations on the feeding of infants and young children. These international recommendations state that infants should be given only breast milk up to 4-6 months of age. Aside from breast milk, no other foods or liquids are needed during this period. At age 4-6 months, adequate and appropriate complementary foods should be added to the infant's diet in order to provide sufficient nutrients for optimal growth. It is recommended that breastfeeding should continue, along with the complementary foods, up through the second-year birthday or beyond. It is further recommended that a feeding bottle should not be used at any age. The Baby Friendly Hospitals Initiative, launched by WHO, additionally recommend early initiation of breastfeeding, immediately after childbirth.

Several indicators of breastfeeding practices have been suggested by WHO to guide countries in the gathering of information for measuring and evaluating infant feeding practices. These indicators include the ever breastfed rate, the exclusive breastfeeding rate, the timely complementary feeding rate, the continued breastfeeding rate, and the bottle feeding rate. The *exclusive breastfeeding rate* is defined as the proportion of infants under four months who receive only breast milk. The *timely complementary feeding rate* is the proportion of infants age 6-9 months who receive both breast milk and solid or semi-solid food. The *continued breastfeeding rate through one year of age* is the proportion of children 12-15 months of age who are being breastfed. The *continued breastfeeding rate through two years of age* is the proportion of children age 20-23 month who are still breastfed. The *bottle feeding is reflected* in the proportion of infants who were fed using a bottle with a nipple. These indicators are highlighted in the presentation of data on breastfeeding and other feeding practices in this chapter.

In the NFHS, data on breastfeeding and supplementation were obtained from a series of questions in Section 4 of the Woman's Questionnaire. These questions pertain to births since January 1989. For any given woman, a maximum of three births were included in the analysis.

Table 10.1 shows the percentages of children ever breastfed by selected background characteristics. This information is reported for children born in the four years preceding the survey -- a total of 1,894 births. In India, traditionally breast milk has been the main source of nutrition for infants and young children. Breast milk not only provides the child with important nutrients but also protects the child against certain infections. Breastfeeding is nearly universal in Delhi, with 96 percent of all children having been breastfed. The practice of breastfeeding is high in all groups, ranging from 93-100 percent.

| Table 10.1 Initiation of breastfeeding | | | | | |
|---|---------------------------|--------------------|--|--|--------------------|
| Percentage of all children who were ever breastfed and the percentage of last-born children who started breastfeeding within one hour and one day of birth, among children born during the four years preceding the survey, according to selected background characteristics, Delhi, 1993 | | | | | |
| Background characteristic | Among all children: | | Among last-born children: | | |
| | Percentage ever breastfed | Number of children | Percent started breastfeeding within 1 hour of birth | Percent started breastfeeding within 1 day of birth ¹ | Number of children |
| Sex of child | | | | | |
| Male | 95.4 | 1006 | 6.0 | 40.1 | 779 |
| Female | 96.4 | 888 | 6.2 | 38.8 | 676 |
| Mother's education | | | | | |
| Illiterate | 95.8 | 841 | 3.8 | 28.4 | 606 |
| Lit., < middle complete | 95.4 | 284 | 7.1 | 39.8 | 211 |
| Middle school complete | 94.1 | 202 | 7.2 | 36.6 | 153 |
| High school and above | 96.8 | 567 | 8.2 | 54.0 | 485 |
| Religion | | | | | |
| Hindu | 96.3 | 1527 | 6.5 | 39.5 | 1172 |
| Muslim | 92.9 | 268 | 3.5 | 35.2 | 199 |
| Sikh | 100.0 | 70 | 8.8 | 49.1 | 57 |
| Other | (93.1) | 29 | (3.7) | (48.1) | 27 |
| Caste/tribe | | | | | |
| Scheduled caste | 96.6 | 117 | 3.4 | 29.5 | 88 |
| Other (Non-SC/ST) | 95.8 | 1757 | 6.2 | 39.9 | 1352 |
| Assistance at delivery | | | | | |
| Health professional | 95.9 | 1003 | 8.0 | 47.9 | 817 |
| Traditional birth attendant | 95.8 | 731 | 3.8 | 30.0 | 526 |
| Other or none | 96.2 | 160 | 3.6 | 22.3 | 112 |
| Place of delivery | | | | | |
| Public health facility | 94.8 | 462 | 10.2 | 51.2 | 361 |
| Private health facility | 97.1 | 378 | 7.0 | 52.0 | 327 |
| Own home | 95.7 | 983 | 3.4 | 27.9 | 713 |
| Parents' home | (97.8) | 45 | (13.9) | (25.0) | 36 |
| Other | (100.0) | 26 | * | * | 18 |
| Total | 95.9 | 1894 | 6.1 | 39.5 | 1455 |

Note: Table is based on children born in the four years preceding the survey, whether living or dead at the time of interview. The total among all children includes 20 scheduled tribe children and the total among last-born children includes 15 scheduled tribe children, who are not shown separately.

() Based on 25-49 cases
* Based on fewer than 25 cases
¹ Includes children who started breastfeeding within one hour of birth

The early initiation of breastfeeding is important because it benefits both the mother and the infant. As soon as the infant starts suckling at the breast, the hormone oxytocin is released, resulting in uterine contractions that reduce the risk of postpartum haemorrhage and facilitate expulsion of the placenta. Colostrum and breast milk are sufficient for newborn infants and have the added advantage of carrying the mother's immunities to disease. Not only is supplemental feeding unnecessary in the first month of life, it is dangerous, because supplemental foods or liquids may introduce contaminants that cause infection, leading to diarrhoea. For children who were ever breastfed, Table 10.1 also shows how soon after birth breastfeeding was initiated. This information was collected for the most recent birth of each woman who had a birth in the four years before the survey (a total of 1,455 births). It is rare for breastfeeding to begin very soon after delivery in Delhi. In fact, only 6 percent of children began breastfeeding within one hour of birth and 40 percent began breastfeeding during the first 24 hours of their life. The practice of squeezing the first milk from the breast is also very common in Delhi. NFHS data not shown here indicate that the practice of squeezing the first milk from the breast was practised by a large majority (73 percent) of the women who breastfeed. This suggests the importance of launching an educational campaign to inform women about the benefits of providing the first breast milk to their children.

There is no difference in the timing of initiation of breastfeeding by the sex of the child, but there are substantial differences according to other background characteristics and the circumstances of the delivery. The postponement of breastfeeding is most common among illiterate women and among scheduled castes. The postponement of breastfeeding is less likely for children whose births took place in health facilities and those whose births were attended by health professionals. It is clear that contact with a health personnel at delivery or delivery in a health facility increases the likelihood of initiation of breastfeeding within the first day of birth. Although there are differences in the initiation of breastfeeding by background characteristics, the postponement of breastfeeding in all groups shows that current feeding practices for newborn infants are not beneficial.

For children currently being breastfed, mothers were asked if the children had been given any other liquids or solid foods at any time the day or night preceding the interview. The results are shown in Table 10.2 and Figure 10.1. Children who received nothing but breast milk in the previous 24 hours are defined as being *exclusively breastfed*, while *full breastfeeding* refers to both those given only breast milk and those who received breast milk and plain water only. In Delhi, exclusive breastfeeding is not common. Even at age 0-1 month where exclusive breastfeeding is highest, only 28 percent are exclusively breastfed. Of the remaining 72 percent, 34 percent of babies are given water as supplement. Fifteen percent of infants age 2-3 months are given only breast milk and 52 percent of them receive some supplementary food or liquid (other than water only). Exclusive breastfeeding drops off rapidly from 28 percent in the first month of life to less than 4 percent at age 10-11 months. It is encouraging to note that three-fourths or more children receive breast milk and supplementation after six months of age, as recommended.

Table 10.3 and Figure 10.2 show in more detail the types of food supplementation received by currently breastfeeding last-born children under four years of age during the 24

Table 10.2 Breastfeeding status by child's age

Percent distribution of living children by breastfeeding status, according to child's age in months, Delhi, 1993

| Age in months | Percent age among all living children | | | | | | Number of living children |
|---------------|---------------------------------------|----------------------------|-------------------|--------------|-----------------|---------------|---------------------------|
| | Not breast-feeding | Exclusively breast-feeding | Breastfeeding and | | | Total percent | |
| | | | Plain water only | Supple-ments | DK Supple-ments | | |
| 0 - 1 | (--) | (27.7) | (34.0) | (38.3) | (--) | 100.0 | 47 |
| 2 - 3 | 1.4 | 15.1 | 31.5 | 52.1 | -- | 100.0 | 73 |
| 4 - 5 | 7.3 | 6.1 | 23.2 | 63.4 | -- | 100.0 | 82 |
| 6 - 7 | 10.6 | 5.3 | 10.6 | 73.4 | -- | 100.0 | 94 |
| 8 - 9 | 7.5 | 2.2 | 15.1 | 75.3 | -- | 100.0 | 93 |
| 10-11 | 13.5 | 3.8 | 1.9 | 80.8 | -- | 100.0 | 52 |
| 12-13 | 22.4 | 4.5 | 4.5 | 68.7 | -- | 100.0 | 67 |
| 14-15 | 28.0 | 1.3 | 2.7 | 68.0 | -- | 100.0 | 75 |
| 16-17 | 35.9 | 1.1 | 1.1 | 62.0 | -- | 100.0 | 92 |
| 18-19 | 40.7 | -- | -- | 59.3 | -- | 100.0 | 86 |
| 20-21 | 39.3 | -- | 1.2 | 59.5 | -- | 100.0 | 84 |
| 22-23 | 58.3 | -- | -- | 41.7 | -- | 100.0 | 60 |
| 24-25 | 71.7 | -- | -- | 26.4 | 1.9 | 100.0 | 53 |
| 26-27 | 68.3 | -- | 1.7 | 30.0 | -- | 100.0 | 60 |
| 28-29 | 76.1 | -- | -- | 23.9 | -- | 100.0 | 88 |
| 30-31 | 76.0 | -- | -- | 22.7 | 1.3 | 100.0 | 75 |
| 32-33 | 73.3 | -- | -- | 25.6 | 1.2 | 100.0 | 86 |
| 34-35 | 80.3 | -- | -- | 18.0 | 1.6 | 100.0 | 61 |
| 36-37 | 88.3 | -- | -- | 11.7 | -- | 100.0 | 60 |
| 38-39 | 80.6 | 1.4 | 1.4 | 16.7 | -- | 100.0 | 72 |
| 40-41 | 91.5 | -- | -- | 7.0 | 1.4 | 100.0 | 71 |
| 42-43 | 94.4 | -- | -- | 4.4 | 1.1 | 100.0 | 90 |
| 44-45 | 91.6 | -- | -- | 7.2 | 1.2 | 100.0 | 83 |
| 46-47 | 91.4 | -- | -- | 8.6 | -- | 100.0 | 58 |

Note: Breastfeeding status refers to last 24 hours. Children classified as "Breastfeeding and plain water only" receive no supplements.

DK: Don't know

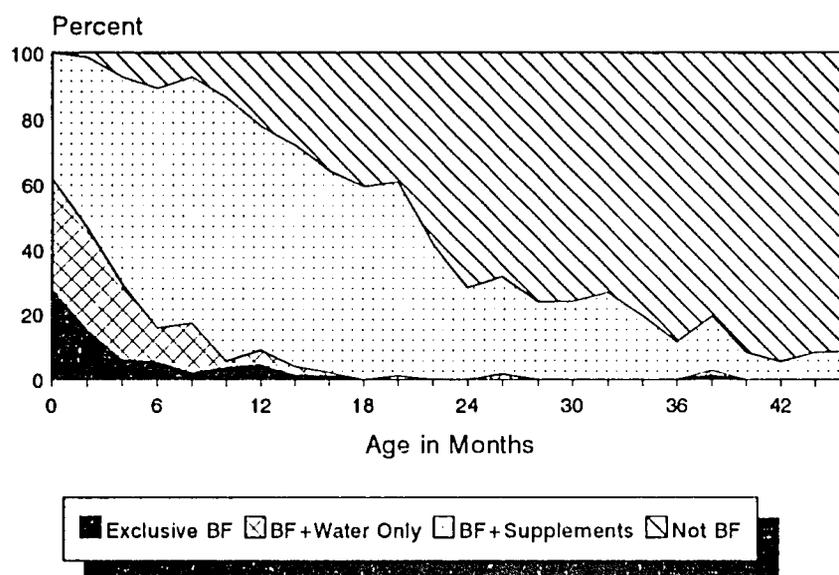
() Based on 25-49 cases

-- Less than 0.05 percent

hours before the interview. The numbers of children in each two-month age group are shown in the far right column. There is some use of infant formula in Delhi. Both the table and figure suggest that the use of infant formula varies from 4 percent for children up to 3 months to 19 percent at age 8-9 months, showing an increasing trend. Supplementation of breast milk by other milk likewise rises steadily with age up to 76 percent at 10-11 months, then it remains between 68 to 76 percent up to 22-23 months, and thereafter declines. Supplementation by other liquids, such as juice or tea, follows the same pattern as introduction of other milk but proportions of children given other liquids is higher after age 8-9 months. Solid or mushy foods are rarely introduced before six months of age but increase fairly steadily with age.

The use of a bottle with a nipple to feed children is of interest to both demographers and health personnel. Bottle feeding has a direct effect on the mother's exposure to the risk of pregnancy since the period of amenorrhoea (if not yet over) is shortened when mothers feed their children from bottles with nipples. In addition, since it is difficult to sterilize the nipple properly, the use of bottles with nipples exposes children to an increased risk of developing

Figure 10.1
Distribution of Children by Breast-feeding (BF) Status According to Age



Note: BF + Supplements includes
BF + DK (Don't know) Supplements

NFHS, Delhi, 1993

diarrhoea and other diseases. The use of bottles with nipples in Delhi is fairly common, increasing from 19 percent at 0-1 month to 47 percent at 10-11 months, after which it decreases.

The duration of breastfeeding is the most widely studied indicator of breastfeeding. Several statistics of duration of breastfeeding (such as the median duration of exclusive breastfeeding, full breastfeeding and breastfeeding of any kind including partial breastfeeding) by selected background variables are shown in Table 10.4. Also shown is the percentage of children under 6 months of age who were breastfed six or more times in the 24 hours preceding the survey interview. The median length of breastfeeding overall is 21 months or one year and nine months. Supplementation begins early, however; the median length of exclusive breastfeeding is only half a month and the median length of full breastfeeding is 1.7 months. The mean length of breastfeeding (21.9 months) is one month longer than the median length, reflecting the fact that some children are breastfed for very long periods of time. Estimates of both the means and the medians are based on the current proportions of children breastfeeding in each age group rather than on the mother's recall because current status information is usually more accurate. An alternative measure of the duration of breastfeeding is the prevalence-incidence mean, which is calculated as the "prevalence" of breastfeeding divided by its "incidence". In this case, prevalence is defined as the number of children whose mothers were breastfeeding at the time of the survey and incidence is defined as the average number of births per month (averaged over a 48-month period to overcome problems of the seasonality of births and possible reference period errors). For "any breastfeeding", the prevalence-incidence mean is very close to the mean calculated in the conventional manner. However, prevalence-incidence

Table 10.3 Type of supplementation by child's age

Percentage of last-born breastfeeding children receiving food supplementation by type and percentage using a bottle with a nipple, according to child's age in months, Delhi, 1993

| Age in months | Percentage of breastfeeding children who are: | | | | | |
|---------------|---|------------|--------------|------------------|----------------------------|-----------------------------------|
| | Receiving supplement | | | | Using bottle with a nipple | Number of breast-feeding children |
| | Infant formula | Other milk | Other liquid | Solid/mushy food | | |
| 0 - 1 | (4.3) | (23.4) | (17.0) | (2.1) | (19.1) | 47 |
| 2 - 3 | 4.2 | 36.1 | 29.2 | 1.4 | 31.9 | 72 |
| 4 - 5 | 7.9 | 44.7 | 44.7 | 9.2 | 26.3 | 76 |
| 6 - 7 | 10.7 | 57.1 | 51.2 | 16.7 | 33.3 | 84 |
| 8 - 9 | 18.6 | 60.5 | 70.9 | 38.4 | 39.5 | 86 |
| 10-11 | (8.9) | (75.6) | (75.6) | (57.8) | (46.7) | 45 |
| 12-13 | 15.4 | 69.2 | 76.9 | 57.7 | 44.2 | 52 |
| 14-15 | 7.4 | 66.7 | 79.6 | 72.2 | 35.2 | 54 |
| 16-17 | 10.2 | 76.3 | 79.7 | 81.4 | 33.9 | 59 |
| 18-19 | 3.9 | 72.5 | 86.3 | 82.4 | 19.6 | 51 |
| 20-21 | 5.9 | 74.5 | 86.3 | 84.3 | 11.8 | 51 |
| 22-23 | (4.0) | (76.0) | (100.0) | (88.0) | (20.0) | 25 |
| 24-29 | 7.4 | 70.4 | 92.6 | 75.9 | 22.2 | 54 |
| 30-47 | 4.4 | 64.8 | 86.8 | 93.4 | 16.5 | 91 |

Note: Supplementation refers to the last 24 hours. Percents by type of supplement among breastfeeding children may sum to more than 100.0 because children may receive more than one type of supplement.
() Based on 25-49 cases

means for exclusive and full breastfeeding are lower.

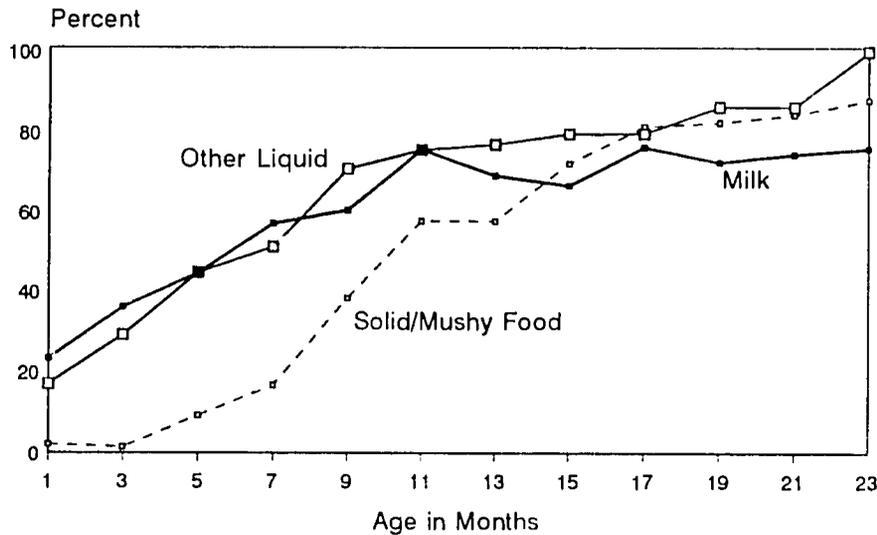
Children of educated women, those who work as employees outside the home, and those who are exposed to mass media have slightly shorter durations of breastfeeding than other children, but the differences are quite small. Male children are breastfed slightly longer than female children (21.8 months compared with 20.0 months). Schedule caste children are breastfed the longest (26.5 months). As expected the nonworking mothers breastfeed for a longer duration than mothers who were working. Other groups with relatively long breastfeeding durations include children whose mothers had no assistance at delivery or assistance from other than professionals or TBAs and those whose mothers are not exposed to any media.

In addition to the length of breastfeeding, the frequency with which mothers breastfeed can affect the duration of postpartum amenorrhoea. The health and nutritional status of the child may also be influenced by the frequency of breastfeeding. There is a high intensity of breastfeeding in Delhi. Almost nine in ten children under six months of age were breastfed six or more times on the day before the interview (Table 10.4).

10.2 Nutritional Status of Children

One of the major contributions of the National Family Health Survey to the study of child health is the anthropometric data collected for children under four years of age. Both weight

Figure 10.2
 Percentage of Children Given Milk,
 Other Liquid, or Solid/Mushy Food
 the Day Before the Interview



Note: Based on youngest child being breastfed;
 Milk refers to fresh milk and tinned/powdered milk

NFHS, Delhi, 1993

and height measurements were obtained for each child. The weight of each child was measured using a salter scale, which is a hanging spring balance. Height or length of children under two years old were measured with the child lying down on an adjustable measuring board, while those age two and above were measured in a standing position. Weight was measured to the nearest 100 grams and the height or length was measured to the nearest 0.1 centimetres. The guidelines given in the United Nations Manual "How to Weigh and Measure Children" (United Nations, 1986), were followed when training the field staff on measurement of height and weight of the children. The data on weight and height were used to calculate three summary indices of nutritional status, which affects children's susceptibility to disease and their chances of survival. These indices are:

- weight-for-age
- height-for-age
- weight-for-height

The nutritional status of children calculated according to these measures is compared with the nutritional status of an international reference population that has been recommended by the World Health Organization (Dibley et al., 1987a, 1987b). The use of this reference population is based on the empirical finding that well-nourished children in all population groups for which data exist follow very similar growth patterns (Martorell and Habicht, 1986). A recent scientific report from the Nutrition Foundation of India has concluded that the WHO standard is applicable to Indian children in general (Agarwal et al., 1991).

Table 10.4 Median duration and frequency of breastfeeding by background characteristics

Median durations of any, exclusive and full breastfeeding among children under four years and the percentage of children under six months of age who were breastfed six or more times in the 24 hours preceding the interview, according to selected background characteristics, Delhi, 1993

| Background characteristic | Median durations (months) ¹ | | | | Children under 6 months | |
|--|--|--------------------------|----------------------------------|--------------------|-------------------------------------|--------------------|
| | Any breast-feeding | Exclusive breast-feeding | Full breast-feeding ² | Number of children | Breastfed 6+ times in last 24 hours | Number of children |
| Sex of child | | | | | | |
| Male | 21.8 | 0.5 | 1.9 | 1006 | 84.8 | 99 |
| Female | 20.0 | 0.5 | 1.5 | 888 | 90.3 | 103 |
| Mother's education | | | | | | |
| Illiterate | 23.6 | 0.6 | 2.7 | 841 | 92.1 | 89 |
| Literate, < middle complete | 19.0 | 0.4 | 0.7 | 284 | (82.8) | 29 |
| Middle school complete | 20.5 | 0.4 | 0.8 | 202 | * | 21 |
| High school and above | 15.2 | 0.6 | 1.3 | 567 | 82.5 | 63 |
| Religion | | | | | | |
| Hindu | 21.0 | 0.5 | 2.1 | 1527 | 88.7 | 159 |
| Muslim | 21.8 | 0.4 | 0.4 | 268 | (89.7) | 29 |
| Sikh | 8.5 | 0.4 | 0.6 | 70 | * | 11 |
| Other | (14.5) | (0.4) | (0.4) | 29 | * | 3 |
| Caste/tribe | | | | | | |
| Scheduled caste | 26.5 | 0.5 | 2.4 | 117 | * | 19 |
| Other (Non-SC/ST) | 20.8 | 0.5 | 1.5 | 1757 | 87.8 | 181 |
| Mother's work status | | | | | | |
| Not working | 21.2 | 0.5 | 1.7 | 1601 | 87.4 | 182 |
| Working in family farm/business | (18.5) | (2.1) | (3.3) | 27 | * | 3 |
| Employed by someone else | 17.6 | 0.5 | 0.6 | 157 | * | 6 |
| Self-employed | 17.6 | 0.4 | 2.2 | 109 | * | 11 |
| Mother's exposure to media | | | | | | |
| Exposed to media | 19.7 | 0.5 | 1.7 | 1527 | 87.1 | 163 |
| Watches television weekly | 19.7 | 0.5 | 1.8 | 1405 | 87.6 | 153 |
| Listens to radio weekly | 19.4 | 0.5 | 1.2 | 1080 | 87.2 | 109 |
| Visits cinema/theatre monthly | 17.5 | 1.6 | 1.9 | 101 | * | 12 |
| Not exposed to any of the media | 22.1 | 0.4 | 1.6 | 367 | (89.7) | 39 |
| Assistance at delivery | | | | | | |
| Health professional | 16.8 | 0.5 | 1.2 | 1003 | 90.4 | 115 |
| Traditional birth attendant | 22.0 | 0.5 | 2.4 | 731 | 84.0 | 75 |
| Other or none | 24.5 | 1.3 | 2.4 | 160 | * | 12 |
| Total¹ | 20.9 | 0.5 | 1.7 | 1894 | 87.6 | 202 |
| Mean for all children¹ | 21.9 | 1.9 | 4.2 | NA | NA | NA |
| P/I for all children³ | 21.4 | 1.1 | 3.4 | NA | NA | NA |

Note: For children under 4 years, total includes 20 scheduled tribe children; and for children under 6 months, total includes 2 scheduled tribe children, who are not shown separately.

NA: Not applicable

() Based on 25-49 cases

* Percentage not shown; based on fewer than 25 cases

¹Median and mean based on current status

²Either exclusively breastfed or received breast milk and plain water only

³Prevalence-incidence mean

The three nutritional status indices are expressed in standard deviation units (z-scores) from the median for the international reference population. Children who fall more than two standard deviations below the reference median are considered to be *undernourished*, while those who fall more than three standard deviations below the reference median are considered to be *severely* undernourished.

Each of the indices provides somewhat different information about nutritional status of children. The height-for-age index measures linear growth retardation among children. Children who are more than two standard deviations below the median of the reference population in terms of height-for-age are considered short for their age or *stunted*. The percentage in this category indicates the prevalence of chronic undernutrition which often leads to chronic or recurrent diarrhoea. Stunting is typically associated with inadequate food intake resulting from poor feeding practices or from the lack of sufficient food, as well as the existence of adverse environmental conditions for an extended period of time. Height-for-age, therefore, is a measure of the long-term effects of undernutrition.

The weight-for-height index measures body mass in relation to body length. Children who are more than two standard deviations below the median of the reference population in terms of their weight-for-height are considered to be too thin or *wasted*. The percentage in this category indicates the prevalence of acute undernutrition. This condition is associated with the failure to receive adequate nutrition in the period immediately before the survey and may be the result of seasonal variations in food supply or recent episodes of illness (especially diarrhoea).

Weight-for-age is a composite measure which takes into account both chronic and acute undernutrition. Children who are more than two standard deviations below the reference median on this index are considered *underweight*.

The validity of these indices is determined by many factors, including the coverage of the population of children and accurate anthropometric measurements. Almost 13 percent of living children under age four were not weighed and measured (see Table B.3 in Appendix B), usually because the child was not at home or because the mother refused to allow the measurements to be taken. Also excluded from the analysis are children whose month and year of birth were not reported by the mother, and those with grossly improbable height and weight measurements. In addition, two of the three indices (height-for-age and weight-for-age) are sensitive to misreporting of children's ages, including heaping on preferred digits. The weight-for-height index is the only one which does not depend on accurate age reporting.

Table 10.5 shows the nutritional status of children by selected demographic characteristics. Both chronic and acute undernutrition are very high in Delhi. Four in ten children are underweight and around the same proportion are stunted. The proportion of children who are severely undernourished is -- 12 percent in the case of weight-for-age and 19 percent in the case of height-for-age. Perhaps the most serious nutritional problem measured (wasting) is also quite evident in Delhi, affecting 1 in every 8 children.

All of the measures of undernutrition vary substantially according to the child's age. There is a marked increase in the prevalence of undernutrition even in the first year of life. Undernutrition is lowest in the first six months of life, when most babies are being breastfed

Table 10.5 Nutritional status by demographic characteristics

Among children under four years of age, the percentage classified as undernourished according to three anthropometric indices of nutritional status, by demographic characteristics, Delhi, 1993

| Demographic characteristic | Weight-for-age | | Height-for-age | | Weight-for-height | | Number of children |
|--|------------------------|-------------------------------------|------------------------|-------------------------------------|------------------------|-------------------------------------|--------------------|
| | Percentage below -3 SD | Percentage below -2 SD ¹ | Percentage below -3 SD | Percentage below -2 SD ¹ | Percentage below -3 SD | Percentage below -2 SD ¹ | |
| Child's age | | | | | | | |
| < 6 months | 0.6 | 3.8 | 3.8 | 8.3 | 1.3 | 6.4 | 156 |
| 6-11 months | 4.8 | 31.4 | 9.0 | 21.9 | 1.9 | 10.0 | 210 |
| 12-23 months | 17.3 | 48.7 | 22.6 | 50.5 | 3.5 | 17.1 | 398 |
| 24-35 months | 18.6 | 54.5 | 22.6 | 52.3 | 3.7 | 12.1 | 354 |
| 36-47 months | 8.7 | 43.4 | 25.4 | 54.0 | 2.0 | 9.2 | 346 |
| Sex | | | | | | | |
| Male | 12.7 | 41.6 | 19.5 | 44.2 | 3.4 | 12.8 | 771 |
| Female | 11.3 | 41.6 | 19.2 | 42.0 | 2.0 | 10.8 | 693 |
| Birth order | | | | | | | |
| 1 | 9.0 | 34.2 | 16.3 | 34.9 | 3.3 | 11.1 | 398 |
| 2-3 | 11.9 | 41.8 | 18.2 | 43.0 | 2.4 | 11.6 | 697 |
| 4-5 | 14.3 | 48.7 | 24.2 | 52.7 | 2.9 | 13.6 | 273 |
| 6+ | 18.8 | 51.0 | 26.0 | 51.0 | 2.1 | 12.5 | 96 |
| Previous birth interval² | | | | | | | |
| First birth | 9.2 | 34.3 | 16.9 | 35.3 | 3.2 | 10.9 | 402 |
| < 24 months | 16.3 | 49.7 | 25.7 | 53.8 | 2.4 | 10.8 | 288 |
| 24-47 months | 12.9 | 44.6 | 21.0 | 45.1 | 2.4 | 13.3 | 543 |
| 48+ months | 9.5 | 37.2 | 11.7 | 39.0 | 3.0 | 11.7 | 231 |
| Total | 12.0 | 41.6 | 19.3 | 43.2 | 2.7 | 11.9 | 1464 |

Note: Figures are for children born 1-47 months prior to the survey. Each of the indices is expressed in standard deviation units (SD) from the median of the International Reference Population. The percentages of children who are more than three and more than two standard deviation units below the median of the International Reference Population (-3SD and -2SD) are shown according to selected characteristics.

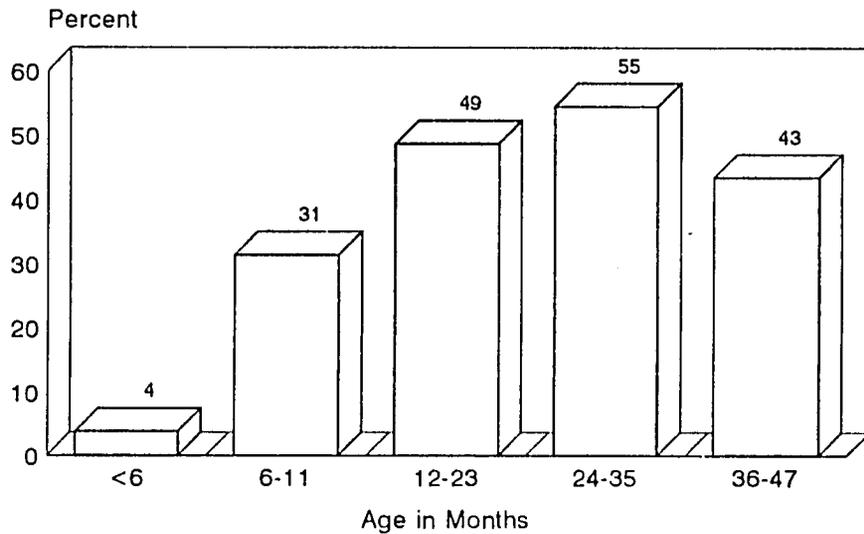
¹Also includes the children who are below -3 standard deviations from the International Reference Population median

²In the case of first-born twins, both twins are counted as first births because neither has a previous birth interval

The percentage of children who are underweight reaches a peak of 55 percent at age two years (Figure 10.3). The prevalence of stunting increases dramatically among children one year old and thereafter continues to a peak of 54 percent among children who are three years old. Wasting, on the other hand, reaches a maximum for children who are one year old and declines thereafter.

The higher order births are slightly more likely to suffer from underweight and stunting. The longer the interval preceding the birth of a child, the lower the percentage who are undernourished according to weight-for-age and height-for-age. These differences are surprisingly modest, however, in view of the large differences in mortality according to the interval since the preceding birth (Chapter 8). Evidently children who survive are not much disadvantaged by having been born shortly after the birth of a sibling.

Figure 10.3
 Percentage of Children Under Age Four
 Who Are Underweight by Age



Note: Percentage of children more than 2 standard deviations below the median of the International Reference Population

NFHS, Delhi, 1993

Table 10.6 shows nutritional status by selected background characteristics. A slightly larger percentage of Muslim children than Hindu children are malnourished according to weight-for-age and height-for-age, and a smaller proportion of Sikh children than others are malnourished according to all of the measures. Children from scheduled castes are slightly more undernourished than other children.

The variability in undernutrition by educational level is striking. For weight-for-age and height-for-age indices, undernutrition declines steadily with the increasing educational attainment of the mother. The decline is particularly pronounced for the highest educational group (high school and above). But even in this group, more than one-fourth of the children are underweight and an equal number are stunted.

Table 10.6 Nutritional status by background characteristics

Among children under four years of age, the percentage classified as undernourished according to three anthropometric indices of nutritional status, by selected background characteristics, Delhi, 1993

| Background characteristic | Weight-for-age | | Height-for-age | | Weight-for-height | | Number of children |
|---------------------------|------------------------|-------------------------------------|------------------------|-------------------------------------|------------------------|-------------------------------------|--------------------|
| | Percentage below -3 SD | Percentage below -2 SD ¹ | Percentage below -3 SD | Percentage below -2 SD ¹ | Percentage below -3 SD | Percentage below -2 SD ¹ | |
| Mother's education | | | | | | | |
| Illiterate | 15.7 | 49.9 | 26.7 | 52.8 | 2.8 | 12.6 | 617 |
| Lit., < middle complete | 16.7 | 48.7 | 18.4 | 48.7 | 2.6 | 10.7 | 234 |
| Middle complete | 9.1 | 38.8 | 16.4 | 38.2 | 2.4 | 12.1 | 165 |
| High school and above | 5.6 | 27.5 | 10.7 | 28.8 | 2.9 | 11.4 | 448 |
| Religion | | | | | | | |
| Hindu | 11.8 | 41.8 | 18.4 | 43.1 | 3.0 | 12.0 | 1184 |
| Muslim | 12.8 | 43.8 | 26.6 | 46.8 | 2.5 | 11.8 | 203 |
| Sikh | 11.1 | 29.6 | 11.1 | 33.3 | -- | 9.3 | 54 |
| Caste/tribe | | | | | | | |
| Scheduled caste | 22.2 | 52.2 | 25.6 | 53.3 | 1.1 | 15.6 | 90 |
| Other | 11.2 | 40.8 | 18.8 | 42.4 | 2.7 | 11.6 | 1357 |
| Total | 12.0 | 41.6 | 19.3 | 43.2 | 2.7 | 11.9 | 1464 |

Note: Figures are for children born 1-47 months prior to the survey. Each of the indices is expressed in standard deviation units (SD) from the median of the International Reference Population. The percentages of children who are more than three and more than two standard deviation units below the median of the International Reference Population (-3SD and -2SD) are shown according to selected characteristics. Total includes 23 children belonging to "Other" religion and 16 scheduled tribe children, who are not shown separately.

-- Less than 0.05 percent

¹Also includes the children who are below -3 standard deviations from the International Reference Population median.

CHAPTER 11

KNOWLEDGE OF AIDS

Acquired Immune Deficiency Syndrome, or AIDS, as it is more commonly known, was first recognized in 1981. Since the beginning of the pandemic, it is estimated that over 16 million individuals throughout the world have been infected with the human immunodeficiency virus (HIV), which causes AIDS, and about 1.5 million people developed AIDS between mid-1993 and mid-1994 - three times as many as in the previous 12-month period (World Health Organization, 1994). The estimated total number of actual AIDS cases in adults and children over the same period is four million, of which over 240,000 (6.0 percent) are from Asia. A large proportion (30-50 percent) of these infected individuals are expected to die within 5-10 years of acquiring the infection (World Health Organization, 1992). Because of the high case fatality rate and the lack of a curative treatment or vaccine, the HIV/AIDS pandemic is one of the most serious health problems in the world.

Within a few years after the original description of the AIDS syndrome, its cause and basic immunological abnormalities were identified, and the mode of transmission of the causative virus was documented. The HIV virus may remain in a state of latency for some time without causing clinical disease. It is thought that once an individual becomes infected with the virus, he or she remains infected for life. The clinical manifestations of AIDS result primarily from critical injury to the immune system. Soon after becoming infected with HIV, some people have an acute self-limiting illness, indistinguishable from many other mild viral illnesses. After the healthy carrier state, which may last as long as 10 years (longer in some cases), most infected people progress to the full long-term clinical illness stage - the stage at which AIDS itself is contracted.

Epidemiological studies have demonstrated that the major routes of HIV virus transmission are sexual intercourse, intravenous injections (e.g., transfusions of HIV-contaminated blood or injections using HIV-contaminated needles) and transmission from infected mothers to unborn fetuses through the placenta. Female sex workers in India have significant levels of HIV infection, and a major route of transmission of the virus is along well-established truck routes of the country, as contact between sex workers and the drivers is common. The available evidence indicates that the HIV virus cannot be transmitted through food, water, vectors, or casual contact. Increasingly HIV is found in association with sexually transmitted diseases (STDs) and tuberculosis, compounding an already alarming public health problem. In urban areas of Tamil Nadu, Gujarat, Karnataka, Punjab, and West Bengal, HIV prevalence levels in STD patients are now estimated to be about 1 percent (World Health Organization, 1994).

India established a National AIDS Control Organization (NACO) under the Ministry of Health and Family Welfare in 1989. Prior to this, attempts were made by various non-governmental organizations (NGOs) to raise awareness of the AIDS syndrome and implement small-scale prevention programmes, concentrating in the perceived higher-risk areas of Bombay, Calcutta, Madras, and Delhi. As the NGO work continues to make important contributions in the field of AIDS prevention, the numbers compiled at the national level reveal the spread of HIV in India (NACO produces a monthly update on HIV infection in India, based on medical

records submitted from 59 hospitals and major medical research centres throughout India).

The updates show that by June of 1988 nearly 120,000 persons from high-risk groups in India had been screened for the virus. Of these cases, 370 tested as HIV-positive, and 22 of them (15 Indians and 7 foreigners) were diagnosed as having actually contracted AIDS. It was subsequently determined that 21 of these 22 AIDS cases were transmitted through sexual intercourse, and one through blood transfusion. According to another set of estimates, by 1988 sixteen patients (14 Indians and two foreigners) had died of AIDS in India (Khurana, 1989). Approximately 600,000 persons were HIV positive in India in 1992, and the number of HIV positive cases among those screened (who tend to be from high-risk groups) has shown an increase from 2.5 per 1,000 population in 1986 to 11.2 per 1,000 in 1992 (Ministry of Health and Family Welfare, 1993).

As of March 1993, 11,849 sero-positive cases out of a total of 1,659,412 samples screened had been reported in India (Ministry of Health and Family Welfare, 1993b). Of these HIV-positive cases, 310 were diagnosed as having contracted AIDS, their geographical distribution covering 20 states and union territories of the country. Three-fourths of these AIDS cases had reportedly acquired the virus through sexual intercourse, 12 percent through blood transfusions, and 7 percent through sharing unsterilized needles. It is estimated that if the transmission of HIV continues at the same pace, about five million persons would be infected in India by the year 2000, and the number of AIDS cases would exceed one million (Ministry of Health and Family Welfare, 1993b).

Recent estimates from the NACO monthly updates on HIV infection in India show that as of 31 March 1994 a total of 15,017 cases were confirmed HIV-positive (using the Western Blot test), out of 2,052,856 samples screened, resulting in a sero-positivity rate of 7.32 per 1000 (National AIDS Control Organization, 1994). The number of AIDS cases *reported* in India was 713, (551 males and 162 females), although according to WHO estimates the actual number would be substantially larger. Nearly half of the sero-positives (15,017) were categorized as heterosexual (43 percent), 16 percent were blood donors, and 13 percent were I/V drug users. It should be noted that a large number of the sero-positives (20 percent) were categorized as "other."

The prevalence of the HIV infection as measured in 1994 was substantially larger than in 1988, when high-risk groups were first screened, and unless serious interventions are undertaken in the area of prevention, there is great potential for a further acceleration in HIV prevalence. To summarize the recent situation in India: (1) HIV infection is rapidly spreading beyond those few areas in the country considered to be of especially high risk, and is at different epidemiological stages even within the same state; (2) the epidemic has begun to spread to the general population, mainly through heterosexual contact with those categorized as "high-risk" groups; and (3) the interaction of HIV infection with sexually transmitted diseases (STDs) and tuberculosis, both widely prevalent throughout India, presents an even more challenging public health problem - stemming STDs is essential to slowing the transmission of HIV, and the correlation between HIV and tuberculosis may result in a resurgence of TB (56 percent of reported AIDS cases in India have tuberculosis). Furthermore, fewer than 10 percent of STD patients seek treatment from public health centres, and the quality of case management and care provided at public as well as private and informal centres is generally low (Lal, 1994).

Within this public health context, the NFHS in Delhi included a series of questions on knowledge of AIDS. These were included as state-specific questions in addition to the core questions used in all Indian states. The added questions enable measurement of the extent of knowledge about AIDS among different population sub-groups, thus generating information that will be useful for planning and implementing AIDS prevention programmes. Ever-married women age 13-49 were first asked if they had ever heard of an illness called AIDS. Respondents indicating knowledge of AIDS were asked further questions about the sources of their knowledge, their knowledge of the mechanisms of AIDS transmission, whether they believe the transmission of AIDS is preventable, and if so, their perception of the precautions a person can take to avoid AIDS.

11.1 Knowledge of AIDS

Table 11.1 shows that knowledge of the existence of AIDS is limited among women in Delhi. In Delhi as a whole, only 36 percent of ever-married women age 13-49 indicated that they had ever heard of this illness. Women age 25-34 are more likely to have knowledge of AIDS than younger and older women. The percentage of women with knowledge of AIDS increases steadily with education from 5 percent of illiterate women to 77 percent of women with at least a high school education. Variations by religion are also notable ranging from a low of 22 percent of Muslims to a high of 67 percent of women of other religions. Scheduled caste women are less likely to know of AIDS than scheduled tribe women and other women. Women not regularly exposed to radio, television or cinema are least likely to have heard about AIDS. The proportion of women who have heard about AIDS is higher among women who go to the cinema at least once a month than among women who are exposed to radio or watch television at least once a week.

In the NFHS, women who had heard about AIDS were asked an open-ended question on how AIDS is transmitted. Interviewers were instructed to record all modes of transmission mentioned by the respondent. The most frequently mentioned modes of transmission of AIDS are sexual intercourse (mentioned by 81 percent of the women) and infected needles/blades/skin punctures (mentioned by 16 percent of the women). The other modes of transmission of AIDS are reported by a small percentage (between 4 and 8 percent) of respondents. Differentials in knowledge of the mode of AIDS transmission by selected background characteristics are similar in pattern to the differentials in knowledge of AIDS.

11.2 Source of Knowledge About AIDS

As a part of the AIDS prevention programme, the Government of India has been using the mass media, especially the electronic media, to create awareness among the general public about AIDS and how to prevent its spread. In the NFHS, women who had heard about AIDS were asked about the information sources through which they came to know about AIDS. Television and newspapers are important sources of knowledge about AIDS (Table 11.2). Among women who had heard about AIDS, 84 percent have heard about it through television and 45 percent through newspapers. Radio (mentioned by 28 percent) and magazines (29 percent) are other important sources of knowledge. Friends/relatives are mentioned as a source of knowledge by about 10 percent of the women.

Table 11.1 Knowledge of AIDS

The percentage of ever-married women age 13-49 who have heard about AIDS and, among women who have heard about AIDS, the percentage who think AIDS can be transmitted through different modes, according to selected background characteristics, Delhi, 1993

| Background characteristic | Percent who heard about AIDS | Total number of women | Among those who have heard about AIDS, percent ¹ who think AIDS can be transmitted through: | | | | | | | Number of women |
|-------------------------------|------------------------------|-----------------------|--|--------------------------|----------------------------|----------------------------|-----------------|-------------------------------|------------|-----------------|
| | | | Sexual inter-course | Homo-sexual inter-course | Hetero-sexual inter-course | Needles/ blades/ punctures | Mother to child | Transfusion of infected blood | Other ways | |
| Age | | | | | | | | | | |
| < 25 | 25.1 | 785 | 76.1 | 8.1 | 6.1 | 10.7 | 3.6 | -- | 4.1 | 197 |
| 25-34 | 40.2 | 1441 | 81.7 | 9.3 | 8.4 | 15.9 | 3.6 | -- | 5.3 | 580 |
| 34+ | 37.4 | 1231 | 81.1 | 8.0 | 7.6 | 19.3 | 3.5 | -- | 6.9 | 461 |
| Education | | | | | | | | | | |
| Illiterate | 5.0 | 1293 | 64.6 | 7.7 | 6.2 | 13.8 | 1.5 | -- | 6.2 | 65 |
| Lit., < middle complete | 15.4 | 520 | 62.5 | 7.5 | 10.0 | 3.8 | 2.5 | -- | 3.8 | 80 |
| Middle school complete | 30.3 | 366 | 74.8 | 4.5 | 8.1 | 9.9 | 2.7 | -- | 3.6 | 111 |
| High school and above | 76.8 | 1278 | 83.8 | 9.3 | 7.6 | 18.2 | 3.9 | -- | 6.1 | 982 |
| Religion | | | | | | | | | | |
| Hindu | 35.3 | 2822 | 81.0 | 7.7 | 7.5 | 16.2 | 2.9 | -- | 5.8 | 996 |
| Muslim | 21.6 | 347 | 78.7 | 13.3 | 12.0 | 13.3 | 1.3 | -- | 1.3 | 75 |
| Sikh | 54.4 | 204 | 77.5 | 9.0 | 2.7 | 16.2 | 9.0 | -- | 6.3 | 111 |
| Other | 66.7 | 84 | 82.1 | 17.9 | 16.1 | 23.2 | 7.1 | -- | 8.9 | 56 |
| Caste/tribe | | | | | | | | | | |
| Scheduled caste | 12.6 | 198 | (68.0) | (12.0) | (12.0) | (8.0) | (--) | -- | (4.0) | 25 |
| Scheduled tribe | (33.3) | 30 | * | * | * | * | * | * | * | 10 |
| Other | 37.3 | 3229 | 81.0 | 8.6 | 7.6 | 16.5 | 3.7 | -- | 5.8 | 1203 |
| Exposure to mass media | | | | | | | | | | |
| Exposed to any media | 40.7 | 2998 | 80.9 | 8.5 | 7.7 | 16.4 | 3.5 | -- | 5.7 | 1219 |
| Listens to radio weekly | 44.5 | 2200 | 81.2 | 8.7 | 7.5 | 16.0 | 3.2 | -- | 5.8 | 979 |
| Watches television weekly | 41.9 | 2861 | 81.0 | 8.7 | 7.8 | 16.4 | 3.6 | -- | 5.8 | 1200 |
| Goes to cinema monthly | 52.8 | 197 | 84.6 | 7.7 | 11.5 | 22.1 | 3.8 | -- | 5.8 | 104 |
| Not exposed to any media | 4.1 | 459 | * | * | * | * | * | * | * | 19 |
| Total | 35.8 | 3457 | 80.6 | 8.6 | 7.8 | 16.3 | 3.6 | -- | 5.7 | 1238 |

(-) Based on 25-49 cases

* Percentage not shown; based on fewer than 25 cases

-- Less than 0.05 percent

¹Percentages may sum to more than 100.0 since multiple responses were allowed.

Television is the major source of knowledge among all groups shown by background characteristics in Table 11.2, but is relatively more important as a source among women over age 34, women with at least a high school education and non-Muslims. The newspaper ranks second as a source of information about AIDS and again is relatively more important for women over age 34, those with at least a high school education and women of other religions.

11.3 Misconceptions About AIDS

Misconceptions about the disease among the general public make it difficult to implement AIDS preventive measures and to provide effective care and treatment of the persons affected with AIDS. NFHS respondents were asked if they thought that one could get AIDS from various commonly occurring social situations such as shaking hands with someone who has

Table 11.2 Source of knowledge about AIDS

Among women who have heard about AIDS, the percentage having knowledge of AIDS from different sources, according to selected background characteristics, Delhi, 1993

| Background characteristic | Among those who have heard about AIDS, percentage ¹ who received information from: | | | | | | Number of women |
|-------------------------------|---|-------------|-------------|-------------|-------------------|---------------|-----------------|
| | Radio | Television | News-papers | Magazines | Friends/relatives | Other sources | |
| Age | | | | | | | |
| < 25 | 26.4 | 77.2 | 33.5 | 22.8 | 7.1 | 2.5 | 197 |
| 25-34 | 27.1 | 82.4 | 43.4 | 31.6 | 10.0 | 1.7 | 580 |
| 34+ | 29.5 | 88.9 | 51.2 | 29.5 | 11.7 | 3.3 | 461 |
| Education | | | | | | | |
| Illiterate | 15.4 | 80.0 | 16.9 | -- | 24.6 | 7.7 | 65 |
| Lit., < middle complete | 18.8 | 81.3 | 17.5 | 11.2 | 15.0 | 2.5 | 80 |
| Middle school complete | 24.3 | 79.3 | 23.4 | 17.1 | 9.0 | 3.6 | 111 |
| High school and above | 29.8 | 85.0 | 51.2 | 34.2 | 9.0 | 1.9 | 982 |
| Religion | | | | | | | |
| Hindu | 28.5 | 84.4 | 46.6 | 29.5 | 9.5 | 2.5 | 996 |
| Muslim | 18.7 | 74.7 | 20.0 | 13.3 | 21.3 | 4.0 | 75 |
| Sikh | 23.4 | 86.5 | 41.4 | 35.1 | 9.9 | 0.9 | 111 |
| Other | 37.5 | 83.9 | 51.8 | 37.5 | 7.1 | 1.8 | 56 |
| Caste/tribe | | | | | | | |
| Scheduled caste | (24.0) | (80.0) | (28.0) | (24.0) | (16.0) | (8.0) | 25 |
| Other (Non-SC/ST) | 27.8 | 84.3 | 45.1 | 29.6 | 10.0 | 2.3 | 1203 |
| Exposure to mass media | | | | | | | |
| Exposed to any media | 27.7 | 84.4 | 44.9 | 29.3 | 10.2 | 2.4 | 1219 |
| Listens to radio weekly | 31.1 | 84.9 | 45.3 | 30.4 | 9.2 | 2.3 | 979 |
| Watches television weekly | 27.8 | 85.4 | 45.1 | 29.4 | 10.2 | 2.2 | 1200 |
| Goes to cinema monthly | 34.6 | 67.3 | 46.2 | 38.5 | 10.6 | 5.8 | 104 |
| Total | 27.9 | 84.0 | 44.7 | 29.1 | 10.2 | 2.4 | 1238 |

Note: Total includes 10 scheduled tribe women and 19 women who are not exposed to any media, who are not shown separately.

() Based on 25-49 cases

-- Less than 0.05 percent

¹Percentages may sum to more than 100.0 because multiple responses were allowed.

AIDS, hugging and kissing someone who has AIDS, sharing clothing or eating utensils with someone who has AIDS, or stepping on the urine or stool of a person who has AIDS. Respondents were also asked whether they thought they could get AIDS from mosquitos, fleas or bedbug bites. Medical professionals believe that these situations pose an extremely low risk of transmission of AIDS. Women were also asked if they thought AIDS is curable or if they thought that an AIDS vaccine exists. Results are shown in Table 11.3.

It is not uncommon for ever-married women who have knowledge of AIDS to believe that AIDS can be contracted from kissing someone with AIDS (41 percent), from sharing eating utensils with someone with AIDS (34 percent), from stepping on urine or stool from someone with AIDS (32 percent) and from wearing the clothes of someone with AIDS (29 percent). The remaining three misconceptions are reported by 25 percent or less of women who have knowledge of AIDS. A little less than one-fifth of the women think that AIDS is curable, and

Table 11.3 Misconceptions about AIDS

Among women who have heard about AIDS, the percentage having misconceptions about different ways of getting AIDS, according to selected background characteristics, Delhi, 1993

| Background characteristic | Percent ¹ who think it is possible to get AIDS from: | | | | | | | Percentage who think: | | |
|-------------------------------|---|---------------------------|---------------------------|--------------------------------------|-------------------------|---|-----------------------------|-----------------------|------------------------|-----------------|
| | Shaking hands with someone with AIDS | Hugging someone with AIDS | Kissing someone with AIDS | Wearing clothes of someone with AIDS | Sharing eating utensils | Stepping on urine/stools of person who has AIDS | Mosquito, flea, bedbug bite | AIDS is curable | An AIDS vaccine exists | Number of women |
| Age | | | | | | | | | | |
| < 25 | 19.8 | 19.3 | 45.2 | 34.5 | 35.5 | 32.0 | 27.9 | 22.8 | 4.6 | 197 |
| 25-34 | 15.7 | 18.1 | 38.8 | 26.6 | 31.9 | 30.9 | 24.7 | 19.3 | 5.5 | 580 |
| 34+ | 16.9 | 19.1 | 41.4 | 28.9 | 35.6 | 32.1 | 25.4 | 18.9 | 6.1 | 461 |
| Education | | | | | | | | | | |
| Illiterate | 26.2 | 36.9 | 49.2 | 50.8 | 55.4 | 38.5 | 35.4 | 30.8 | 6.2 | 65 |
| Lit., < middle complete | 26.2 | 33.7 | 42.5 | 38.7 | 43.8 | 38.7 | 26.2 | 15.0 | 3.8 | 80 |
| Middle school complete | 18.0 | 23.4 | 42.3 | 29.7 | 34.2 | 30.6 | 23.4 | 22.5 | 4.5 | 111 |
| High school and above | 15.3 | 15.7 | 39.9 | 26.3 | 31.6 | 30.5 | 24.9 | 19.0 | 5.8 | 982 |
| Religion | | | | | | | | | | |
| Hindu | 16.5 | 18.5 | 40.4 | 28.5 | 34.2 | 31.6 | 25.0 | 19.4 | 5.2 | 996 |
| Muslim | 17.1 | 18.7 | 37.3 | 38.7 | 33.3 | 28.0 | 29.3 | 20.0 | 9.3 | 75 |
| Sikh | 18.9 | 18.9 | 44.1 | 25.2 | 30.6 | 28.8 | 23.4 | 19.8 | 3.6 | 111 |
| Other | 17.9 | 21.4 | 46.4 | 25.0 | 33.9 | 39.3 | 32.1 | 25.0 | 10.7 | 56 |
| Caste/tribe | | | | | | | | | | |
| Scheduled caste | (12.0) | (16.0) | (40.0) | (24.0) | (28.0) | (24.0) | (20.0) | (20.0) | (4.0) | 25 |
| Other (Non-SC/ST) | 16.8 | 18.7 | 40.8 | 28.8 | 34.0 | 31.6 | 25.4 | 19.7 | 5.6 | 1203 |
| Exposure to mass media | | | | | | | | | | |
| Exposed to any media | 16.7 | 18.7 | 40.7 | 28.5 | 33.9 | 31.6 | 25.5 | 19.2 | 5.6 | 1219 |
| Listens to radio weekly | 17.0 | 18.7 | 41.1 | 27.9 | 33.4 | 31.7 | 25.7 | 19.3 | 5.3 | 979 |
| Watches television weekly | 16.7 | 18.5 | 40.7 | 28.3 | 34.0 | 31.7 | 25.7 | 19.7 | 5.6 | 1200 |
| Goes to cinema monthly | 14.4 | 17.3 | 49.0 | 30.8 | 33.7 | 31.7 | 29.8 | 16.3 | 3.8 | 104 |
| Total | 16.8 | 18.7 | 40.8 | 28.7 | 33.8 | 31.5 | 25.4 | 19.7 | 5.6 | 1238 |

Note: Total includes 10 scheduled tribe women and 19 women who are not exposed to any media, who are not shown separately.

() Based on 25-49 cases

-- Less than 0.05 percent

¹Percentage may sum to more than 100.0 because multiple responses were allowed.

6 percent think that an AIDS vaccine exists. Women age 25-34 and those with at least a high school education are less likely than others to have misconceptions about ways to get AIDS.

11.4 Knowledge of Prevention of AIDS

In response to an open-ended question on the precautions to be taken to avoid AIDS, 52 percent of women state that AIDS can be avoided by practising "safe sex" (Table 11.4). Two-fifths of women say that AIDS can be avoided by using condoms during intercourse. Other precautionary measures such as checking blood prior to transfusion (13 percent), sterilizing needles/syringes before injection (11 percent), and avoiding pregnancy when infected with AIDS

(only 1 percent) were also mentioned by small proportions of women who have heard about AIDS. Women who have completed high school are more likely to report these precautions than other groups. Differentials with respect to other characteristics do not show any pattern.

Table 11.4 Knowledge about avoidance of AIDS

Among women who have heard about AIDS, percentage who believe AIDS can be avoided by various means, according to selected background characteristics, Delhi, 1993

| Background characteristic | Percentage ¹ who believe AIDS can be avoided by: | | | | | Number of women |
|-------------------------------|---|---------------------|-------------------------------------|--|--|-----------------|
| | Using condoms during intercourse | Practising safe sex | Checking blood prior to transfusion | Sterilizing needles/syringes for injection | Avoiding pregnancy when infected with AIDS | |
| Age | | | | | | |
| < 25 | 32.0 | 48.7 | 8.1 | 6.6 | -- | 197 |
| 25-34 | 42.9 | 53.8 | 12.2 | 10.2 | 2.1 | 580 |
| 34+ | 39.9 | 51.2 | 16.1 | 13.2 | 0.9 | 461 |
| Education | | | | | | |
| Illiterate | 18.5 | 53.8 | 7.7 | 12.3 | -- | 65 |
| Lit., < middle complete | 20.0 | 45.0 | 2.5 | 1.3 | 3.8 | 80 |
| Middle school complete | 30.6 | 48.6 | 7.2 | 7.2 | 1.8 | 111 |
| High school and above | 44.2 | 52.9 | 14.9 | 11.8 | 1.1 | 982 |
| Religion | | | | | | |
| Hindu | 40.8 | 51.2 | 13.1 | 11.4 | 1.3 | 996 |
| Muslim | 30.7 | 60.0 | 10.7 | 9.3 | 2.7 | 75 |
| Sikh | 34.2 | 57.7 | 13.5 | 6.3 | -- | 111 |
| Other | 51.8 | 44.6 | 14.3 | 8.9 | 1.8 | 56 |
| Caste/tribe | | | | | | |
| Scheduled caste | (28.0) | (52.0) | (--) | (4.0) | (--) | 25 |
| Other (Non-SC/ST) | 40.6 | 52.0 | 13.4 | 10.9 | 1.3 | 1203 |
| Exposure to mass media | | | | | | |
| Exposed to any media | 40.3 | 51.9 | 13.0 | 10.7 | 1.2 | 1219 |
| Listens to radio weekly | 43.1 | 50.8 | 13.2 | 10.5 | 1.3 | 979 |
| Watches television weekly | 40.2 | 51.9 | 13.2 | 10.8 | 1.3 | 1200 |
| Goes to cinema monthly | 38.5 | 58.7 | 11.5 | 15.4 | 1.9 | 104 |
| Total | 40.1 | 52.0 | 13.0 | 10.7 | 1.3 | 1238 |

Note: Total includes 10 scheduled tribe women and 19 women who are not exposed to any media, who are not shown separately

() Based on 25-49 cases

-- Less than 0.05 percent

¹Percentage may sum to more than 100.0 because multiple responses were allowed.

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APPENDIX A

ESTIMATES OF SAMPLING ERRORS

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

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

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

If the sample of women had been selected as a simple random sample, it would have been possible, for many statistics, to use straightforward formulas for calculating sampling errors. However, the NFHS sample is the result of a multi-stage stratified sample design, and it is therefore necessary to use more complex formulas. The computer software used to calculate sampling errors for the NFHS is the ISSA Sampling Error Module (ISSAS). This module uses the linear Taylor series approximation method for variance estimation, known as the CLUSTERS model, for survey estimates of means, proportions and ratios. The JACKKNIFE repeated replication method is used for variance estimation for more complex statistics such as fertility and mortality rates.

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

$$\text{var}(r) = \frac{1-f}{x^2} \sum_{h=1}^H \left[\frac{m_h}{m_h-1} \left(\sum_{i=1}^{m_h} z_{hi}^2 - \frac{z_h^2}{m_h} \right) \right]$$

in which

$$z_{hi} = y_{hi} - r x_{hi}$$

$$z_h = y_h - r x_h$$

where

- h represents the stratum which varies from 1 to H,
- m_h is the total number of PSUs selected in the h^{th} stratum,
- y_{hi} is the sum of the values of variable y in PSU i in the h^{th} stratum,
- x_{hi} is the sum of the number of cases in PSU i in the h^{th} stratum, and
- f is the overall sampling fraction, which is so small that ISSAS ignores it.

In addition to the standard errors, ISSAS computes the design effect (DEFT) for each estimate, which is defined as the ratio between the standard error using the given sample design and the standard error that would result if a simple random sample had been used. A DEFT value of 1.0 indicates that the sample design is as efficient as a simple random sample, while a value of greater than 1.0 indicates the increase in the sampling error due to the use of a more complex and less statistically efficient sample compared with the simple random sample. ISSAS also computes the relative error and confidence limits for the estimates.

In the NFHS, sampling errors are calculated for selected variables considered to be of primary interest. The results are presented in this appendix for Delhi as a whole. For each variable, the type of statistic (mean, proportion, ratio or rate) and the base population are given in Table A.1. Table A.2 presents the value of the statistic (R), its standard error (SE), the number of cases (N), the standard error assuming a simple random sample (SER), the design effect ($DEFT$), the relative standard error (SE/R), and the 95 percent confidence limits ($R \pm 2SE$), for each variable.

Table A.1 List of selected variables for sampling errors, Delhi, 1993

| VARIABLE | ESTIMATE | BASE POPULATION |
|---|------------|---|
| Sex ratio | Ratio | Household <i>de facto</i> population |
| Literate | Proportion | Household <i>de facto</i> population, age 6 and older |
| Different sources of drinking water | Proportion | Households |
| Illiterate | Proportion | Ever-married women 13-49 |
| With secondary education or more | Proportion | Ever-married women 13-49 |
| Currently married | Proportion | Ever-married women 13-49 |
| Children ever born | Mean | Ever-married women 13-49 |
| Children surviving | Mean | Ever-married women 13-49 |
| Know at least one contraceptive method | Proportion | Currently married women 13-49 |
| Know source for any modern method | Proportion | Currently married women 13-49 |
| Have ever used any method | Proportion | Currently married women 13-49 |
| Currently using any method | Proportion | Currently married women 13-49 |
| Currently using any modern method | Proportion | Currently married women 13-49 |
| Currently using pills | Proportion | Currently married women 13-49 |
| Currently using Copper T/IUD | Proportion | Currently married women 13-49 |
| Currently using injections | Proportion | Currently married women 13-49 |
| Currently using condoms | Proportion | Currently married women 13-49 |
| Currently using female sterilization | Proportion | Currently married women 13-49 |
| Currently using male sterilization | Proportion | Currently married women 13-49 |
| Currently using periodic abstinence | Proportion | Currently married women 13-49 |
| Using public source for modern method | Proportion | Current users of modern methods |
| Do not want any more children | Proportion | Currently married women 13-49 |
| Want to delay birth at least 2 years | Proportion | Currently married women 13-49 |
| Ideal number of children | Mean | Ever-married women 13-49 |
| Ideal number of sons | Mean | Ever-married women 13-49 |
| Ideal number of daughters | Mean | Ever-married women 13-49 |
| Received no antenatal care | Proportion | Births in the last 4 years |
| Received tetanus toxoid (2 doses) | Proportion | Births in the last 4 years |
| Received medical assistance at delivery | Proportion | Births in the last 4 years |
| Had diarrhoea in the last 24 hours | Proportion | Children under 4 years old |
| Had diarrhoea in the last 2 weeks | Proportion | Children under 4 years old |
| Treated with ORS packets | Proportion | Children under 4 with diarrhoea in last 2 weeks |
| Consulted medical personnel for diarrhoea | Proportion | Children under 4 with diarrhoea in last 2 weeks |
| Showing vaccination card | Proportion | Children 12-23 months |
| Received BCG vaccination | Proportion | Children 12-23 months |
| Received DPT vaccination (3 doses) | Proportion | Children 12-23 months |
| Received polio vaccination (3 doses) | Proportion | Children 12-23 months |
| Received measles vaccination | Proportion | Children 12-23 months |
| Fully vaccinated | Proportion | Children 12-23 months |
| Know about AIDS | Proportion | Ever-married women age 13-49 |
| Fertility rates | Rate | All women, population |
| Mortality rates | Rate | Births, population |

Table A.2 Sampling errors, Delhi, 1993

| Variable | Value (R) | Standard error (SE) | Number of cases (N) | Standard error assum- ing SRS (SER) | Design effect (DEFT) | Relative error (SE/R) | Confidence limits | |
|--|--------------|---------------------------|------------------------------|--|----------------------------|-----------------------------|-------------------|-------|
| | | | | | | | R-2SE | R+2SE |
| SEX RATIO (Household <i>de facto</i> population) | 833 | 11.593 | 10216 | 10.336 | 1.122 | 0.014 | 809.7 | 856.1 |
| ILLITERATE (Household <i>de facto</i> population, age 6 and over) | 0.210 | 0.010 | 15949 | 0.005 | 2.097 | 0.045 | 0.191 | 0.229 |
| PIPED WATER AS SOURCE OF DRINKING WATER (Households) | 0.843 | 0.013 | 3677 | 0.006 | 2.241 | 0.016 | 0.816 | 0.870 |
| PUMPED WATER AS SOURCE OF DRINKING WATER (Households) | 0.152 | 0.013 | 3677 | 0.006 | 2.235 | 0.087 | 0.126 | 0.179 |
| WELL WATER AS SOURCE OF DRINKING WATER (Households) | 0.002 | 0.001 | 3677 | 0.001 | 1.119 | 0.395 | 0.000 | 0.004 |
| SURFACE WATER AS SOURCE OF DRINKING WATER (Households) | 0.000 | 0.000 | 3677 | 0.000 | NC | NC | 0.000 | 0.000 |
| OTHER SOURCE OF DRINKING WATER (Households) | 0.002 | 0.001 | 3677 | 0.001 | 1.201 | 0.400 | 0.000 | 0.004 |
| ILLITERATE (Ever-married women age 13-49) | 0.374 | 0.018 | 3457 | 0.008 | 2.157 | 0.047 | 0.339 | 0.410 |
| WITH SECONDARY EDUCATION OR MORE (Ever-married women age 13-49) | 0.370 | 0.019 | 3457 | 0.008 | 2.333 | 0.052 | 0.331 | 0.408 |
| CURRENTLY MARRIED (Ever-married women age 13-49) | 0.957 | 0.004 | 3457 | 0.003 | 1.028 | 0.004 | 0.950 | 0.965 |
| MEAN NUMBER OF CHILDREN EVER BORN (Ever-married women age 13-49) | 2.855 | 0.046 | 3457 | 0.034 | 1.351 | 0.016 | 2.764 | 2.946 |
| MEAN NUMBER OF CHILDREN SURVIVING (Ever-married women age 13-49) | 2.572 | 0.038 | 3457 | 0.027 | 1.304 | 0.015 | 2.495 | 2.648 |
| KNOW AT LEAST ONE CONTRACEPTIVE METHOD (Currently married women age 13-49) | 0.990 | 0.002 | 3310 | 0.002 | 1.032 | 0.002 | 0.986 | 0.993 |
| KNOW SOURCE FOR ANY MODERN METHOD (Currently married women age 13-49) | 0.939 | 0.005 | 3310 | 0.004 | 1.286 | 0.006 | 0.929 | 0.950 |
| HAVE EVER USED ANY METHOD (Currently married women age 13-49) | 0.722 | 0.011 | 3310 | 0.008 | 1.454 | 0.016 | 0.700 | 0.745 |
| CURRENTLY USING ANY METHOD (Currently married women age 13-49) | 0.603 | 0.012 | 3310 | 0.009 | 1.387 | 0.020 | 0.579 | 0.627 |

Table A.2 Sampling errors, Delhi, 1993 (Contd.)

| Variable | Value (R) | Standard error (SE) | Number of cases (N) | Standard error assum- ing SRS (SER) | Design effect (DEFT) | Relative error (SE/R) | Confidence limits | |
|--|--------------|---------------------------|------------------------------|--|----------------------------|-----------------------------|-------------------|-------|
| | | | | | | | R-2SE | R+2SE |
| CURRENTLY USING ANY MODERN METHOD (Currently married women age 13-49) | 0.546 | 0.012 | 3310 | 0.009 | 1.340 | 0.021 | 0.522 | 0.569 |
| CURRENTLY USING PILLS (Currently married women age 13-49) | 0.029 | 0.003 | 3310 | 0.003 | 1.065 | 0.107 | 0.023 | 0.035 |
| CURRENTLY USING COPPER T/IUD (Currently married women age 13-49) | 0.078 | 0.006 | 3310 | 0.005 | 1.196 | 0.071 | 0.067 | 0.089 |
| CURRENTLY USING INJECTIONS (Currently married women age 13-49) | 0.001 | 0.001 | 3310 | 0.001 | 0.579 | 0.000 | 0.002 | 0.035 |
| CURRENTLY USING CONDOM (Currently married women age 13-49) | 0.205 | 0.011 | 3310 | 0.007 | 1.529 | 0.052 | 0.183 | 0.226 |
| CURRENTLY USING FEMALE STERILIZATION (Currently married women age 13-49) | 0.200 | 0.007 | 3310 | 0.007 | 1.028 | 0.036 | 0.186 | 0.215 |
| CURRENTLY USING MALE STERILIZATION (Currently married women age 13-49) | 0.032 | 0.003 | 3310 | 0.003 | 1.083 | 0.103 | 0.026 | 0.039 |
| CURRENTLY USING PERIODIC ABSTINENCE (Currently married women age 13-49) | 0.031 | 0.003 | 3310 | 0.003 | 1.096 | 0.106 | 0.025 | 0.038 |
| USING PUBLIC SOURCE FOR MODERN METHOD (Current users of modern methods) | 0.452 | 0.016 | 1806 | 0.012 | 1.340 | 0.035 | 0.421 | 0.484 |
| DO NOT WANT ANY MORE CHILDREN (Currently married women age 13-49) | 0.454 | 0.010 | 3310 | 0.009 | 1.134 | 0.022 | 0.434 | 0.474 |
| WANT TO DELAY BIRTH AT LEAST TWO YEARS (Currently married women age 13-49) | 0.166 | 0.008 | 3310 | 0.006 | 1.169 | 0.046 | 0.151 | 0.181 |
| IDEAL NUMBER OF CHILDREN (Ever-married women age 13-49) | 2.522 | 0.026 | 3253 | 0.016 | 1.674 | 0.010 | 2.469 | 2.574 |
| IDEAL NUMBER OF SONS (Ever-married women age 13-49) | 1.186 | 0.021 | 3247 | 0.015 | 1.457 | 0.018 | 1.144 | 1.229 |
| IDEAL NUMBER OF DAUGHTERS (Ever-married women age 13-49) | 0.863 | 0.014 | 3247 | 0.010 | 1.317 | 0.016 | 0.836 | 0.891 |
| RECEIVED NO ANTENATAL CARE (Births in last 4 years) | 0.169 | 0.014 | 1876 | 0.011 | 1.287 | 0.081 | 0.142 | 0.196 |
| RECEIVED TETANUS TOXOID (2 DOSES) (Births in last 4 years) | 0.725 | 0.014 | 1876 | 0.012 | 1.193 | 0.020 | 0.696 | 0.754 |

Table A.2 Sampling errors, Delhi, 1993 (Contd.)

| Variable | Value (R) | Standard error (SE) | Number of cases (N) | Standard error assum- ing SRS (SER) | Design effect (DEFT) | Relative error (SE/R) | Confidence limits | |
|--|--------------|---------------------------|------------------------------|--|----------------------------|-----------------------------|-------------------|-------|
| | | | | | | | R-2SE | R+2SE |
| RECEIVED MEDICAL ASSISTANCE AT DELIVERY (Births in last 4 years) | 0.530 | 0.018 | 1876 | 0.013 | 1.314 | 0.033 | 0.494 | 0.565 |
| HAD DIARRHOEA IN THE LAST 24 HOURS (Children under 4 years old) | 0.045 | 0.005 | 1744 | 0.005 | 1.048 | 0.117 | 0.035 | 0.056 |
| HAD DIARRHOEA IN THE LAST 2 WEEKS (Children under 4 years old) | 0.097 | 0.007 | 1744 | 0.007 | 1.014 | 0.076 | 0.083 | 0.112 |
| TREATED WITH ORS PACKETS (Children with diarrhoea in the last 2 weeks) | 0.206 | 0.033 | 170 | 0.032 | 1.035 | 0.162 | 0.139 | 0.273 |
| SOUGHT MEDICAL TREATMENT FOR DIARRHOEA (Children with diarrhoea in the last 2 weeks) | 0.647 | 0.043 | 170 | 0.038 | 1.117 | 0.066 | 0.561 | 0.733 |
| SHOWING VACCINATION CARD (Children age 12-23 months) | 0.455 | 0.023 | 464 | 0.023 | 0.991 | 0.051 | 0.409 | 0.501 |
| RECEIVED BCG VACCINATION (Children age 12-23 months) | 0.901 | 0.015 | 464 | 0.014 | 1.061 | 0.016 | 0.871 | 0.930 |
| RECEIVED DPT VACCINATION (3 DOSES) (Children age 12-23 months) | 0.716 | 0.022 | 464 | 0.021 | 1.025 | 0.030 | 0.672 | 0.759 |
| RECEIVED POLIO VACCINATION (3 DOSES) (Children age 12-23 months) | 0.750 | 0.020 | 464 | 0.020 | 0.971 | 0.026 | 0.711 | 0.789 |
| RECEIVED MEASLES VACCINATION (Children aged 12-23 months) | 0.696 | 0.022 | 464 | 0.021 | 1.024 | 0.032 | 0.652 | 0.740 |
| FULLY VACCINATED (Children aged 12-23 months) | 0.578 | 0.024 | 464 | 0.023 | 1.045 | 0.042 | 0.529 | 0.626 |
| KNOW ABOUT AIDS (Ever-married women aged 13-49) | 0.358 | 0.017 | 3457 | 0.008 | 2.132 | 0.049 | 0.323 | 0.393 |

Table A.2 Sampling errors, Delhi, 1993 (Contd.)

| Variable | Value (R) | Standard error (SE) | Relative error (SE/R) | Confidence limits | |
|---|--------------|---------------------------|-----------------------------|-------------------|--------|
| | | | | R-2SE | R+2SE |
| TOTAL FERTILITY RATE (Women aged 15-49) | 3.022 | 0.088 | 0.029 | 2.846 | 3.199 |
| TOTAL FERTILITY RATE (Women aged 15-44) | 3.022 | 0.088 | 0.029 | 2.846 | 3.199 |
| AGE-SPECIFIC FERTILITY RATE (Age group 15-19) | 0.066 | 0.006 | 0.092 | 0.054 | 0.078 |
| AGE-SPECIFIC FERTILITY RATE (Age group 20-24) | 0.224 | 0.007 | 0.032 | 0.210 | 0.238 |
| AGE-SPECIFIC FERTILITY RATE (Age group 25-29) | 0.184 | 0.007 | 0.040 | 0.169 | 0.198 |
| AGE-SPECIFIC FERTILITY RATE (Age group 30-34) | 0.086 | 0.007 | 0.082 | 0.072 | 0.100 |
| AGE-SPECIFIC FERTILITY RATE (Age group 35-39) | 0.040 | 0.006 | 0.146 | 0.028 | 0.052 |
| AGE-SPECIFIC FERTILITY RATE (Age group 40-44) | 0.005 | 0.003 | 0.526 | 0.000 | 0.010 |
| NEONATAL MORTALITY (5-year period preceding survey) | 34.915 | 4.488 | 0.129 | 25.940 | 43.891 |
| INFANT MORTALITY ${}_4q_0$ (5-year period preceding survey) | 65.397 | 5.719 | 0.087 | 53.958 | 76.836 |
| CHILD MORTALITY ${}_4q_1$ (5-year period preceding survey) | 18.957 | 3.184 | 0.168 | 12.589 | 25.325 |
| UNDER FIVE MORTALITY ${}_6q_0$ (5-year period preceding survey) | 83.114 | 6.463 | 0.078 | 70.188 | 96.041 |
| CRUDE BIRTH RATE (Based on Household Questionnaire) | 27.329 | 0.907 | 0.033 | 25.515 | 29.143 |
| CRUDE DEATH RATE (Based on Household Questionnaire) | 7.751 | 0.526 | 0.068 | 6.699 | 8.803 |
| NATURAL INCREASE (Based on Household Questionnaire) | 19.577 | 0.982 | 0.050 | 17.613 | 21.541 |
| CRUDE BIRTH RATE (Based on birth history) | 26.632 | 0.759 | 0.028 | 25.115 | 28.149 |

SRS: Simple Random Sampling

NC: Not calculated because the denominator is 0.

APPENDIX B

DATA QUALITY TABLES

The purpose of this appendix is to provide the data user with an initial view of the general quality of the NFHS data. While Appendix A is concerned with sampling errors and their effects on the survey results, the tables in this appendix refer to possible *nonsampling* errors: for example, digit preference; rounding or heaping on certain ages or dates; omission of events occurring further in the past; deliberate distortion of information by some interviewers in an attempt to lighten their work loads; noncooperation of the respondent in providing information or refusal to have children measured and weighed. A description of the magnitude of such nonsampling errors is provided in the following paragraphs.

The distribution of the *de facto* household population by single year of age is presented in Table B.1 (See also Figure 3.1). In many (but not all) cases, the respondent was the head of the household. In cases where an eligible woman was later interviewed with the Woman's Questionnaire, her own reported age from the Woman's Questionnaire was substituted for the age in the household listing when there was a difference, because it was assumed that she would be better able than the household respondent to report her own age.

It is well known that the age reporting is poor in most parts of India. Ages are of little relevance to much of the rural population in particular, and no amount of probing will ensure that ages are properly recorded. Taking into account the urban nature of Delhi the age misreporting is expected to be less. In the NFHS interviewer training, a great deal of emphasis was placed on obtaining as accurate information as possible on ages and dates of events. Nevertheless, it is clear that age reporting in the NFHS shares the same problems inherent in all Indian censuses and surveys. Heaping on ages ending in 0 and 5 is severe, particularly in the older age groups, and the typical pattern of heaping on ages 8, 10 and 12 is also evident. However, the NFHS age data are evidently of considerably better quality than age data from other sources. This can be seen, for example, by comparing the degree of age heaping in the NFHS with the 1981 Census, which is the most recent census that has already published data by single year of age (see Chapter 3, Section 3.1). The age reporting for females appears to be particularly good during the childbearing years, when interviewed women reported their own ages. Another measure of the quality of the NFHS age data is the negligible number of persons whose ages were recorded as not known or missing. In Delhi, age was missing for only one person out of a total of 10,216 persons listed on the household schedule.

Table B.2 examines the possibility that some eligible women (that is, ever-married women age 13-49) were not properly identified in the NFHS. In some surveys, interviewers may try to reduce their work load by pushing women out of the eligible age range or recording ever-married women as never married so that they will not have to be interviewed. If such practices were being followed to a noticeable extent, Table B.2 would normally show (1) a shortage of ever-married women in the 45-49 age group and an excess in the 50-54 age group or (2) an unusually low proportion of ever-married women by age. Neither of these patterns is evident in the NFHS data. It can, therefore, be concluded that there was no concerted effort to mis-identify eligible women in the NFHS in Delhi.

Table B.1 Household age distribution

Single year age distribution of the *de facto* household population by sex, Delhi, 1993

| Age | Male | | Female | | Age | Male | | Female | |
|-----|--------|---------|--------|---------|---------|--------|---------|--------|---------|
| | Number | Percent | Number | Percent | | Number | Percent | Number | Percent |
| 00 | 239 | 2.3 | 218 | 2.6 | 38 | 157 | 1.5 | 88 | 1.0 |
| 01 | 227 | 2.2 | 211 | 2.5 | 39 | 54 | 0.5 | 76 | 0.9 |
| 02 | 233 | 2.3 | 203 | 2.4 | 40 | 256 | 2.5 | 102 | 1.2 |
| 03 | 254 | 2.5 | 220 | 2.6 | 41 | 40 | 0.4 | 66 | 0.8 |
| 04 | 222 | 2.2 | 232 | 2.7 | 42 | 102 | 1.0 | 68 | 0.8 |
| 05 | 277 | 2.7 | 241 | 2.8 | 43 | 40 | 0.4 | 61 | 0.7 |
| 06 | 265 | 2.6 | 231 | 2.7 | 44 | 38 | 0.4 | 76 | 0.9 |
| 07 | 239 | 2.3 | 206 | 2.4 | 45 | 214 | 2.1 | 84 | 1.0 |
| 08 | 243 | 2.4 | 244 | 2.9 | 46 | 49 | 0.5 | 78 | 0.9 |
| 09 | 201 | 2.0 | 163 | 1.9 | 47 | 38 | 0.4 | 58 | 0.7 |
| 10 | 241 | 2.4 | 224 | 2.6 | 48 | 74 | 0.7 | 89 | 1.0 |
| 11 | 193 | 1.9 | 172 | 2.0 | 49 | 37 | 0.4 | 81 | 1.0 |
| 12 | 254 | 2.5 | 202 | 2.4 | 50 | 142 | 1.4 | 38 | 0.4 |
| 13 | 174 | 1.7 | 190 | 2.2 | 51 | 23 | 0.2 | 23 | 0.3 |
| 14 | 203 | 2.0 | 162 | 1.9 | 52 | 63 | 0.6 | 59 | 0.7 |
| 15 | 208 | 2.0 | 162 | 1.9 | 53 | 29 | 0.3 | 31 | 0.4 |
| 16 | 198 | 1.9 | 178 | 2.1 | 54 | 32 | 0.3 | 28 | 0.3 |
| 17 | 219 | 2.1 | 148 | 1.7 | 55 | 113 | 1.1 | 103 | 1.2 |
| 18 | 278 | 2.7 | 192 | 2.3 | 56 | 39 | 0.4 | 36 | 0.4 |
| 19 | 169 | 1.7 | 160 | 1.9 | 57 | 23 | 0.2 | 22 | 0.3 |
| 20 | 259 | 2.5 | 195 | 2.3 | 58 | 43 | 0.4 | 42 | 0.5 |
| 21 | 160 | 1.6 | 169 | 2.0 | 59 | 22 | 0.2 | 16 | 0.2 |
| 22 | 277 | 2.7 | 191 | 2.2 | 60 | 106 | 1.0 | 108 | 1.3 |
| 23 | 174 | 1.7 | 162 | 1.9 | 61 | 7 | 0.1 | 6 | 0.1 |
| 24 | 191 | 1.9 | 201 | 2.4 | 62 | 34 | 0.3 | 38 | 0.4 |
| 25 | 330 | 3.2 | 191 | 2.2 | 63 | 12 | 0.1 | 6 | 0.1 |
| 26 | 228 | 2.2 | 181 | 2.1 | 64 | 17 | 0.2 | 7 | 0.1 |
| 27 | 166 | 1.6 | 166 | 2.0 | 65 | 76 | 0.7 | 57 | 0.7 |
| 28 | 269 | 2.6 | 173 | 2.0 | 66 | 10 | 0.1 | 4 | -- |
| 29 | 97 | 0.9 | 150 | 1.8 | 67 | 21 | 0.2 | 8 | 0.1 |
| 30 | 361 | 3.5 | 190 | 2.2 | 68 | 21 | 0.2 | 16 | 0.2 |
| 31 | 69 | 0.7 | 113 | 1.3 | 69 | 1 | -- | 4 | -- |
| 32 | 219 | 2.1 | 137 | 1.6 | 70+ | 178 | 1.7 | 178 | 2.1 |
| 33 | 96 | 0.9 | 114 | 1.3 | Don't | | | | |
| 34 | 92 | 0.9 | 114 | 1.3 | know/ | | | | |
| 35 | 385 | 3.8 | 133 | 1.6 | missing | 1 | -- | 1 | -- |
| 36 | 120 | 1.2 | 124 | 1.5 | | | | | |
| 37 | 74 | 0.7 | 88 | 1.0 | Total | 10216 | 100.0 | 8509 | 100.0 |

Note: The *de facto* population includes residents and non-residents who slept in the household the night before the interview.

-- Less than 0.05 percent

One traditional measure of the quality of data is the extent to which information is missing on key variables. Although completeness of responses does not necessarily indicate that the results are accurate, the existence of missing information for a large number of cases would suggest that the data collection was not carried out with sufficient care. For Delhi, the extent of missing information is very low on all of the measures shown except for the measurement of the height and weight of young children (Table B.3). The data are exceptionally complete for month and year of birth, age at death, age at first marriage, woman's education, child's size at birth and prevalence of diarrhoea in the two weeks preceding the NFHS. Data on height and weight are available for more than 85 percent of children, which is also acceptable since in any survey many children cannot be measured because they are not at home or they are ill at the time of the survey. In some cases when the child was at home, either the child refused to be measured or the mother refused to allow the child to be measured because of cultural beliefs, and no amount of persuasion could change their mind.

| Age | All women | Ever-married women | Interviewed women | | Percent interviewed |
|-------|-----------|--------------------|-------------------|---------|---------------------|
| | | | Number | Percent | |
| 10-12 | 598 | 2 | NA | NA | NA |
| 13-14 | 352 | 1 | 1 | -- | 100.0 |
| 15-19 | 840 | 158 | 153 | 4.4 | 96.8 |
| 20-24 | 918 | 645 | 631 | 18.3 | 97.8 |
| 25-29 | 861 | 803 | 790 | 22.9 | 98.4 |
| 30-34 | 668 | 658 | 651 | 18.8 | 98.9 |
| 35-39 | 509 | 505 | 497 | 14.4 | 98.4 |
| 40-44 | 373 | 370 | 354 | 10.2 | 95.7 |
| 45-49 | 390 | 388 | 380 | 11.0 | 97.9 |
| 50-54 | 179 | 177 | NA | NA | NC |
| 13-49 | 4911 | 3528 | 3457 | 100.0 | 98.0 |

Note: The *de facto* population includes all residents and non-residents who slept in the household the night before the interview.
 NA: Not applicable
 NC: Not calculated
 -- Less than 0.05 percent

Another measure of data quality is the completeness and accuracy of information on births. Table B.4 examines the distribution of births by calendar year to identify any unusual patterns which may indicate that births have been omitted or that the ages of children have been displaced. Almost all living children (99.5 percent) listed in the birth history had complete birth dates recorded as did 97 percent of children who had died.

| Subject | Reference group | Percentage missing information | Number of cases |
|----------------------------------|-----------------------------------|--------------------------------|-----------------|
| Birth date | Births in last 15 years | | |
| Month only | | 0.46 | 6739 |
| Month and year | | 0.03 | 6739 |
| Age at death | Deaths to births in last 15 years | 0.55 | 544 |
| Age at 1st marriage | Ever-married women | 0.00 | 3457 |
| Woman's education | Ever-married women | 0.00 | 3457 |
| Child's size at birth | Births in last 0-47 months | 0.00 | 1894 |
| Anthropometry¹ | Living children age 0-47 months | | |
| Weight | | 12.05 | 1760 |
| Height | | 12.56 | 1760 |
| Height/weight | | 12.73 | 1760 |
| Diarrhoea in last 2 weeks | Living children age 0-47 months | 0.51 | 1761 |

¹Child not measured

Thus, the completeness of data on birth dates is exceptionally good. Although the annual number of births does fluctuate somewhat, real annual fluctuations are to be expected and there is no evidence of the wholesale omission of births or displacement of birth dates which would substantially affect the fertility rate estimates for recent years.

It should be noted that many surveys that include both demographic and health information for children below a specified age have been subject to a substantial amount of age displacement. In particular, there is often a tendency for interviewers to "age" children out of the eligible period for asking health questions. This problem was well known before the NFHS began; therefore, interviewer training stressed this issue to try to avoid any biases due to age displacement. In Delhi, the cutoff date for asking the health questions was 1 January 1989. An examination of Table B.4 indicates that there is no age displacement across this boundary for living children. There does, however, appear to be some likely omission of dead children since 1987, although much of the decline in the number of deaths to children born after 1987 is undoubtedly real. Moreover, the proportion of children who died will naturally decrease with each successive calendar year because the more recent births have been subject to the risk of

Table 3.4 Births by calendar year

Distribution of births by calendar year for living (L), dead (D), and all (T) children, according to reporting completeness, sex ratio at birth, and ratio of births by calendar year, Delhi, 1993

| Calendar year | Number of births | | | Percent with complete birth date ¹ | | | Sex ratio at birth ² | | | Calendar year ratio ³ | | |
|-----------------|------------------|-----|------|---|---------|-------|---------------------------------|--------|------|----------------------------------|-----|-----|
| | L | D | T | L | D | T | L | D | T | L | D | T |
| 1993 | 108 | 3 | 111 | 100.0 | * | 100.0 | 1204 | * | 1220 | NA | NA | NA |
| 1992 | 466 | 36 | 502 | 100.0 | (100.0) | 100.0 | 894 | (1250) | 916 | NA | NA | NA |
| 1991 | 429 | 32 | 461 | 100.0 | (100.0) | 100.0 | 873 | (600) | 851 | 94 | 90 | 94 |
| 1990 | 445 | 35 | 480 | 99.8 | (97.1) | 99.6 | 878 | (667) | 861 | 104 | 111 | 105 |
| 1989 | 425 | 31 | 456 | 99.3 | (100.0) | 99.3 | 856 | (938) | 861 | 97 | 78 | 95 |
| 1988 | 431 | 45 | 476 | 98.6 | (95.6) | 98.3 | 1092 | (1143) | 1097 | 92 | 150 | 96 |
| 1987 | 511 | 29 | 540 | 99.8 | (100.0) | 99.8 | 756 | (1636) | 788 | 112 | 76 | 109 |
| 1986 | 481 | 31 | 512 | 99.4 | (100.0) | 99.4 | 932 | (1385) | 954 | 107 | 90 | 106 |
| 1985 | 390 | 40 | 430 | 99.5 | (97.5) | 99.3 | 940 | (1000) | 946 | 82 | 105 | 83 |
| 1984 | 474 | 45 | 519 | 100.0 | (93.3) | 99.4 | 874 | (1500) | 915 | 129 | 111 | 127 |
| 1983 | 345 | 41 | 386 | 99.4 | (92.7) | 98.7 | 760 | (640) | 747 | 79 | 93 | 80 |
| 1988-1992 | 2196 | 179 | 2375 | 99.5 | 98.3 | 99.5 | 915 | 904 | 914 | NA | NA | NA |
| 1983-1987 | 2201 | 186 | 2387 | 99.6 | 96.2 | 99.4 | 850 | 1138 | 869 | NA | NA | NA |
| 1978-1982 | 1747 | 183 | 1930 | 99.4 | 98.9 | 99.3 | 922 | 926 | 922 | NA | NA | NA |
| 1973-1977 | 1252 | 184 | 1436 | 99.0 | 96.2 | 98.6 | 932 | 979 | 938 | NA | NA | NA |
| 1972 or earlier | 1386 | 244 | 1630 | 99.0 | 96.3 | 99.1 | 819 | 968 | 840 | NA | NA | NA |
| All | 8890 | 979 | 9869 | 99.5 | 97.1 | 99.2 | 890 | 982 | 898 | NA | NA | NA |

NA: Not applicable

() Based on 15-49 births

* Percent/ratio not shown; based on fewer than 25 cases

¹ Both year and month of birth given

² $(B_f/B_m) \times 1000$, where B_f and B_m are the numbers of female and male births, respectively

³ $[2B_x / (B_{x-1} + B_{x+1})] \times 100$, where B_x is the number of births in calendar year x

mortality for a shorter period of time.

Table B.5 presents information on the reporting of age at death in days. Results from the table suggest that early infant deaths have not been severely underreported in Delhi, since the ratios of deaths under seven days to all neonatal deaths are quite high (a ratio of less than 25 percent is often used as a guideline to indicate underreporting of early neonatal deaths). The ratios are 72 percent for 0-4 years, 67 percent for 5-9 years and 59 percent for 10-14 years prior to the survey, which needs further explanation. Although there was no severe underreporting in Delhi, there was some misreporting of age at death due to a preference for reporting the age at death at 6, 8, 10, and 15 days (see Table B.5).

Table B.6 shows the ratios of infant deaths that occurred during the neonatal period. These ratios are also quite high, suggesting that there is no major omission of early deaths. Moreover, there is a decline of a little more than 6 points during the second five year period but it increased by 1 point during the first five year period. One problem that is inherent in most retrospective surveys is heaping of the age at death on certain digits, e.g., 6, 12 and 18 months.

| Table B.5 Reporting of age at death in days | | | | |
|---|------------------------|-----|-------|------|
| Distribution of reported deaths under 1 month of age by age at death in days and the percentage of neonatal deaths reported to occur at ages 0-6 days, for five-year periods of birth preceding the survey, Delhi, 1993 | | | | |
| Age at death (days) | Years preceding survey | | | |
| | 0-4 | 5-9 | 10-14 | 0-14 |
| < 1 | 24 | 24 | 17 | 65 |
| 1 | 6 | 7 | 9 | 22 |
| 2 | 12 | 5 | 5 | 22 |
| 3 | 7 | 7 | 6 | 20 |
| 4 | 1 | 2 | 2 | 5 |
| 5 | 4 | 1 | 5 | 10 |
| 6 | 5 | 4 | 7 | 16 |
| 7 | 3 | 4 | 5 | 12 |
| 8 | 2 | 4 | 7 | 13 |
| 9 | 1 | 4 | 1 | 6 |
| 10 | 2 | 2 | 4 | 8 |
| 11 | 4 | 1 | 1 | 6 |
| 12 | 1 | 0 | 2 | 3 |
| 13 | 0 | 1 | 0 | 1 |
| 14 | 0 | 1 | 2 | 3 |
| 15 | 3 | 3 | 4 | 10 |
| 16 | 0 | 1 | 0 | 1 |
| 17 | 1 | 0 | 0 | 1 |
| 18 | 1 | 1 | 0 | 2 |
| 20 | 0 | 0 | 3 | 3 |
| 21 | 0 | 2 | 2 | 4 |
| 24 | 2 | 0 | 0 | 2 |
| 25 | 1 | 1 | 2 | 4 |
| 27 | 0 | 0 | 1 | 1 |
| 28 | 1 | 0 | 2 | 3 |
| 30 | 1 | 0 | 0 | 1 |
| 0-30 | 82 | 75 | 87 | 244 |
| Percent early neonatal ¹ | 72 | 67 | 59 | 66 |

¹0-6 days/0-30 days

Table B.6 Reporting of age at death in months

Distribution of reported deaths under two years of age by age at death in months and the percentage of infant deaths reported to occur at age under one month, for five-year periods of birth preceding the survey, Delhi, 1993

| Age at death (months) | Years preceding survey | | | |
|-------------------------------|------------------------|-----|-------|------|
| | 0-4 | 5-9 | 10-14 | 0-14 |
| <1 | 82 | 75 | 87 | 274 |
| 1 | 6 | 9 | 9 | 24 |
| 2 | 14 | 6 | 4 | 24 |
| 3 | 11 | 7 | 5 | 23 |
| 4 | 5 | 3 | 4 | 12 |
| 5 | 4 | 3 | 3 | 10 |
| 6 | 2 | 7 | 8 | 17 |
| 7 | 4 | 11 | 4 | 19 |
| 8 | 5 | 4 | 7 | 16 |
| 9 | 4 | 6 | 4 | 14 |
| 10 | 10 | 5 | 1 | 16 |
| 11 | 2 | 3 | 8 | 13 |
| 12 | 0 | 1 | 1 | 2 |
| 13 | 1 | 2 | 2 | 5 |
| 14 | 4 | 5 | 2 | 11 |
| 15 | 2 | 4 | 1 | 7 |
| 16 | 0 | 2 | 1 | 3 |
| 18 | 2 | 4 | 2 | 8 |
| 19 | 1 | 0 | 0 | 1 |
| 20 | 0 | 1 | 0 | 1 |
| 21 | 2 | 1 | 0 | 3 |
| 1 year | 0 | 1 | 1 | 2 |
| 0-11 | 149 | 139 | 144 | 432 |
| Percent neonatal ¹ | 55 | 54 | 60 | 57 |

¹Under 1 month/under 1 year

Misreporting of age at death will bias estimates of the age pattern of mortality if the net result of misreporting is the transference of deaths between age segments for which the rates are calculated; for example, an overestimate of child mortality relative to infant mortality may result if children dying during the first year of life are reported as having died at age one or older. Thus, heaping at 12 months can bias the mortality estimates because a certain fraction of these deaths, which are reported to have occurred after infancy (that is, at ages 12-23 months), may have actually occurred during infancy (that is, at ages 0-11 months). In this case, heaping would bias the infant mortality rate downward and child mortality upward.

Examination of the distribution of deaths under age two years during the 15 years prior to the survey by month of death (Table B.6) indicates that the calculated infant mortality rates for the population of Delhi as a whole are not likely to be understated by more than 1-2 percent due to age misreporting. There is surprisingly little heaping on particular months of death and due to strong emphasis during training, there were few deaths reported at age "one year", making any adjustment of infant and child mortality rates unnecessary.

This brief check on internal consistency of Delhi NFHS childhood mortality data suggests that there is no serious underreporting of deaths during the time periods for which mortality rates are estimated. However, some proportion of the decline in the number of deaths after 1987 is undoubtedly due to omission or misreporting. Although there is some evidence of heaping in age at death at certain ages, the bias in infant and child mortality rates arising from this heaping is negligible.

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APPENDIX D
SURVEY INSTRUMENTS

| | | | | | | | |
|---|------------------|---------------------------|---|--|--|--|--|
| 1 | RECORD THE TIME. | HOUR..... MINUTES..... | <table border="1" style="margin: auto;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table> | | | | |
| | | | | | | | |
| | | | | | | | |

| LINE NO. | USUAL RESIDENTS AND VISITORS | RELATIONSHIP TO HEAD OF HOUSEHOLD* | RESIDENCE | | SEX | | AGE | IF AGED 6 YEARS OR OLD | | | | | |
|----------|---|--|------------------------------------|--------------------------------------|-------------------------------|------------------------|-----|------------------------|-----------|--|----------------|--|--|
| | | | Does (NAME) usually live here? (5) | Did (NAME) stay here last night? (6) | Is (NAME) male or female? (7) | How old is (NAME)? (8) | | MARITAL STATUS** (9) | EDUCATION | | IF ATTEND (12) | | |
| (2) | Please give me the names of the persons who usually live in your household and guests of the household who stayed here last night, starting with the head of the household. (3) | What is the relationship of (NAME) to the head of the household? (4) | | | | | | | | | | | |

| LINE NO. | USUAL RESIDENTS AND VISITORS | RELATIONSHIP TO HEAD OF HOUSEHOLD* | RESIDENCE | | SEX | | AGE | MARITAL STATUS** | | | | | EDUCATION | | IF ATTEND |
|----------|------------------------------|------------------------------------|-----------|--------|-----|---|-----|------------------|-----|-----|---|---|-----------|--------|-----------|
| | | | YES NO | YES NO | M | F | | IN YEARS | CM | S | W | D | NM | YES NO | |
| 01 | | | 1 2 | 1 2 | 1 2 | | | 1 2 3 4 5 | 1 2 | 1 2 | | | | | |
| 02 | | | 1 2 | 1 2 | 1 2 | | | 1 2 3 4 5 | 1 2 | 1 2 | | | | | |
| 03 | | | 1 2 | 1 2 | 1 2 | | | 1 2 3 4 5 | 1 2 | 1 2 | | | | | |
| 04 | | | 1 2 | 1 2 | 1 2 | | | 1 2 3 4 5 | 1 2 | 1 2 | | | | | |
| 05 | | | 1 2 | 1 2 | 1 2 | | | 1 2 3 4 5 | 1 2 | 1 2 | | | | | |
| 06 | | | 1 2 | 1 2 | 1 2 | | | 1 2 3 4 5 | 1 2 | 1 2 | | | | | |
| 07 | | | 1 2 | 1 2 | 1 2 | | | 1 2 3 4 5 | 1 2 | 1 2 | | | | | |
| 08 | | | 1 2 | 1 2 | 1 2 | | | 1 2 3 4 5 | 1 2 | 1 2 | | | | | |

Now I would like some information about the people who usually live in your household or who are staying with you now.

| ED SCHOOL | | AFTER COMPLETING COLUMNS 1-14 FOR ALL LISTED PERSONS, ASK: | | | | | ELIGI-BIL. TY | | | | | | |
|------------------------------------|--|--|---|--|---|--|--|------------|-----------|------|-------|------|----|
| OCCUPATION | | Does anyone listed suffer from: | | | | | CIRCLE LINE NUMBER OF WOMEN ELIGIBLE FOR INDIVIDUAL INTERVIEW (EVER MARRIED FEMALES AGED 13-49) (20) | | | | | | |
| IF AGED LESS THAN 15 YEARS | What kind of work does (NAME) do most of the time? (14) | Blindness? RECORD FOR EACH PERSON (15) | Tuberculosis? RECORD FOR EACH PERSON (16) | Leprosy? RECORD FOR EACH PERSON (17) | Any physical impairment of limbs? RECORD FOR EACH PERSON (18) | Did anyone listed suffer from malaria any time during the last THREE months? (19) | | | | | | | |
| Is (NAME) still in school? (13) | | YES PARTIAL 1 | YES COMPLETE 2 | NO 3 | YES 1 | NO 2 | YES MORE THAN HANDS 1 | YES LEGS 2 | NO BOTH 3 | NO 4 | YES 1 | NO 2 | |
| | | | | | | | | | | | | | 01 |
| | | | | | | | | | | | | | 02 |
| | | | | | | | | | | | | | 03 |
| | | | | | | | | | | | | | 04 |
| | | | | | | | | | | | | | 05 |
| | | | | | | | | | | | | | 06 |
| | | | | | | | | | | | | | 07 |
| | | | | | | | | | | | | | 08 |

HOUSEHOLD SCHEDULE (CONTINUED)

| (2) | (3) | (4) | (5) | | (7) | | (8) | (9) | | | | | (10) | (11) | (12) | | | | | | |
|-----|-----|-----|-----|----|-----|----|-----|-----|----------|--|---|---|------|------|------|---|-----|----|-----|----|-------|
| | | | YES | NO | YES | NO | M | F | IN YEARS | | C | M | S | W | D | N | YES | NO | YES | NO | GRADE |
| 09 | | | 1 | 2 | 1 | 2 | 1 | 2 | | | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 1 | 2 | |
| 10 | | | 1 | 2 | 1 | 2 | 1 | 2 | | | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 1 | 2 | |
| 11 | | | 1 | 2 | 1 | 2 | 1 | 2 | | | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 1 | 2 | |
| 12 | | | 1 | 2 | 1 | 2 | 1 | 2 | | | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 1 | 2 | |
| 13 | | | 1 | 2 | 1 | 2 | 1 | 2 | | | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 1 | 2 | |
| 14 | | | 1 | 2 | 1 | 2 | 1 | 2 | | | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 1 | 2 | |
| 15 | | | 1 | 2 | 1 | 2 | 1 | 2 | | | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 1 | 2 | |
| 16 | | | 1 | 2 | 1 | 2 | 1 | 2 | | | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 1 | 2 | |
| 17 | | | 1 | 2 | 1 | 2 | 1 | 2 | | | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 1 | 2 | |
| 18 | | | 1 | 2 | 1 | 2 | 1 | 2 | | | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 1 | 2 | |

TICK HERE IF CONTINUATION SHEET USED

- 21 Just to make sure that I have a complete listing:
- 1) Are there any other persons such as small children or infants that we have not listed?
 - 2) In addition, are there any other people who may not be members of your family, such as domestic servants, lodgers or friends who usually live here?
 - 3) Do you have any guests or temporary visitors staying here, or anyone else who stayed here last night?

* CODES FOR Q.4
 RELATIONSHIP TO HEAD OF HOUSEHOLD:
 01= HEAD
 02= WIFE OR HUSBAND
 03= SON OR DAUGHTER
 04= SON OR DAUGHTER-IN-LAW
 05= GRANDCHILD
 06= PARENT
 07= PARENT-IN-LAW
 08= BROTHER OR SISTER
 09= BROTHER OR SISTER-IN-LAW
 10= OTHER RELATIVE
 11= ADOPTED/FOSTER CHILD
 12= NOT RELATED
 98= DK

| (13) | (14) | (15) | (16) | (17) | (18) | (19) | (20) |
|--------|--------------------------|-------------------------------------|--------|--------|--|--------|------|
| YES NO | | YES YES NO PART COMP IAL LETE | YES NO | YES NO | YES YES YES NO HAN LEGS BO DS TH | YES NO | |
| 1 2 | | 1 2 3 | 1 2 | 1 2 | 1 2 3 4 | 1 2 | |
| | <input type="checkbox"/> | | | | | | 09 |
| | <input type="checkbox"/> | | | | | | 10 |
| | <input type="checkbox"/> | | | | | | 11 |
| | <input type="checkbox"/> | | | | | | 12 |
| | <input type="checkbox"/> | | | | | | 13 |
| | <input type="checkbox"/> | | | | | | 14 |
| | <input type="checkbox"/> | | | | | | 15 |
| | <input type="checkbox"/> | | | | | | 16 |
| | <input type="checkbox"/> | | | | | | 17 |
| | <input type="checkbox"/> | | | | | | 18 |

TOTAL NUMBER OF ELIGIBLE WOMEN

YES ENTER EACH IN TABLE NO

YES ENTER EACH IN TABLE NO

YES ENTER EACH IN TABLE NO

** CODES FOR Q.9
 MARITAL STATUS:
 1= CURRENTLY MARRIED
 2= SEPARATED
 3= WIDOWED
 4= DIVORCED
 5= NEVER MARRIED

***CODES FOR Q.12
 GRADE:
 00=LESS THAN 1
 YEAR COMPLETED
 98=DK

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP TO |
|-----|---|---|---------|
| 22 | What is the main source of water your household uses for bathing and washing? | PIPED WATER PIPED INTO RESIDENCE/YARD/PLOT.....11 → 24 PUBLIC TAP.....12 GROUND WATER HANDPUMP IN YARD/PLOT.....21 → 24 PUBLIC HANDPUMP.....22 WELL WATER WELL IN RESIDENCE/YARD/PLOT...23 → 24 PUBLIC WELL.....24 SURFACE WATER SPRING.....31 RIVER/STREAM.....32 POND/LAKE.....33 DAM.....34 RAINWATER.....41 TANKER TRUCK.....51 OTHER.....81 (SPECIFY) | |
| 23 | How long does it take to go there, get water, and come back in one trip? | MINUTES..... <input type="text"/> <input type="text"/> <input type="text"/> | |
| 24 | Does your household get drinking water from this same source? | YES.....1 → 26 NO.....2 | |
| 25 | What is the main source of drinking water for members of your household? | PIPED WATER PIPED INTO RESIDENCE/YARD/PLOT.....11 PUBLIC TAP.....12 GROUND WATER HANDPUMP IN YARD/PLOT.....21 PUBLIC HANDPUMP.....22 WELL WATER WELL IN RESIDENCE/YARD/PLOT...23 PUBLIC WELL.....24 SURFACE WATER SPRING.....31 RIVER/STREAM.....32 POND/LAKE.....33 DAM.....34 RAINWATER.....41 TANKER TRUCK.....51 BOTTLED WATER.....61 OTHER.....81 (SPECIFY) | |
| 26 | What kind of toilet facility does your household have? | FLUSH TOILET OWN FLUSH TOILET.....11 SHARED FLUSH TOILET.....12 PUBLIC FLUSH TOILET.....13 PIT TOILET/LATRINE OWN PIT TOILET/LATRINE.....21 SHARED PIT TOILET/LATRINE.....22 PUBLIC PIT TOILET/LATRINE.....23 NO FACILITY/BUSH/FIELD.....31 OTHER.....41 (SPECIFY) | |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP TO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|---|---|---------|-----|----|---------------------|---|---|------------------|---|---|---------------|---|---|----------|---|---|-----------------------|---|---|-------------------|---|---|-----------------|---|---|--------------|---|---|--------------|---|---|-------------------------|---|---|----------|---|---|-------------------|---|---|---------------|---|---|--------------|---|---|-----------------|---|---|--|
| 36 | Does this household own any agricultural land? | YES.....1 NO.....2 | 39 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 37 | What is the size of <u>non-irrigated</u> land under cultivation, in acres? | ACRES..... <input type="text"/> <input type="text"/> <input type="text"/> NONE.....000 LESS THAN ONE.....996 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 38 | What is the size of <u>irrigated</u> land under cultivation, in acres? | ACRES..... <input type="text"/> <input type="text"/> <input type="text"/> NONE.....000 LESS THAN ONE.....996 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 39 | Does this household own any livestock? | YES.....1 NO.....2 | 42 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40 | What type of livestock do you own? RECORD ALL MENTIONED. | BULLOCK.....A COW.....B BUFFALO.....C GOAT.....D SHEEP.....E CAMEL.....F OTHER.....G (SPECIFY) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 41 | Where do you usually keep the animals at night? | IN THE HOUSE.....1 OUTSIDE THE HOUSE.....2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 42 | Does the household own any of the following? A sewing machine? A clock or watch? A sofa set? A fan? A radio or transistor? A refrigerator? A television? A VCR or VCP? A bicycle? A motorcycle or scooter? A car? A bullock cart? A thresher? A tractor? A water pump? | <table border="1"> <thead> <tr> <th></th> <th>YES</th> <th>NO</th> </tr> </thead> <tbody> <tr> <td>SEWING MACHINE.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>CLOCK/WATCH.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>SOFA SET.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>FAN.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>RADIO/TRANSISTOR.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>REFRIGERATOR.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>TELEVISION.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>VCR/VCP.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>BICYCLE.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>MOTORCYCLE/SCOOTER.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>CAR.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>BULLOCK CART.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>THRESHER.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>TRACTOR.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>WATER PUMP.....</td> <td>1</td> <td>2</td> </tr> </tbody> </table> | | YES | NO | SEWING MACHINE..... | 1 | 2 | CLOCK/WATCH..... | 1 | 2 | SOFA SET..... | 1 | 2 | FAN..... | 1 | 2 | RADIO/TRANSISTOR..... | 1 | 2 | REFRIGERATOR..... | 1 | 2 | TELEVISION..... | 1 | 2 | VCR/VCP..... | 1 | 2 | BICYCLE..... | 1 | 2 | MOTORCYCLE/SCOOTER..... | 1 | 2 | CAR..... | 1 | 2 | BULLOCK CART..... | 1 | 2 | THRESHER..... | 1 | 2 | TRACTOR..... | 1 | 2 | WATER PUMP..... | 1 | 2 | |
| | YES | NO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SEWING MACHINE..... | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CLOCK/WATCH..... | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SOFA SET..... | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FAN..... | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RADIO/TRANSISTOR..... | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| REFRIGERATOR..... | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TELEVISION..... | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| VCR/VCP..... | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BICYCLE..... | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MOTORCYCLE/SCOOTER..... | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAR..... | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BULLOCK CART..... | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| THRESHER..... | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TRACTOR..... | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| WATER PUMP..... | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP TO |
|-----|---|---|---------|
| 43 | <p>Now I would like to ask you about the births that have taken place to any member of your household or visitor during the last two years.</p> <p>Did any usual resident of this household give birth to a child since (Pongal/Makar Sankranti/January) 1991 in this (city/town/village) or outside?</p> | <p>YES.....1 NO.....2</p> | 45 |
| 44 | How many births took place? | TOTAL BIRTHS..... <input type="text"/> | |
| 45 | <p>Did any visitor to this household give birth to a child since (Pongal/Makar Sankranti/January) 1991?</p> | <p>YES.....1 NO.....2</p> | 47 |
| 46 | How many births took place? | TOTAL BIRTHS..... <input type="text"/> | |
| 47 | CHECK 44 AND 46: | <p>ONE OR MORE BIRTHS <input type="checkbox"/> NO BIRTHS <input type="checkbox"/></p> | 58 |

RECORD NAMES OF BIRTHS SINCE JANUARY 1991 IN 48. RECORD TWINS AND TRIPLETS ON SEPARATE LINES.

| | | | | | | | | |
|--|--|---|--|---|----------------------------|--|------------------------|---|
| 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 |
| What name was given to the baby born (first/next)? | Was the mother a usual resident of the household or a visitor? | RECORD LINE NUMBER OF MOTHER IN THE HOUSEHOLD SCHEDULE. | How old was the mother at the time of birth of (NAME)? RECORD AGE IN COMPLETED YEARS. | RECORD SINGLE OR MULTIPLE BIRTH STATUS. | Is (NAME) a boy or a girl? | In what month and year was (NAME) born? PROBE: What is his/her birthday? OR: In what season was he/she born? | Is (NAME) still alive? | IF DEAD: How old was he/she when he/she died? IF "1 YEAR", PROBE: How many months old was (NAME)? RECORD DAYS IF LESS THAN ONE MONTH |

| | | | | | | | | |
|-----------------------|-----------------------------|--|---|-------------------------|--------------------|---|---------------------------------------|--|
| 01 _____ (NAME) | RESIDENT...1 VISITOR...2 | LINE NUMBER <input type="text"/> <input type="text"/> MOTHER DIED.....95 LEFT HH..96 | AGE OF MOTHER <input type="text"/> <input type="text"/> | SINGLE...1 MULT....2 | BOY...1 GIRL..2 | MONTH... <input type="text"/> <input type="text"/> YEAR... <input type="text"/> <input type="text"/> | YES...1 (GO TO NEXT BIRTH) NO....2 | DAYS....1 <input type="text"/> <input type="text"/> MONTHS..2 <input type="text"/> <input type="text"/> |
| 02 _____ (NAME) | RESIDENT...1 VISITOR...2 | LINE NUMBER <input type="text"/> <input type="text"/> MOTHER DIED.....95 LEFT HH..96 | AGE OF MOTHER <input type="text"/> <input type="text"/> | SINGLE...1 MULT....2 | BOY...1 GIRL..2 | MONTH... <input type="text"/> <input type="text"/> YEAR... <input type="text"/> <input type="text"/> | YES...1 (GO TO NEXT BIRTH) NO....2 | DAYS....1 <input type="text"/> <input type="text"/> MONTHS..2 <input type="text"/> <input type="text"/> |
| 03 _____ (NAME) | RESIDENT...1 VISITOR...2 | LINE NUMBER <input type="text"/> <input type="text"/> MOTHER DIED.....95 LEFT HH..96 | AGE OF MOTHER <input type="text"/> <input type="text"/> | SINGLE...1 MULT....2 | BOY...1 GIRL..2 | MONTH... <input type="text"/> <input type="text"/> YEAR... <input type="text"/> <input type="text"/> | YES...1 (GO TO NEXT BIRTH) NO....2 | DAYS....1 <input type="text"/> <input type="text"/> MONTHS..2 <input type="text"/> <input type="text"/> |
| 04 _____ (NAME) | RESIDENT...1 VISITOR...2 | LINE NUMBER <input type="text"/> <input type="text"/> MOTHER DIED.....95 LEFT HH..96 | AGE OF MOTHER <input type="text"/> <input type="text"/> | SINGLE...1 MULT....2 | BOY...1 GIRL..2 | MONTH... <input type="text"/> <input type="text"/> YEAR... <input type="text"/> <input type="text"/> | YES...1 (GO TO NEXT BIRTH) NO....2 | DAYS....1 <input type="text"/> <input type="text"/> MONTHS..2 <input type="text"/> <input type="text"/> |
| 05 _____ (NAME) | RESIDENT...1 VISITOR...2 | LINE NUMBER <input type="text"/> <input type="text"/> MOTHER DIED.....95 LEFT HH..96 | AGE OF MOTHER <input type="text"/> <input type="text"/> | SINGLE...1 MULT....2 | BOY...1 GIRL..2 | MONTH... <input type="text"/> <input type="text"/> YEAR... <input type="text"/> <input type="text"/> | YES...1 (GO TO NEXT BIRTH) NO....2 | DAYS....1 <input type="text"/> <input type="text"/> MONTHS..2 <input type="text"/> <input type="text"/> |
| 06 _____ (NAME) | RESIDENT...1 VISITOR...2 | LINE NUMBER <input type="text"/> <input type="text"/> MOTHER DIED.....95 LEFT HH..96 | AGE OF MOTHER <input type="text"/> <input type="text"/> | SINGLE...1 MULT....2 | BOY...1 GIRL..2 | MONTH... <input type="text"/> <input type="text"/> YEAR... <input type="text"/> <input type="text"/> | YES...1 (GO TO NEXT BIRTH) NO....2 | DAYS....1 <input type="text"/> <input type="text"/> MONTHS..2 <input type="text"/> <input type="text"/> |

57 COMPARE SUM OF 44 AND 46 WITH NUMBER OF BIRTHS IN 48 AND MARK:

NUMBERS ARE SAME

NUMBERS ARE DIFFERENT

PROBE AND RECONCILE

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP TO |
|-----|---|---|---------|
| 58 | <p>Now I would like to ask you about the deaths of any member of your household or visitor during the last two years.</p> <p>Did any usual resident of this household die since (Pongal/Makar Sankranti/January) 1991 in this (city/town/village) or outside?</p> | <p>YES.....1</p> <p>NO.....2 → 60</p> | |
| 59 | <p>How many persons died?</p> | <p>TOTAL DEATHS..... <input type="text"/></p> | |
| 60 | <p>Did any visitor to this household die since (Pongal/Makar Sankranti/January) 1991?</p> | <p>YES.....1</p> <p>NO.....2 → 62</p> | |
| 61 | <p>How many deaths took place?</p> | <p>TOTAL DEATHS..... <input type="text"/></p> | |
| 62 | <p>CHECK 59 AND 61:</p> <p>ONE OR MORE DEATHS <input type="checkbox"/></p> <p>NO DEATHS <input type="checkbox"/></p> | <p>→ 75</p> | |

RECORD NAMES OF DEATHS SINCE JANUARY 1990 IN 63.

| | | | | | | | | | | |
|--|--|--------------------------------|---|--|---|------------------------------------|-----------------------------------|--|---|---|
| 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 |
| What (was/were) the name(s) of the person(s) who died? | Was (NAME) a usual resident of the household or a visitor? | Was (NAME) a male or a female? | How old was he/she when he/she died? RECORD DAYS IF LESS THAN ONE MONTH, MONTHS IF LESS THAN TWO YEARS, OR YEARS | In what month and year did (NAME) die? | CHECK 65 AND 66: DECEASED WAS FEMALE AGED 13-49 AT THE TIME OF DEATH | Was (NAME) pregnant when she died? | Did (NAME) die during childbirth? | Did (NAME) die within two months after the end of a pregnancy or childbirth? | Was the death of (NAME) due to a complication of the pregnancy or childbirth? | What were the major symptoms observed before the death of (NAME)? |

| | | | | | | | | | | |
|-----------------------|-----------------------------|-------------------------|------------------------------------|--------------------|--------------------------------------|--------------------------------------|--|--------------------------------------|--|----------------------------|
| 01 _____ (NAME) | RESIDENT...1 VISITOR...2 | MALE....1 FEMALE...2 | DAYS...1 MONTHS..2 YEARS...3 | MONTH.. YEAR... | YES.....1 NO.....2 (GO TO 73)← | YES.....1 (GO TO 72)← NO.....2 | YES.....1 (GO TO NEXT DEATH)← NO.....2 | YES.....1 NO.....2 (GO TO 73)← | YES.....1 (GO TO NEXT DEATH)← NO.....2 | SYMPTOMS _____ _____ |
| 02 _____ (NAME) | RESIDENT...1 VISITOR...2 | MALE....1 FEMALE...2 | DAYS...1 MONTHS..2 YEARS...3 | MONTH.. YEAR... | YES.....1 NO.....2 (GO TO 73)← | YES.....1 (GO TO 72)← NO.....2 | YES.....1 (GO TO NEXT DEATH)← NO.....2 | YES.....1 NO.....2 (GO TO 73)← | YES.....1 (GO TO NEXT DEATH)← NO.....2 | SYMPTOMS _____ _____ |
| 03 _____ (NAME) | RESIDENT...1 VISITOR...2 | MALE....1 FEMALE...2 | DAYS...1 MONTHS..2 YEARS...3 | MONTH.. YEAR... | YES.....1 NO.....2 (GO TO 73)← | YES.....1 (GO TO 72)← NO.....2 | YES.....1 (GO TO NEXT DEATH)← NO.....2 | YES.....1 NO.....2 (GO TO 73)← | YES.....1 (GO TO NEXT DEATH)← NO.....2 | SYMPTOMS _____ _____ |

74 COMPARE SUM OF 59 AND 61 WITH NUMBER OF DEATHS IN 63 AND MARK:

NUMBERS ARE SAME NUMBERS ARE DIFFERENT → PROBE AND RECONCILE

75 RECORD THE TIME.

HOUR.....
MINUTES.....

- 196

NATIONAL FAMILY HEALTH SURVEY
(MCH AND FAMILY PLANNING)
WOMAN'S QUESTIONNAIRE

CONFIDENTIAL
For Research
Purposes Only

INDIA 1992-1993

| IDENTIFICATION | | | | | | | | | | | | | | | | | | | | | | |
|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| NAME OF STATE _____ | <table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr> </table> | | | | | | | | | | | | | | | | | | | | | |
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| PSU NUMBER..... | | | | | | | | | | | | | | | | | | | | | | |
| NAME OF DISTRICT _____ | | | | | | | | | | | | | | | | | | | | | | |
| NAME OF TEHSIL/TALUK _____ | | | | | | | | | | | | | | | | | | | | | | |
| URBAN/RURAL (urban=1, rural=2)..... | | | | | | | | | | | | | | | | | | | | | | |
| NAME OF TOWN AND TOWN BLOCK OR VILLAGE _____ | | | | | | | | | | | | | | | | | | | | | | |
| LARGE CITY/SMALL CITY/TOWN/RURAL AREA..... (large city=1, small city=2, town=3, rural area=4) HOUSEHOLD NUMBER..... | | | | | | | | | | | | | | | | | | | | | | |
| NAME AND LINE NUMBER OF WOMAN _____ ADDRESS OF HOUSEHOLD _____ | <table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr> </table> | | | | | | | | | | | | | | | | | | | | | |
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| INTERVIEWER VISITS | | | | | | | | |
|--------------------------|-------|-------|---|---|--|--|--|--|
| | 1 | 2 | 3 | FINAL VISIT | | | | |
| DATE | _____ | _____ | _____ | DAY <table border="1" style="width: 20px; height: 20px; border-collapse: collapse;"><tr><td style="width: 10px; height: 10px;"></td><td style="width: 10px; height: 10px;"></td></tr></table> | | | | |
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| | | | | MONTH <table border="1" style="width: 20px; height: 20px; border-collapse: collapse;"><tr><td style="width: 10px; height: 10px;"></td><td style="width: 10px; height: 10px;"></td></tr></table> | | | | |
| | | | | | | | | |
| INTERVIEWER'S NAME | _____ | _____ | _____ | YEAR <table border="1" style="width: 20px; height: 20px; border-collapse: collapse;"><tr><td style="width: 10px; height: 10px;"></td><td style="width: 10px; height: 10px;"></td></tr></table> | | | | |
| | | | | | | | | |
| RESULT* | _____ | _____ | _____ | NAME <table border="1" style="width: 20px; height: 20px; border-collapse: collapse;"><tr><td style="width: 10px; height: 10px;"></td><td style="width: 10px; height: 10px;"></td></tr></table> | | | | |
| | | | | | | | | |
| NEXT VISIT: DATE TIME | _____ | _____ | <table border="1" style="width: 20px; height: 20px; border-collapse: collapse;"><tr><td style="width: 10px; height: 10px;"></td><td style="width: 10px; height: 10px;"></td></tr></table> | | | RESULT <table border="1" style="width: 20px; height: 20px; border-collapse: collapse;"><tr><td style="width: 10px; height: 10px;"></td><td style="width: 10px; height: 10px;"></td></tr></table> | | |
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*RESULT CODES:
 1 COMPLETED 3 POSTPONED 5 PARTLY COMPLETED
 2 NOT AT HOME 4 REFUSED 6 OTHER _____ (SPECIFY)

| | | | | | | | | |
|---|---|--|--|--|--|--|--|--|
| LANGUAGE OF QUESTIONNAIRE**..... | <table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr> </table> | | | | | | | |
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| LANGUAGE OF INTERVIEW**..... | | | | | | | | |
| NATIVE LANGUAGE OF RESPONDENT**..... TRANSLATOR USED..... YES...1 NO...2 | | | | | | | | |

**LANGUAGE CODES:

| | | | |
|--------------------------|--------------|-------------|-----------|
| 01 Assamese | 05 Hindi | 09 Marathi | 13 Sindhi |
| 02 Bengali | 06 Kannada | 10 Oriya | 14 Tamil |
| 03 English | 07 Kashmiri | 11 Punjabi | 15 Telugu |
| 04 Gujarati | 08 Malayalam | 12 Sanskrit | 16 Urdu |
| 17 Other (SPECIFY) _____ | | 18 Konkani | |

| NAME | SPOT-CHECKED BY | FIELD EDITED BY | OFFICE EDITED BY | KEYED BY | KEYED BY | | |
|------|-----------------|-----------------|------------------|----------|---|--|--|
| DATE | _____ | _____ | _____ | _____ | <table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr> </table> | | |
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SECTION 1. RESPONDENT'S BACKGROUND

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP TO |
|-----|--|--|--------------|
| 101 | RECORD THE TIME. | HOUR..... <input type="text"/> <input type="text"/> MINUTES..... <input type="text"/> <input type="text"/> | |
| 102 | First I would like to ask some questions about you and your household. For most of the time until you were 12 years old, did you live in a city or in a village? | CITY/TOWN.....1 VILLAGE.....2 | |
| 103 | How long have you been living continuously in (NAME OF CURRENT PLACE OF RESIDENCE)? | YEARS..... <input type="text"/> <input type="text"/> ALWAYS.....95 VISITOR.....96 | →105 |
| 104 | Just before you moved here, did you live in a city or in a village? | CITY/TOWN.....1 VILLAGE.....2 | |
| 105 | In what month and year were you born? | MONTH..... <input type="text"/> <input type="text"/> DK MONTH.....98 YEAR..... <input type="text"/> <input type="text"/> DK YEAR.....98 | |
| 106 | How old were you at your last birthday? COMPARE AND CORRECT 105 AND/OR 106 IF INCONSISTENT. | AGE IN COMPLETED YEARS..... <input type="text"/> <input type="text"/> | |
| 107 | What is your current marital status? | CURRENTLY MARRIED.....1 SEPARATED.....2 WIDOWED.....3 DIVORCED.....4 NEVER MARRIED.....5 | →111 →END |
| 108 | Are you living with your husband now or is he staying elsewhere? | LIVING WITH HIM.....1 STAYING ELSEWHERE.....2 | →111 |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP TO | | | | |
|-----|--|--|---|--|--|--|--|
| 109 | During the last four weeks, did you stay with your husband at any time? | YES.....1 NO.....2 | 111 | | | | |
| 110 | For how long have you and your husband not been living together? RECORD MONTHS OR YEARS. | MONTHS.....1 YEARS.....2 | <table border="1"> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> </table> | | | | |
| | | | | | | | |
| | | | | | | | |
| 111 | How I would like to ask you some questions on your marriage. Have you been married only once or more than once? | ONCE.....1 MORE THAN ONCE.....2 | 115 | | | | |
| 112 | How old were you at the time of your <u>first</u> marriage? | AGE IN COMPLETED YEARS..... | <table border="1"> <tr><td></td><td></td></tr> </table> | | | | |
| | | | | | | | |
| 113 | How old were you when you started living with your <u>first</u> husband? | AGE IN COMPLETED YEARS..... GAUNA HAD NOT TAKEN PLACE..... 96 | <table border="1"> <tr><td></td><td></td></tr> </table> | | | | |
| | | | | | | | |
| 114 | How old were you when your first marriage dissolved? | AGE IN COMPLETED YEARS..... | <table border="1"> <tr><td></td><td></td></tr> </table> | | | | |
| | | | | | | | |
| 115 | How old were you at the time of your [current] marriage? | AGE IN COMPLETED YEARS..... | <table border="1"> <tr><td></td><td></td></tr> </table> | | | | |
| | | | | | | | |
| 116 | How old were you when you started living with your [current] husband? | AGE IN COMPLETED YEARS..... GAUNA HAS NOT TAKEN PLACE.....96 | <table border="1"> <tr><td></td><td></td></tr> </table> END | | | | |
| | | | | | | | |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP TO |
|-----|---|--|------------|
| 117 | Before you got married, was your [current] husband related to you in any way? | YES.....1 NO.....2 | 119 |
| 118 | What type of relationship was it? | FIRST COUSIN ON FATHER'S SIDE...1 FIRST COUSIN ON MOTHER'S SIDE...2 SECOND COUSIN.....3 UNCLE.....4 OTHER BLOOD RELATIVE.....5 BROTHER-IN-LAW.....6 OTHER NON-BLOOD RELATIVE.....7 | |
| 119 | What is the minimum legal age at marriage for a girl in India? | AGE IN YEARS..... <input type="text"/> <input type="text"/> DK.....98 | |
| 120 | What is the minimum legal age at marriage for a boy in India? | AGE IN YEARS..... <input type="text"/> <input type="text"/> DK.....98 | |
| 121 | Have you ever attended school? | YES.....1 NO.....2 | 124 |
| 122 | What is the highest grade you completed? | GRADE..... <input type="text"/> <input type="text"/> | |
| 123 | CHECK 122: | GRADE 0-5 <input type="checkbox"/> GRADE 6-12 <input type="checkbox"/> GRADE 13+ <input type="checkbox"/> | 126 125 |
| 124 | Can you read and write? | YES.....1 NO.....2 | 126 |
| 125 | What is the highest degree you have obtained? | DEGREE NOT COMPLETED.....01 NON-TECHNICAL DEGREE BACHELOR'S DEGREE.....02 MASTER'S DEGREE.....03 Ph.D.....04 TECHNICAL DEGREE BACHELOR'S DEGREE.....05 MASTER'S DEGREE.....06 TECHNICAL DIPLOMA/CERTIFICATE NOT EQUIVALENT TO DEGREE.....07 NON-TECHNICAL DIPLOMA/CERTIF. NOT EQUIVALENT TO DEGREE.....08 OTHER DEGREE.....09 (SPECIFY) | |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP TO | | | | | | |
|-----|--|---|--|--|--|--|--|--|--|
| 126 | Do you usually listen to a radio at least once a week? | YES.....1 NO.....2 | | | | | | | |
| 127 | Do you usually watch television at least once a week? | YES.....1 NO.....2 | | | | | | | |
| 128 | Do you usually go to a Cinema Hall or Theatre to see a movie at least once a month? | YES.....1 NO.....2 | | | | | | | |
| 129 | CHECK Q.5 IN THE HOUSEHOLD SCHEDULE: THE WOMAN INTERVIEWED IS NOT A USUAL RESIDENT <input type="checkbox"/> | THE WOMAN INTERVIEWED IS A USUAL RESIDENT <input type="checkbox"/> | →201 | | | | | | |
| 130 | How long have you been visiting in this house? | DAYS.....1 MONTHS.....2 YEARS.....3 | <table border="1" style="width: 20px; height: 40px;"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table> | | | | | | |
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| | | | | | | | | | |
| 131 | How much longer do you intend to stay here? | DAYS.....1 MONTHS.....2 YEARS.....3 | <table border="1" style="width: 20px; height: 40px;"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table> | | | | | | |
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| | | | | | | | | | |
| 132 | What is the main reason for your visiting this household? | VISITING FOR DELIVERY PURPOSE..1 VISITING FOR OTHER PURPOSE....2 | | | | | | | |
| 133 | Now I would like to ask about the place in which you usually live. Do you usually live in a city, in a town, or in a village? IF CITY: In which city do you live? _____ | LARGE CITY (1 MILLION +).....1 SMALL CITY.....2 TOWN.....3 VILLAGE.....4 | | | | | | | |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP TO |
|-----|--|--|---------|
| 134 | In which state do you usually live? | ANDHRA PRADESH.....01 ARUNACHAL PRADESH.....02 ASSAM.....03 BIHAR.....04 GOA.....05 GUJARAT.....06 HARYANA.....07 HIMACHAL PRADESH.....08 JAMMU & KASHMIR.....09 KARNATAKA.....10 KERALA.....11 MADHYA PRADESH.....12 MAHARASHTRA.....13 MANIPUR.....14 MEGHALAYA.....15 MIZORAM.....16 NAGALAND.....17 ORISSA.....18 PUNJAB.....19 RAJASHTAN.....20 SIKKIM.....21 TAMIL NADU.....22 TRIPURA.....23 UTTAR PRADESH.....24 WEST BENGAL.....25 ANDMAN & NICOBAR ISLANDS.....26 CHANDIGARH.....27 DADRA & NAGAR HAVELI.....28 DAMAN & DIU.....29 DELHI.....30 LAKSHADWEEP.....31 PONDICHERRY.....32 OUTSIDE INDIA.....33 | |
| 135 | <p>Now I would like to ask about the household in which you usually live.</p> <p>What is the main source of water your household uses for bathing and washing?</p> | PIPED WATER PIPED INTO RESIDENCE/YARD/PLOT.....11 → 137 PUBLIC TAP.....12 GROUND WATER HANDPUMP IN YARD/PLOT.....21 → 137 PUBLIC HANDPUMP.....22 WELL WATER WELL IN RESIDENCE/YARD/PLOT...23 → 137 PUBLIC WELL.....24 SURFACE WATER SPRING.....31 RIVER/STREAM.....32 POND/LAKE.....33 DAM.....34 RAINWATER.....41 TANKER TRUCK.....51 OTHER.....81 (SPECIFY) | |
| 136 | How long does it take to go there, get water, and come back in one trip? | MINUTES..... <input type="text"/> <input type="text"/> <input type="text"/> | |
| 137 | Does your household get drinking water from this same source? | YES.....1 → 139 NO.....2 | |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP TO |
|-----|---|--|---------|
| 138 | <p>What is the main source of drinking water for members of your household?</p> | <p>PIPED WATER PIPED INTO RESIDENCE/YARD/PLOT.....11 PUBLIC TAP.....12</p> <p>GROUND WATER HANDPUMP IN YARD/PLOT.....21 PUBLIC HANDPUMP.....22</p> <p>WELL WATER WELL IN RESIDENCE/YARD/PLOT...23 PUBLIC WELL.....24</p> <p>SURFACE WATER SPRING.....31 RIVER/STREAM.....32 POND/LAKE.....33 DAM.....34</p> <p>RAINWATER.....41 TANKER TRUCK.....51 BOTTLED WATER.....61 OTHER _____ 81 (SPECIFY)</p> | |
| 139 | <p>What kind of toilet facility does your household have?</p> | <p>FLUSH TOILET OWN FLUSH TOILET.....11 SHARED FLUSH TOILET.....12 PUBLIC FLUSH TOILET.....13</p> <p>PIT TOILET/LATRINE OWN PIT TOILET/LATRINE.....21 SHARED PIT TOILET/LATRINE.....22 PUBLIC PIT TOILET/LATRINE.....23 NO FACILITY/BUSH/FIELD.....31 OTHER _____ 41 (SPECIFY)</p> | |
| 140 | <p>What is the main source of lighting for your household?</p> | <p>ELECTRICITY.....1 KEROSENE.....2 GAS.....3 OIL.....4 OTHER _____ 5 (SPECIFY)</p> | |
| 141 | <p>How many rooms are there in your household?</p> | <p>ROOMS..... <input type="text"/> <input type="text"/></p> | |
| 142 | <p>Do you have a separate room which is used as a kitchen?</p> | <p>YES.....1 NO.....2</p> | |
| 143 | <p>What type of fuel does your household mainly use for cooking?</p> | <p>WOOD.....01 COW DUNG CAKES.....02 COAL/COKE/LIGNITE.....03 CHARCOAL.....04 KEROSENE.....05 ELECTRICITY.....06 LIQUID PETROLEUM GAS.....07 BIO-GAS.....08 OTHER _____ 09 (SPECIFY)</p> | |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP TO |
|-----|--|---|---------|
| 144 | What materials have been used for the construction of roof, walls and floor of the house where you usually live? ROOF _____ WALLS _____ FLOOR _____ | PUCCA.....1 KACHHA.....2 SEMI-PUCCA.....3 | |
| 145 | What is the religion of the head of the household? | HINDU.....01 SIKH.....02 BUDDHIST/NEO BUDDHIST.....03 CHRISTIAN.....04 JAIN.....05 JEWISH.....06 MUSLIM.....07 ZOROASTRIAN.....08 NO RELIGION.....09 OTHER _____ 10 (SPECIFY) | |
| 146 | Does the head of the household belong to a scheduled tribe? | YES.....1 NO.....2 | → 148 |
| 147 | What is the name of the tribe? | TRIBE _____ (NAME) | → 149 |
| 148 | To which caste does the head of the household belong? | CASTE _____ (NAME) NO CASTE.....996 | |
| 149 | Does your household own any agricultural land? | YES.....1 NO.....2 | → 152 |
| 150 | What is the size of <u>non-irrigated</u> land under cultivation, in acres? | ACRES..... NONE.....000 LESS THAN ONE.....996 | |
| 151 | What is the size of <u>irrigated</u> land under cultivation, in acres? | ACRES..... NONE.....000 LESS THAN ONE.....996 | |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP TO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------|---|--|--|-----|----|----------------------|---|---|-------------------|---|---|----------------|---|---|-----------|---|---|------------------------|---|---|--------------------|---|---|------------------|---|---|---------------|---|---|---------------|---|---|--------------------------|---|---|-----------|---|---|--------------------|---|---|---------------|---|---|----------------|---|---|------------------|---|---|--|
| 152 | Does your household own any livestock? | YES.....1 NO.....2 | → 155 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 153 | What type of livestock do you own? RECORD ALL MENTIONED. | BULLOCK.....A COW.....B BUFFALO.....C GOAT.....D SHEEP.....E CAMEL.....F OTHER.....G (SPECIFY) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 154 | Where do you usually keep the animals at night? | IN THE HOUSE.....1 OUTSIDE THE HOUSE.....2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 155 | Does the household own any of the following? | <table border="1"> <thead> <tr> <th></th> <th>YES</th> <th>NO</th> </tr> </thead> <tbody> <tr> <td>SEWING MACHINE.....1</td> <td>1</td> <td>2</td> </tr> <tr> <td>CLOCK/WATCH.....1</td> <td>1</td> <td>2</td> </tr> <tr> <td>SOFA SET.....1</td> <td>1</td> <td>2</td> </tr> <tr> <td>FAN.....1</td> <td>1</td> <td>2</td> </tr> <tr> <td>RADIO/TRANSISTOR.....1</td> <td>1</td> <td>2</td> </tr> <tr> <td>REFRIGERATOR.....1</td> <td>1</td> <td>2</td> </tr> <tr> <td>TELEVISION.....1</td> <td>1</td> <td>2</td> </tr> <tr> <td>VCR/VCP.....1</td> <td>1</td> <td>2</td> </tr> <tr> <td>BICYCLE.....1</td> <td>1</td> <td>2</td> </tr> <tr> <td>MOTORCYCLE/SCOOTER.....1</td> <td>1</td> <td>2</td> </tr> <tr> <td>CAR.....1</td> <td>1</td> <td>2</td> </tr> <tr> <td>BULLOCK CART.....1</td> <td>1</td> <td>2</td> </tr> <tr> <td>TRACTOR.....1</td> <td>1</td> <td>2</td> </tr> <tr> <td>THRESHER.....1</td> <td>1</td> <td>2</td> </tr> <tr> <td>WATER PUMP.....1</td> <td>1</td> <td>2</td> </tr> </tbody> </table> | | YES | NO | SEWING MACHINE.....1 | 1 | 2 | CLOCK/WATCH.....1 | 1 | 2 | SOFA SET.....1 | 1 | 2 | FAN.....1 | 1 | 2 | RADIO/TRANSISTOR.....1 | 1 | 2 | REFRIGERATOR.....1 | 1 | 2 | TELEVISION.....1 | 1 | 2 | VCR/VCP.....1 | 1 | 2 | BICYCLE.....1 | 1 | 2 | MOTORCYCLE/SCOOTER.....1 | 1 | 2 | CAR.....1 | 1 | 2 | BULLOCK CART.....1 | 1 | 2 | TRACTOR.....1 | 1 | 2 | THRESHER.....1 | 1 | 2 | WATER PUMP.....1 | 1 | 2 | |
| | YES | NO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SEWING MACHINE.....1 | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CLOCK/WATCH.....1 | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SOFA SET.....1 | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FAN.....1 | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RADIO/TRANSISTOR.....1 | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| REFRIGERATOR.....1 | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TELEVISION.....1 | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| VCR/VCP.....1 | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BICYCLE.....1 | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MOTORCYCLE/SCOOTER.....1 | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAR.....1 | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BULLOCK CART.....1 | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TRACTOR.....1 | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| THRESHER.....1 | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| WATER PUMP.....1 | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 156 | How many people are there in your household? | NUMBER OF PERSONS..... | <table border="1"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

SECTION 2. REPRODUCTION

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP TO | | | | |
|-----|--|---|---|--|--|--|--|
| 201 | Now I would like to ask about all the births you have had during your life. Have you ever given birth? | YES.....1 NO.....2 | →206 | | | | |
| 202 | Do you have any sons or daughters to whom you have given birth who are now living with you? | YES.....1 NO.....2 | →204 | | | | |
| 203 | How many sons live with you? And how many daughters live with you? IF NONE, RECORD '00'. | SONS AT HOME..... DAUGHTERS AT HOME..... | <table border="1" style="display: inline-table;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table> | | | | |
| | | | | | | | |
| | | | | | | | |
| 204 | Do you have any sons or daughters to whom you have given birth who are alive but do not live with you? | YES.....1 NO.....2 | →206 | | | | |
| 205 | How many sons are alive but do not live with you? And how many daughters are alive but do not live with you? IF NONE, RECORD '00'. | SONS ELSEWHERE..... DAUGHTERS ELSEWHERE..... | <table border="1" style="display: inline-table;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table> | | | | |
| | | | | | | | |
| | | | | | | | |
| 206 | Have you ever given birth to a boy or a girl who was born alive but later died? IF NO, PROBE: Any baby who cried or showed any sign of life but only survived a few hours or days? | YES.....1 NO.....2 | →208 | | | | |
| 207 | In all, how many boys have died? And how many girls have died? IF NONE, RECORD '00'. | BOYS DEAD..... GIRLS DEAD..... | <table border="1" style="display: inline-table;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table> | | | | |
| | | | | | | | |
| | | | | | | | |
| 208 | SUM ANSWERS TO 203, 205, AND 207, AND ENTER TOTAL. IF NONE RECORD '00'. | TOTAL..... | <table border="1" style="display: inline-table;"><tr><td> </td><td> </td></tr></table> | | | | |
| | | | | | | | |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP TO |
|-----|---|--|---------|
| 209 | <p>CHECK 208:</p> <p>Just to make sure that I have this right: you have had in TOTAL ___ births during your life. Is that correct?</p> <p>YES <input type="checkbox"/> NO <input type="checkbox"/> → PROBE AND CORRECT 201-208 AS NECESSARY</p> <p style="margin-left: 100px;">↓</p> | | |
| 210 | Have you ever had a stillbirth? | YES.....1 NO.....2 → 212 | |
| 211 | How many stillbirths have you had? | NUMBER OF STILLBIRTHS..... <input type="text"/> | |
| 212 | Have you ever had an abortion? PROBE FOR SPONTANEOUS AND INDUCED ABORTIONS. | YES.....1 NO.....2 → 214 | |
| 213 | How many abortions have you had? PROBE FOR NUMBER OF SPONTANEOUS AND INDUCED ABORTIONS. IF NONE, RECORD '0'. | SPONTANEOUS ABORTIONS..... <input type="text"/> INDUCED ABORTIONS..... <input type="text"/> | |
| 214 | CHECK 208: ONE OR MORE BIRTHS <input type="checkbox"/> NO BIRTHS <input type="checkbox"/> → 226 | | |

215

Now I would like to talk to you about all the births in your lifetime, whether currently alive or not, starting with the first one you had.

RECORD NAMES OF ALL THE BIRTHS IN 216. RECORD TWINS AND TRIPLETS ON SEPARATE LINES.

| | | | | | | | |
|---|---|--|--|--|---|---|--|
| <p>216</p> <p>What name was given to your (first, next) baby?</p> | <p>217</p> <p>RECORD SINGLE OR MULTIPLE BIRTH STATUS.</p> | <p>218</p> <p>Is (NAME) a boy or a girl?</p> | <p>219</p> <p>In what month and year was (NAME) born?</p> <p>PROBE:</p> <p>What is his/her birthday?</p> <p>OR:</p> <p>In what season was he/she born?</p> | <p>220</p> <p>Is (NAME) still alive?</p> | <p>221</p> <p>IF ALIVE:</p> <p>How old was (NAME) at his/her last birthday?</p> <p>RECORD AGE IN COMPLETED YEARS.</p> | <p>222</p> <p>IF ALIVE:</p> <p>Is (NAME) living with you?</p> | <p>223</p> <p>IF DEAD:</p> <p>How old was he/she when he/she died?</p> <p>IF "1 YEAR", PROBE:</p> <p>How many months old was (NAME)?</p> <p>RECORD DAYS IF LESS THAN 1 MONTH, MONTHS IF LESS THAN TWO YEARS, OR YEARS.</p> |
|---|---|--|--|--|---|---|--|

| | | | | | | | |
|-------------------------|---------------------------------|-------------------------------|-------------------------------|---|---------------------|---|---|
| <p>01</p> <p>(NAME)</p> | <p>SING...1</p> <p>MULT...2</p> | <p>BOY...1</p> <p>GIRL..2</p> | <p>MONTH..</p> <p>YEAR...</p> | <p>YES...1</p> <p>NO....2</p> <p>↓</p> <p>223</p> | <p>AGE IN YEARS</p> | <p>YES.....1</p> <p>NO.....2</p> <p>↓</p> <p>(GO TO NEXT BIRTH)</p> | <p>DAYS...1</p> <p>MONTHS..2</p> <p>YEARS...3</p> |
| <p>02</p> <p>(NAME)</p> | <p>SING...1</p> <p>MULT...2</p> | <p>BOY...1</p> <p>GIRL..2</p> | <p>MONTH..</p> <p>YEAR...</p> | <p>YES...1</p> <p>NO....2</p> <p>↓</p> <p>223</p> | <p>AGE IN YEARS</p> | <p>YES.....1</p> <p>NO.....2</p> <p>↓</p> <p>(GO TO NEXT BIRTH)</p> | <p>DAYS...1</p> <p>MONTHS..2</p> <p>YEARS...3</p> |
| <p>03</p> <p>(NAME)</p> | <p>SING...1</p> <p>MULT...2</p> | <p>BOY...1</p> <p>GIRL..2</p> | <p>MONTH..</p> <p>YEAR...</p> | <p>YES...1</p> <p>NO....2</p> <p>↓</p> <p>223</p> | <p>AGE IN YEARS</p> | <p>YES.....1</p> <p>NO.....2</p> <p>↓</p> <p>(GO TO NEXT BIRTH)</p> | <p>DAYS...1</p> <p>MONTHS..2</p> <p>YEARS...3</p> |
| <p>04</p> <p>(NAME)</p> | <p>SING...1</p> <p>MULT...2</p> | <p>BOY...1</p> <p>GIRL..2</p> | <p>MONTH..</p> <p>YEAR...</p> | <p>YES...1</p> <p>NO....2</p> <p>↓</p> <p>223</p> | <p>AGE IN YEARS</p> | <p>YES.....1</p> <p>NO.....2</p> <p>↓</p> <p>(GO TO NEXT BIRTH)</p> | <p>DAYS...1</p> <p>MONTHS..2</p> <p>YEARS...3</p> |
| <p>05</p> <p>(NAME)</p> | <p>SING...1</p> <p>MULT...2</p> | <p>BOY...1</p> <p>GIRL..2</p> | <p>MONTH..</p> <p>YEAR...</p> | <p>YES...1</p> <p>NO....2</p> <p>↓</p> <p>223</p> | <p>AGE IN YEARS</p> | <p>YES.....1</p> <p>NO.....2</p> <p>↓</p> <p>(GO TO NEXT BIRTH)</p> | <p>DAYS...1</p> <p>MONTHS..2</p> <p>YEARS...3</p> |
| <p>06</p> <p>(NAME)</p> | <p>SING...1</p> <p>MULT...2</p> | <p>BOY...1</p> <p>GIRL..2</p> | <p>MONTH..</p> <p>YEAR...</p> | <p>YES...1</p> <p>NO....2</p> <p>↓</p> <p>223</p> | <p>AGE IN YEARS</p> | <p>YES.....1</p> <p>NO.....2</p> <p>↓</p> <p>(GO TO NEXT BIRTH)</p> | <p>DAYS...1</p> <p>MONTHS..2</p> <p>YEARS...3</p> |
| <p>07</p> <p>(NAME)</p> | <p>SING...1</p> <p>MULT...2</p> | <p>BOY...1</p> <p>GIRL..2</p> | <p>MONTH..</p> <p>YEAR...</p> | <p>YES...1</p> <p>NO....2</p> <p>↓</p> <p>223</p> | <p>AGE IN YEARS</p> | <p>YES.....1</p> <p>NO.....2</p> <p>↓</p> <p>(GO TO NEXT BIRTH)</p> | <p>DAYS...1</p> <p>MONTHS..2</p> <p>YEARS...3</p> |

| | | | | | | | |
|--|---|----------------------------|--|------------------------|--|----------------------------|--|
| 216 | 217 | 218 | 219 | 220 | 221 IF ALIVE: | 222 IF ALIVE: | 223 IF DEAD: |
| What name was given to your next baby? | RECORD SINGLE OR MULTIPLE BIRTH STATUS. | Is (NAME) a boy or a girl? | In what month and year was (NAME) born? PROBE: What is his/her birthday? OR: In what season was he/she born? | Is (NAME) still alive? | How old was (NAME) at his/her last birthday? | Is (NAME) living with you? | How old was he/she when he/she died? IF "1 YEAR", PROBE: How many months old was (NAME)? RECORD DAYS IF LESS THAN 1 MONTH, MONTHS IF LESS THAN TWO YEARS, OR YEARS. |

| | | | | | | | |
|-----------------------|----------------------|---------------------|--|-------------------------------|--|--|--|
| 08 _____ (NAME) | SING...1 MULT...2 | BOY...1 GIRL...2 | MONTH.. YEAR... <input type="text"/> <input type="text"/> | YES...1 NO...2 ↓ 223 | AGE IN YEARS <input type="text"/> <input type="text"/> | YES.....1 NO.....2 ↓ (GO TO NEXT BIRTH) | DAYS...1 MONTHS..2 YEARS...3 <input type="text"/> <input type="text"/> <input type="text"/> |
| 09 _____ (NAME) | SING...1 MULT...2 | BOY...1 GIRL...2 | MONTH.. YEAR... <input type="text"/> <input type="text"/> | YES...1 NO...2 ↓ 223 | AGE IN YEARS <input type="text"/> <input type="text"/> | YES.....1 NO.....2 ↓ (GO TO NEXT BIRTH) | DAYS...1 MONTHS..2 YEARS...3 <input type="text"/> <input type="text"/> <input type="text"/> |
| 10 _____ (NAME) | SING...1 MULT...2 | BOY...1 GIRL...2 | MONTH.. YEAR... <input type="text"/> <input type="text"/> | YES...1 NO...2 ↓ 223 | AGE IN YEARS <input type="text"/> <input type="text"/> | YES.....1 NO.....2 ↓ (GO TO NEXT BIRTH) | DAYS...1 MONTHS..2 YEARS...3 <input type="text"/> <input type="text"/> <input type="text"/> |
| 11 _____ (NAME) | SING...1 MULT...2 | BOY...1 GIRL...2 | MONTH.. YEAR... <input type="text"/> <input type="text"/> | YES...1 NO...2 ↓ 223 | AGE IN YEARS <input type="text"/> <input type="text"/> | YES.....1 NO.....2 ↓ (GO TO NEXT BIRTH) | DAYS...1 MONTHS..2 YEARS...3 <input type="text"/> <input type="text"/> <input type="text"/> |
| 12 _____ (NAME) | SING...1 MULT...2 | BOY...1 GIRL...2 | MONTH.. YEAR... <input type="text"/> <input type="text"/> | YES...1 NO...2 ↓ 223 | AGE IN YEARS <input type="text"/> <input type="text"/> | YES.....1 NO.....2 ↓ (GO TO NEXT BIRTH) | DAYS...1 MONTHS..2 YEARS...3 <input type="text"/> <input type="text"/> <input type="text"/> |

224 COMPARE 208 WITH NUMBER OF BIRTHS IN HISTORY ABOVE AND MARK:

NUMBERS ARE SAME NUMBERS ARE DIFFERENT (PROBE AND RECONCILE)

CHECK: FOR EACH BIRTH: YEAR OF BIRTH IS RECORDED.
FOR EACH LIVING CHILD: CURRENT AGE IS RECORDED.
FOR EACH DEAD CHILD: AGE AT DEATH IS RECORDED.
FOR AGE AT DEATH 12 MONTHS: PROBE TO DETERMINE EXACT NUMBER OF MONTHS.
FOR EACH CALENDAR BIRTH INTERVAL 4 OR 4+ YEARS: EXPLANATION IS GIVEN.

225 CHECK 219 AND ENTER THE NUMBER OF BIRTHS SINCE JANUARY 1989. IF NONE, RECORD '0'.

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP TO |
|-----|--|---|--------------|
| 226 | CHECK 107: CURRENTLY MARRIED <input type="checkbox"/> WIDOWED DIVORCED SEPARATED <input type="checkbox"/> | | →232 |
| 227 | Are you pregnant now? | YES.....1 NO.....2 UNSURE.....8 | →230 |
| 228 | How many months pregnant are you? | MONTHS..... <input type="text"/> | |
| 229 | At the time you became pregnant, did you want to become pregnant <u>then</u> , did you want to wait until <u>later</u> , or did you <u>not want</u> to become pregnant at all? | THEN.....1 LATER.....2 NOT AT ALL.....3 | →232 |
| 230 | Are you currently menstruating? | YES1 NO IN MENOPAUSE.....2 NO IN AMENORRHOEA.....3 NEVER MENSTRUATED.....4 | →232 →301 |
| 231 | When did your last menstrual period start? | MONTH..... <input type="text"/> YEAR..... <input type="text"/> | |
| 232 | How old were you when you experienced your first monthly period? | AGE IN YEARS..... <input type="text"/> | |

SECTION 3. CONTRACEPTION

301

Now I would like to talk about family planning - the various ways or methods that a couple can use to delay or avoid a pregnancy. Which ways or methods have you heard about?

CIRCLE CODE 1 IN 302 FOR EACH METHOD MENTIONED SPONTANEOUSLY.
 THEN PROCEED DOWN THE COLUMN, READING THE NAME AND DESCRIPTION OF EACH METHOD NOT MENTIONED SPONTANEOUSLY.
 CIRCLE CODE 2 IF METHOD IS RECOGNIZED, AND CODE 3 IF NOT RECOGNIZED.
 THEN, FOR EACH METHOD WITH CODE 1 OR 2 CIRCLED IN 302, ASK 303-304 BEFORE PROCEEDING TO THE NEXT METHOD.

| | 302 Have you ever heard of (METHOD)? READ DESCRIPTION OF EACH METHOD. | 303 Have you ever used (METHOD)? | 304 Do you know where a person could go to get (METHOD)? |
|--|---|--|---|
| 01 <u>Pill</u> Women can take a pill every day. | YES/SPONTANEOUS.....1 YES/PROBED.....2 NO.....3 | YES.....1 NO.....2 | YES.....1 NO.....2 |
| 02 <u>Loop or Copper I</u> Women can have a loop or coil placed inside them by a doctor or a nurse. | YES/SPONTANEOUS.....1 YES/PROBED.....2 NO.....3 | YES.....1 NO.....2 | YES.....1 NO.....2 |
| 03 <u>Injections</u> Women can have an injection given by a doctor or nurse which stops them from becoming pregnant for several months. | YES/SPONTANEOUS.....1 YES/PROBED.....2 NO.....3 | YES.....1 NO.....2 | YES.....1 NO.....2 |
| 04 <u>Condom or Nirodh</u> Men can use a rubber sheath during sexual intercourse. | YES/SPONTANEOUS.....1 YES/PROBED.....2 NO.....3 | YES.....1 NO.....2 | YES.....1 NO.....2 |
| 05 <u>Female sterilization</u> Women can have an operation to avoid having any more children. | YES/SPONTANEOUS.....1 YES/PROBED.....2 NO.....3 | Have you ever had an operation to avoid having any more children? YES.....1 NO.....2 | YES.....1 NO.....2 |

| | 302 | 303 | 304 |
|---|--|--|---|
| | Have you ever heard of (METHOD)? READ DESCRIPTION OF EACH METHOD. | Have you ever used (METHOD)? | Do you know where a person could go to get (METHOD)? |
| 06 | YES/SPONTANEOUS.....1 YES/PROBED.....2 NO.....3 <u>Male sterilization</u> Men can have an operation to avoid having any more children. | Has your husband ever had an operation to avoid having any more children? YES.....1 NO.....2 | YES.....1 NO.....2 |
| 07 | YES/SPONTANEOUS.....1 YES/PROBED.....2 NO.....3 <u>Rhythm or Periodic abstinence</u> Couples can avoid having sexual intercourse on certain days of the month when the woman is more likely to become pregnant. | YES.....1 NO.....2 | Do you know where a person can obtain advice on how to practice periodic abstinence? YES.....1 NO.....2 |
| 08 | YES/SPONTANEOUS.....1 YES/PROBED.....2 NO.....3 <u>Withdrawal</u> Men can be careful and pull out before climax. | YES.....1 NO.....2 | |
| 09 | YES/SPONTANEOUS.....1 NO.....3 Have you heard of any other ways or methods that women or men can use to avoid pregnancy? 1 _____ (SPECIFY) 2 _____ (SPECIFY) 3 _____ (SPECIFY) | YES.....1 NO.....2 YES.....1 NO.....2 YES.....1 NO.....2 | |
| 305 CHECK 303: NOT A SINGLE "YES" (NEVER USED) <input type="checkbox"/> AT LEAST ONE "YES" (EVER USED) <input type="checkbox"/> → SKIP TO 308 | | | |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP TO |
|-----|---|--|---------|
| 306 | Have you ever used anything or tried in any way to delay or avoid getting pregnant? | YES..... <input type="checkbox"/> NO..... <input type="checkbox"/> | →344 |
| 307 | What have you used or done? CORRECT 303-305 (AND 302 IF NECESSARY). | | |
| 308 | Now I would like to ask you about the time when you first did something or used a method to avoid getting pregnant. How many living children did you have at that time, if any? IF NONE, RECCRD '00'. | NUMBER OF CHILDREN..... <input type="text"/> <input type="text"/> | |
| 309 | CHECK 107: | CURRENTLY MARRIED <input type="checkbox"/> WIDOWED DIVORCED SEPARATED <input type="checkbox"/> | →352 |
| 310 | CHECK 227: | NOT PREGNANT OR UNSURE <input type="checkbox"/> PREGNANT <input type="checkbox"/> | →345 |
| 311 | CHECK 303: | NEITHER STERILIZED <input type="checkbox"/> HE OR SHE STERILIZED <input type="checkbox"/> | →313A |
| 312 | Are you or your husband currently doing something or using any method to delay or avoid getting pregnant? | YES.....1 NO.....2 | →342 |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP TO |
|------|---|--|------------|
| 313 | Which method are you using? | PILL.....01 LOOP/COPPER T.....02 → 321 INJECTION.....03 → 328 CONDOM/NIRODH.....04 → 330 FEMALE STERILIZATION.....05 MALE STERILIZATION.....06 → 332 RHYTHM/PERIODIC ABSTINENCE.....07 WITHDRAWAL.....08 → 341 OTHER.....09 (SPECIFY) | |
| 313A | CIRCLE '05' FOR FEMALE STERILIZATION. CIRCLE '06' FOR MALE STERILIZATION. | | |
| 314 | For how many months have you been using the pill continuously? IF LESS THAN 1 MONTH, RECORD '00'. | MONTHS..... <input type="text"/> <input type="text"/> 8 YEARS OR LONGER.....96 | |
| 315 | At the time you first started using the pill, did you consult a doctor or a nurse ? | YES.....1 NO.....2 | |
| 316 | Once you started using the pill, did a health worker come to visit you for a follow-up related to your use of the pill? | YES.....1 NO.....2 | |
| 317 | Once you started using the pill, did you go to consult a medical or health person about your experience with the use of the pill? | YES.....1 NO.....2 | |
| 318 | Have you had any problems with the use of the pill? | YES.....1 NO.....2 → 320 | |
| 319 | What problems have you had? RECORD ALL PROBLEMS MENTIONED. | CRAMPS.....A WEIGHT GAIN.....B DIZZINESS.....C BODY ACHE.....D SPOTTING/BLEEDING.....E WHITE DISCHARGE.....F BREAST TENDERNESS.....G NAUSEA/VOMITING.....H CANCER.....I ALLERGY.....J HEADACHE.....K OTHER.....L (SPECIFY) | |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP TO |
|-----|--|--|---------|
| 320 | <p>Where did you obtain the pills the last time?</p> <p>_____</p> <p>(NAME OF HOSPITAL IF CODE 11 OR 21)</p> | <p>PUBLIC SECTOR</p> <p>GOVT./MUNICIPAL HOSPITAL.....11</p> <p>PRIMARY HEALTH CENTRE.....12</p> <p>SUB-CENTRE.....13</p> <p>FAMILY PLANNING CLINIC.....14</p> <p>MOBILE CLINIC.....15</p> <p>GOVERNMENT PARAMEDIC.....16</p> <p>PRIVATE MEDICAL SECTOR</p> <p>PRIVATE HOSPITAL OR CLINIC....21</p> <p>PHARMACY/DRUGSTORE.....22</p> <p>PRIVATE DOCTOR.....23</p> <p>MOBILE CLINIC.....24</p> <p>FIELD WORKER.....25</p> <p>OTHER PRIVATE SECTOR</p> <p>SHOP.....31</p> <p>FRIENDS/RELATIVES.....32</p> <p>OTHER _____41</p> <p>(SPECIFY)</p> | 352 |
| 321 | <p>Who inserted the (LOOP/COPPER T)?</p> | <p>GOVERNMENT DOCTOR.....1</p> <p>GOVERNMENT PARAMEDIC.....2</p> <p>PRIVATE DOCTOR.....3</p> <p>PRIVATE NURSE.....4</p> | |
| 322 | <p>Where did you obtain the (LOOP/COPPER T)?</p> <p>_____</p> <p>(NAME OF HOSPITAL IF CODE 11 OR 21)</p> | <p>PUBLIC SECTOR</p> <p>GOVT./MUNICIPAL HOSPITAL.....11</p> <p>PRIMARY HEALTH CENTRE.....12</p> <p>SUB-CENTRE.....13</p> <p>FAMILY PLANNING CLINIC.....14</p> <p>MOBILE CLINIC.....15</p> <p>GOVERNMENT PARAMEDIC.....16</p> <p>PRIVATE MEDICAL SECTOR</p> <p>PRIVATE HOSPITAL OR CLINIC....21</p> <p>PRIVATE DOCTOR.....22</p> <p>MOBILE CLINIC.....23</p> <p>OTHER _____31</p> <p>(SPECIFY)</p> | |
| 323 | <p>For how many months have you been using the (LOOP/COPPER T) continuously?</p> <p>IF LESS THAN 1 MONTH, RECORD '00'.</p> | <p>MONTHS..... <input type="text"/> <input type="text"/></p> <p>8 YEARS OR LONGER.....96</p> | |
| 324 | <p>Since the (LOOP/COPPER T) was inserted, did any health worker visit you for follow-up related to use of the (LOOP/COPPER T)?</p> | <p>YES.....1</p> <p>NO.....2</p> | |
| 325 | <p>After the (LOOP/COPPER T) was inserted, did you go to consult a medical or health person about your experience with the use of the (LOOP/COPPER T)?</p> | <p>YES.....1</p> <p>NO.....2</p> | |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP TO |
|-----|---|---|---------|
| 326 | <p>Have you had any problems with the use of the (LOOP/COPPER T)?</p> | <p>YES.....1 NO.....2</p> | 352 |
| 327 | <p>What problems have you had? RECORD ALL PROBLEMS MENTIONED</p> | <p>CRAMPS.....A BACKACHE.....B IRREGULAR PERIODS.....C EXCESSIVE BLEEDING.....D WEAKNESS/INABILITY TO WORK.....E EXPULSION.....F OTHER _____ G (SPECIFY)</p> | 352 |
| 328 | <p>For how many months have you been using injections continuously? IF LESS THAN 1 MONTH, RECORD '00'.</p> | <p>MONTHS..... <input type="text"/> <input type="text"/> 8 YEARS OR LONGER.....96</p> | |
| 329 | <p>Where did you obtain the injection the last time? _____ (NAME OF HOSPITAL IF CODE 11 OR 21)</p> | <p>PUBLIC SECTOR GOVT./MUNICIPAL HOSPITAL.....11 PRIMARY HEALTH CENTRE.....12 SUB-CENTRE.....13 FAMILY PLANNING CLINIC.....14 MOBILE CLINIC.....15 GOVERNMENT PARAMEDIC.....16 PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL OR CLINIC....21 PRIVATE DOCTOR.....22 MOBILE CLINIC.....23 OTHER _____ 31 (SPECIFY)</p> | 352 |
| 330 | <p>For how many months have you been using (condoms/Nirodhs) continuously? IF LESS THAN 1 MONTH, RECORD '00'.</p> | <p>MONTHS..... <input type="text"/> <input type="text"/> 8 YEARS OR LONGER.....96</p> | |
| 331 | <p>Where did you obtain the (condoms/Nirodhs) the last time? _____ (NAME OF HOSPITAL IF CODE 11 OR 21)</p> | <p>PUBLIC SECTOR GOVT./MUNICIPAL HOSPITAL.....11 PRIMARY HEALTH CENTRE.....12 SUB-CENTRE.....13 FAMILY PLANNING CLINIC.....14 MOBILE CLINIC.....15 GOVERNMENT PARAMEDIC.....16 PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL OR CLINIC....21 PHARMACY/DRUGSTORE.....22 PRIVATE DOCTOR.....23 MOBILE CLINIC.....24 FIELD WORKER.....25 OTHER PRIVATE SECTOR SHOP.....31 HUSBAND.....32 FRIENDS/RELATIVES.....33 OTHER _____ 41 (SPECIFY) DK.....98</p> | 352 |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP TO | | | | | | | | |
|-----|---|--|---------|--|--|--|--|--|--|--|------|
| 332 | In what month and year was the sterilization operation performed? | MONTH..... <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table> YEAR..... <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table> DK.....9998 | | | | | | | | | →334 |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| 333 | How long ago were (you/your husband) sterilized? | MONTHS AGO.....1 <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table> YEARS AGO.....2 <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table> | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| 334 | Where did (you/your husband) obtain the sterilization? _____ (NAME OF HOSPITAL IF CODE 11 OR 21) | PUBLIC SECTOR GOVT./MUNICIPAL HOSPITAL.....11 PRIMARY HEALTH CENTRE.....12 FAMILY PLANNING CLINIC.....14 MOBILE CLINIC.....15 CAMP.....16 PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL OR CLINIC....21 PRIVATE DOCTOR.....22 MOBILE CLINIC.....23 OTHER _____ 31 (SPECIFY) | | | | | | | | | |
| 335 | How would you rate the care (you/he) received during or immediately after the operation: excellent, very good, alright, not so good, or very bad? | EXCELLENT.....1 VERY GOOD.....2 ALLRIGHT.....3 NOT SO GOOD.....4 VERY BAD.....5 DK.....8 | | | | | | | | | |
| 336 | Since the sterilization, has any health worker come to visit (you/your husband) for follow-up related to the sterilization? | YES.....1 NO.....2 DK.....8 | →338 | | | | | | | | |
| 337 | How would you rate the follow-up care services for the sterilization: excellent, very good, alright, not so good, or very bad? | EXCELLENT.....1 VERY GOOD.....2 ALLRIGHT.....3 NOT SO GOOD.....4 VERY BAD.....5 DK.....8 | | | | | | | | | |
| 338 | After the sterilization, did (you/your husband) go to consult a medical or health person about the sterilization? | YES.....1 NO.....2 DK.....8 | | | | | | | | | |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP TO |
|-----|--|--|---------|
| 339 | (Have you/Has your husband) had any problems as a result of the sterilization (operation)? | YES.....1 NO.....2 | 352 |
| 340 | What problems (have you/has he) had? RECORD ALL PROBLEMS MENTIONED | FEVER.....A PAIN/BACKACHE.....B SEPSIS.....C WEAKNESS/INABILITY TO WORK.....D FAILURE/GOT PREGNANT.....E LOSS OF SEXUAL POWER.....F OTHER.....G (SPECIFY) | 352 |
| 341 | For how many months have you been using (CURRENT METHOD) continuously? IF LESS THAN 1 MONTH, RECORD '00'. | MONTHS..... 8 YEARS OR LONGER.....96 | 350 |
| 342 | What is the main reason you stopped using family planning? | METHOD FAILED/GOT PREGNANT.....01 LACK OF SEXUAL SATISFACTION.....02 CREATED MENSTRUAL PROBLEM.....03 CREATED HEALTH PROBLEM.....04 INCONVENIENT TO USE.....05 HARD TO GET METHOD.....06 PUT ON WEIGHT.....07 DID NOT LIKE THE METHOD.....08 WANTED TO HAVE A CHILD.....09 WANTED TO REPLACE DEAD CHILD...10 LACK OF PRIVACY FOR USE.....11 OTHER.....12 (SPECIFY) | 345 |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP TO | | | | | |
|----------------------|--|---|--------------------------|----------------------|--------------------------|----------------------------------|--------------------------|------|
| 343 | What was the outcome of that pregnancy? | INDUCED ABORTION.....1 SPONTANEOUS ABORTION.....2 STILLBIRTH.....3 LIVE BIRTH.....4 | | | | | | |
| 344 | CHECK 107: | <table border="0"> <tr> <td>CURRENTLY MARRIED</td> <td><input type="checkbox"/></td> <td>WIDOWED DIVORCED SEPARATED</td> <td><input type="checkbox"/></td> <td>→352</td> </tr> </table> | | CURRENTLY MARRIED | <input type="checkbox"/> | WIDOWED DIVORCED SEPARATED | <input type="checkbox"/> | →352 |
| CURRENTLY MARRIED | <input type="checkbox"/> | WIDOWED DIVORCED SEPARATED | <input type="checkbox"/> | →352 | | | | |
| 345 | Do you intend to use a method to delay or avoid pregnancy at any time in the future? | YES.....1 →347 NO.....2 DK.....8 →352 | | | | | | |
| 346 | What is the main reason you do not intend to use a method? | WANTS CHILDREN.....01 WANTS A SON.....02 WANTS A DAUGHTER.....19 LACK OF KNOWLEDGE.....03 AFRAID OF STERILIZATION.....04 CAN'T WORK AFTER STERILIZATION.....05 COST TOO MUCH.....06 WORRY ABOUT SIDE EFFECTS.....07 HARD TO GET METHODS.....08 AGAINST RELIGION.....09 →350 OPPOSED TO FAMILY PLANNING.....10 HUSBAND OPPOSED.....11 OTHER PEOPLE OPPOSED.....12 DIFFICULT TO GET PREGNANT.....13 HEALTH DOES NOT PERMIT.....14 MENOPAUSAL/HAD HYSTERECTOMY.....15 INCONVENIENT.....16 DON'T LIKE EXISTING METHODS.....17 OTHER.....18 (SPECIFY) | | | | | | |
| 347 | Do you intend to use a method within the next 12 months? | YES.....1 NO.....2 DK.....8 | | | | | | |
| 348 | When you use a method, which method would you prefer to use? | PILL.....01 LOOP/COPPER T.....02 INJECTION.....03 CONDOM/DIAPHRAGM.....04 FEMALE STERILIZATION.....05 MALE STERILIZATION.....06 RHYTHM/PERIODIC ABSTINENCE.....07 WITHDRAWAL.....08 OTHER.....09 →350 (SPECIFY) UNSURE.....98 | | | | | | |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP TO |
|-----|--|---|---------|
| 349 | Where can you get (METHOD MENTIONED IN 348)? | PUBLIC SECTOR GOVT./MUNICIPAL HOSPITAL.....11 PRIMARY HEALTH CENTRE.....12 SUB-CENTRE.....13 FAMILY PLANNING CLINIC.....14 MOBILE CLINIC.....15 GOVERNMENT PARAMEDIC.....16 PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL OR CLINIC....21 PHARMACY/DRUGSTORE.....22 PRIVATE DOCTOR.....23 MOBILE CLINIC.....24 FIELD WORKER.....25 OTHER PRIVATE SECTOR SHOP.....31 FRIENDS/RELATIVES.....32 OTHER.....41 (SPECIFY) DK.....98 | 352 |
| | (NAME OF HOSPITAL IF CODE 11 OR 21) | | |
| 350 | Do you know of a place where you can obtain a method of family planning? | YES.....1 NO.....2 | 352 |
| 351 | Where is that? | PUBLIC SECTOR GOVT./MUNICIPAL HOSPITAL.....11 PRIMARY HEALTH CENTRE.....12 SUB-CENTRE.....13 FAMILY PLANNING CLINIC.....14 MOBILE CLINIC.....15 GOVERNMENT PARAMEDIC.....16 PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL OR CLINIC....21 PHARMACY/DRUGSTORE.....22 PRIVATE DOCTOR.....23 MOBILE CLINIC.....24 FIELD WORKER.....25 OTHER PRIVATE SECTOR SHOP.....31 FRIENDS/RELATIVES.....32 OTHER.....41 (SPECIFY) | |
| | (NAME OF HOSPITAL IF CODE 11 OR 21) | | |
| 352 | In the last month, have you heard a message about family planning on: the radio? television? | YES NO RADIO.....1 2 TELEVISION.....1 2 | |
| 353 | Is it acceptable or not acceptable to you for family planning information to be provided on the radio or television? | ACCEPTABLE.....1 NOT ACCEPTABLE.....2 DK.....8 | |

SECTION 4A. PREGNANCY AND BREASTFEEDING

401 CHECK 225:
 ONE OR MORE BIRTHS SINCE JAN. 1989 NO BIRTHS SINCE JAN. 1989 (SKIP TO 501)

402 ENTER THE LINE NUMBER, NAME, AND SURVIVAL STATUS OF EACH BIRTH SINCE JANUARY 1989 IN THE TABLE. ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS. BEGIN WITH THE LAST BIRTH. (IF THERE ARE MORE THAN 3 BIRTHS, RECORD ONLY THE LAST 3 BIRTHS).

Now I would like to ask you some more questions about the health of all your children born in the past four years. (We will talk about one child at a time.)

| | | | |
|-------------------------|----------------------|----------------------|----------------------|
| LINE NUMBER FROM Q. 216 | <input type="text"/> | <input type="text"/> | <input type="text"/> |
|-------------------------|----------------------|----------------------|----------------------|

| FROM Q. 216 AND Q. 220 | LAST BIRTH NAME <input type="text"/> ALIVE <input type="checkbox"/> DEAD <input type="checkbox"/> | NEXT-TO-LAST BIRTH NAME <input type="text"/> ALIVE <input type="checkbox"/> DEAD <input type="checkbox"/> | SECOND-FROM-LAST BIRTH NAME <input type="text"/> ALIVE <input type="checkbox"/> DEAD <input type="checkbox"/> |
|------------------------|---|---|---|
|------------------------|---|---|---|

403

At the time you became pregnant with (NAME), did you want to become pregnant then, did you want to wait until later or did you want no (more) children at all?

| | | |
|---------------------------------|---------------------------------|---------------------------------|
| THEN.....1 (SKIP TO 405)← | THEN.....1 (SKIP TO 405)← | THEN.....1 (SKIP TO 405)← |
| LATER.....2 | LATER.....2 | LATER.....2 |
| NO MORE.....3 (SKIP TO 405)← | NO MORE.....3 (SKIP TO 405)← | NO MORE.....3 (SKIP TO 405)← |

404

How much longer would you like to have waited?

| | | |
|-----------------------------------|-----------------------------------|-----------------------------------|
| MONTHS.....1 <input type="text"/> | MONTHS.....1 <input type="text"/> | MONTHS.....1 <input type="text"/> |
| YEARS.....2 <input type="text"/> | YEARS.....2 <input type="text"/> | YEARS.....2 <input type="text"/> |
| DK.....998 | DK.....998 | DK.....998 |

405

When you were pregnant with (NAME), did any health worker visit you at home for an antenatal check-up?

| | | |
|----------------------------|----------------------------|----------------------------|
| YES.....1 | YES.....1 | YES.....1 |
| NO.....2 (SKIP TO 408)← | NO.....2 (SKIP TO 408)← | NO.....2 (SKIP TO 408)← |

406

How many months pregnant were you when a health worker first visited you?

| | | |
|----------------------------------|----------------------------------|----------------------------------|
| MONTHS..... <input type="text"/> | MONTHS..... <input type="text"/> | MONTHS..... <input type="text"/> |
|----------------------------------|----------------------------------|----------------------------------|

| | NAME _____ LAST BIRTH | NAME _____ NEXT-TO-LAST BIRTH | NAME _____ SECOND-FROM-LAST BIRTH |
|-----|--|---|---|
| 407 | How many times did she visit you? NO. OF VISITS..... <input type="text"/> | NO. OF VISITS..... <input type="text"/> | NO. OF VISITS..... <input type="text"/> |
| 408 | When you were pregnant with (NAME), did you go for an antenatal check-up? YES.....1 NO.....2 (SKIP TO 412)← | YES.....1 NO.....2 (SKIP TO 412)← | YES.....1 NO.....2 (SKIP TO 412)← |
| 409 | Whom did you see? Anyone else? RECORD ALL PERSONS SEEN. HEALTH PROFESSIONAL DOCTOR.....A AYURVEDIC DOCTOR/VAID...B HOMEOPATH.....C NURSE/MIDWIFE.....D OTHER HEALTH PROFFSNL...E OTHER PERSON TRAINED (TRADITIONAL) BIRTH ATTENDANT.....F TRADITIONAL BIRTH ATTENDANT.....G HAKIM.....H OTHER.....I (SPECIFY) | HEALTH PROFESSIONAL DOCTOR.....A AYURVEDIC DOCTOR/VAID...B HOMEOPATH.....C NURSE/MIDWIFE.....D OTHER HEALTH PROFFSNL...E OTHER PERSON TRAINED (TRADITIONAL) BIRTH ATTENDANT.....F TRADITIONAL BIRTH ATTENDANT.....G HAKIM.....H OTHER.....I (SPECIFY) | HEALTH PROFESSIONAL DOCTOR.....A AYURVEDIC DOCTOR/VAID...B HOMEOPATH.....C NURSE/MIDWIFE.....D OTHER HEALTH PROFFSNL...E OTHER PERSON TRAINED (TRADITIONAL) BIRTH ATTENDANT.....F TRADITIONAL BIRTH ATTENDANT.....G HAKIM.....H OTHER.....I (SPECIFY) |
| 410 | How many months pregnant were you when you first went for an antenatal check-up? MONTHS..... <input type="text"/> | MONTHS..... <input type="text"/> | MONTHS..... <input type="text"/> |
| 411 | How many times did you go for an antenatal check-up? NO. OF TIMES..... <input type="text"/> (SKIP TO 413)← | NO. OF TIMES..... <input type="text"/> (SKIP TO 413)← | NO. OF TIMES..... <input type="text"/> (SKIP TO 413)← |
| 412 | What is the main reason you did not go for an antenatal check-up? LACK OF KNOWLEDGE OF SERVICES.....01 NOT NECESSARY.....02 NOT CUSTOMARY.....03 FINANCIAL COST.....04 INCONVENIENT.....05 POOR QUALITY SERVICE...06 HEALTH STAFF VISIT AT HOME.....07 NO TIME TO GO.....08 NOT PERMITTED TO GO.....09 OTHER.....10 (SPECIFY) | LACK OF KNOWLEDGE OF SERVICES.....01 NOT NECESSARY.....02 NOT CUSTOMARY.....03 FINANCIAL COST.....04 INCONVENIENT.....05 POOR QUALITY SERVICE...06 HEALTH STAFF VISIT AT HOME.....07 NO TIME TO GO.....08 NOT PERMITTED TO GO.....09 OTHER.....10 (SPECIFY) | LACK OF KNOWLEDGE OF SERVICES.....01 NOT NECESSARY.....02 NOT CUSTOMARY.....03 FINANCIAL COST.....04 INCONVENIENT.....05 POOR QUALITY SERVICE...06 HEALTH STAFF VISIT AT HOME.....07 NO TIME TO GO.....08 NOT PERMITTED TO GO.....09 OTHER.....10 (SPECIFY) |

| | NAME _____ LAST BIRTH | NAME _____ NEXT-TO-LAST BIRTH | NAME _____ SECOND-FROM-LAST BIRTH |
|-----|--|---|---|
| 413 | <p>Were you given any iron folic tablets during this pregnancy?</p> <p>YES.....1 NO.....2</p> | <p>YES.....1 NO.....2</p> | <p>YES.....1 NO.....2</p> |
| 414 | <p>When you were pregnant with (NAME), were you given an injection in the arm to prevent you and the baby from getting tetanus, that is, convulsions?</p> <p>YES.....1 NO.....2 (SKIP TO 416)← DK.....8</p> | <p>YES.....1 NO.....2 (SKIP TO 416)← DK.....8</p> | <p>YES.....1 NO.....2 (SKIP TO 416)← DK.....8</p> |
| 415 | <p>During this pregnancy how many times did you get this injection?</p> <p>TIMES..... <input type="text"/> DK.....8</p> | <p>TIMES..... <input type="text"/> DK.....8</p> | <p>TIMES..... <input type="text"/> DK.....8</p> |
| 416 | <p>Where did you give birth to (NAME)?</p> <p>HOME YOUR HOME.....11 PARENTS' HOME.....12 OTHER HOME.....13</p> <p>PUBLIC SECTOR GVT./MUNICIPAL HOSPITAL..21 PRIMARY HEALTH CENTRE..22 SUB-CENTRE.....23</p> <p>PRIVATE SECTOR PRIVATE HOSPITAL/ CLINIC/MATERNITY HOME..31 OTHER.....41 (SPECIFY)</p> | <p>HOME YOUR HOME.....11 PARENTS' HOME.....12 OTHER HOME.....13</p> <p>PUBLIC SECTOR GVT./MUNICIPAL HOSPITAL..21 PRIMARY HEALTH CENTRE..22 SUB-CENTRE.....23</p> <p>PRIVATE SECTOR PRIVATE HOSPITAL/ CLINIC/MATERNITY HOME..31 OTHER.....41 (SPECIFY)</p> | <p>HOME YOUR HOME.....11 PARENTS' HOME.....12 OTHER HOME.....13</p> <p>PUBLIC SECTOR GVT./MUNICIPAL HOSPITAL..21 PRIMARY HEALTH CENTRE..22 SUB-CENTRE.....23</p> <p>PRIVATE SECTOR PRIVATE HOSPITAL/ CLINIC/MATERNITY HOME..31 OTHER.....41 (SPECIFY)</p> |

| | LAST BIRTH NAME _____ | NEXT-TO-LAST BIRTH NAME _____ | SECOND-FROM-LAST BIRTH NAME _____ | |
|-----|--|--|--|--|
| 417 | <p>Who assisted with the delivery of (NAME)?</p> <p>Anyone else?</p> <p>PROBE FOR THE TYPE OF PERSON AND RECORD ALL PERSONS ASSISTING.</p> | <p>HEALTH PROFESSIONAL</p> <p>DOCTOR.....A</p> <p>AYURVEDIC DOCTOR/VAID...B</p> <p>NURSE/MIDWIFE.....C</p> <p>ANM/LHV.....D</p> <p>OTHER PERSON</p> <p>TRAINED (TRADITIONAL) BIRTH ATTENDANT.....E</p> <p>TRADITIONAL BIRTH ATTENDANT.....F</p> <p>RELATIVE/FRIEND.....G</p> <p>OTHER.....H</p> <p>(SPECIFY)</p> <p>NO ONE.....I</p> | <p>HEALTH PROFESSIONAL</p> <p>DOCTOR.....A</p> <p>AYURVEDIC DOCTOR/VAID...B</p> <p>NURSE/MIDWIFE.....C</p> <p>ANM/LHV.....D</p> <p>OTHER PERSON</p> <p>TRAINED (TRADITIONAL) BIRTH ATTENDANT.....E</p> <p>TRADITIONAL BIRTH ATTENDANT.....F</p> <p>RELATIVE/FRIEND.....G</p> <p>OTHER.....H</p> <p>(SPECIFY)</p> <p>NO ONE.....I</p> | <p>HEALTH PROFESSIONAL</p> <p>DOCTOR.....A</p> <p>AYURVEDIC DOCTOR/VAID...B</p> <p>NURSE/MIDWIFE.....C</p> <p>ANM/LHV.....D</p> <p>OTHER PERSON</p> <p>TRAINED (TRADITIONAL) BIRTH ATTENDANT.....E</p> <p>TRADITIONAL BIRTH ATTENDANT.....F</p> <p>RELATIVE/FRIEND.....G</p> <p>OTHER.....H</p> <p>(SPECIFY)</p> <p>NO ONE.....I</p> |
| 418 | <p>Was (NAME) born on time or prematurely?</p> | <p>ON TIME.....1</p> <p>PREMATURELY.....2</p> <p>DK.....8</p> | <p>ON TIME.....1</p> <p>PREMATURELY.....2</p> <p>DK.....8</p> | <p>ON TIME.....1</p> <p>PREMATURELY.....2</p> <p>DK.....8</p> |
| 419 | <p>Were there any complications in the delivery of (NAME)?</p> | <p>YES.....1</p> <p>NO.....2</p> <p>(SKIP TO 421)←</p> | <p>YES.....1</p> <p>NO.....2</p> <p>(SKIP TO 421)←</p> | <p>YES.....1</p> <p>NO.....2</p> <p>(SKIP TO 421)←</p> |
| 420 | <p>What were the complications?</p> <p>RECORD ALL MENTIONED.</p> | <p>CAESARIAN SECTION.....A</p> <p>USE OF FORCEPS.....B</p> <p>EXCESSIVE BLEEDING.....C</p> <p>LONG PERIOD OF LABOR.....D</p> <p>DELAYED DELIVERY OF PLACENTA.....E</p> <p>OTHER.....F</p> <p>(SPECIFY)</p> | <p>CAESARIAN SECTION.....A</p> <p>USE OF FORCEPS.....B</p> <p>EXCESSIVE BLEEDING.....C</p> <p>LONG PERIOD OF LABOR.....D</p> <p>DELAYED DELIVERY OF PLACENTA.....E</p> <p>OTHER.....F</p> <p>(SPECIFY)</p> | <p>CAESARIAN SECTION.....A</p> <p>USE OF FORCEPS.....B</p> <p>EXCESSIVE BLEEDING.....C</p> <p>LONG PERIOD OF LABOR.....D</p> <p>DELAYED DELIVERY OF PLACENTA.....E</p> <p>OTHER.....F</p> <p>(SPECIFY)</p> |
| 421 | <p>When (NAME) was born, was he/she: large, average or small?</p> | <p>LARGE.....1</p> <p>AVERAGE.....2</p> <p>SMALL.....3</p> <p>DK.....8</p> | <p>LARGE.....1</p> <p>AVERAGE.....2</p> <p>SMALL.....3</p> <p>DK.....8</p> | <p>LARGE.....1</p> <p>AVERAGE.....2</p> <p>SMALL.....3</p> <p>DK.....8</p> |
| 422 | <p>Was (NAME) weighed at birth?</p> | <p>YES.....1</p> <p>NO.....2</p> <p>(SKIP TO 424)←</p> | <p>YES.....1</p> <p>NO.....2</p> <p>(SKIP TO 425)←</p> | <p>YES.....1</p> <p>NO.....2</p> <p>(SKIP TO 425)←</p> |

| | LAST BIRTH NAME _____ | NEXT-TO-LAST BIRTH NAME _____ | SECOND-FROM-LAST BIRTH NAME _____ |
|-----|--|--|--|
| 423 | <p>How much did (NAME) weigh?</p> <p>GRAMS.....1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p> <p>POUNDS OUNCES</p> <p>POUNDS....2 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p> <p>DK.....99998</p> | <p>GRAMS.....1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p> <p>POUNDS OUNCES</p> <p>POUNDS....2 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p> <p>DK.....99998</p> | <p>GRAMS.....1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p> <p>POUNDS OUNCES</p> <p>POUNDS....2 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p> <p>DK.....99998</p> |
| 424 | <p>Has your period returned since the birth of (NAME)?</p> <p>YES1 (SKIP TO 426) ←</p> <p>NO.....2 (SKIP TO 427) ←</p> | | |
| 425 | | <p>YES1</p> <p>NO.....2 (SKIP TO 429) ←</p> | <p>YES1</p> <p>NO.....2 (SKIP TO 429) ←</p> |
| 426 | <p>For how many months after the birth of (NAME) did you <u>not</u> have a period?</p> <p>MONTHS..... <input type="text"/> <input type="text"/></p> <p>DK.....98</p> | <p>MONTHS..... <input type="text"/> <input type="text"/></p> <p>DK.....98</p> | <p>MONTHS..... <input type="text"/> <input type="text"/></p> <p>DK.....98</p> |
| 427 | <p>CHECK 227: RESPONDENT PREGNANT?</p> <p>NOT PREGNANT <input type="checkbox"/></p> <p>PREGNANT OR UNSURE <input type="checkbox"/></p> <p>(SKIP TO 429) ↓</p> | | |
| 428 | <p>Have you resumed sexual relations since the birth of (NAME)?</p> <p>YES.....1</p> <p>NO.....2 (SKIP TO 430) ←</p> | | |
| 429 | <p>For how many months after the birth of (NAME) did you <u>not have</u> sexual relations?</p> <p>MONTHS..... <input type="text"/> <input type="text"/></p> <p>DK.....98</p> | <p>MONTHS..... <input type="text"/> <input type="text"/></p> <p>DK.....98</p> | <p>MONTHS..... <input type="text"/> <input type="text"/></p> <p>DK.....98</p> |

| | LAST BIRTH NAME _____ | NEXT-TO-LAST BIRTH NAME _____ | SECOND-FROM-LAST BIRTH NAME _____ | |
|-----|--|--|--|--|
| 430 | Did you ever breastfeed (NAME)? YES.....1 (SKIP TO 432)← NO.....2 | YES.....1 (SKIP TO 440)← NO.....2 | YES.....1 (SKIP TO 440)← NO.....2 | |
| 431 | Why did you not breastfeed (NAME)? MOTHER ILL/WEAK.....01 CHILD ILL/WEAK.....02 CHILD DIED.....03 NIPPLE/BREAST PROBLEM...04 INSUFFICIENT MILK.....05 MOTHER WORKING.....06 CHILD REFUSED.....07 OTHER.....08 (SPECIFY) (SKIP TO 442)← | MOTHER ILL/WEAK.....01 CHILD ILL/WEAK.....02 CHILD DIED.....03 NIPPLE/BREAST PROBLEM...04 INSUFFICIENT MILK.....05 MOTHER WORKING.....06 CHILD REFUSED.....07 OTHER.....08 (SPECIFY) (SKIP TO 442)← | MOTHER ILL/WEAK.....01 CHILD ILL/WEAK.....02 CHILD DIED.....03 NIPPLE/BREAST PROBLEM...04 INSUFFICIENT MILK.....05 MOTHER WORKING.....06 CHILD REFUSED.....07 OTHER.....08 (SPECIFY) (SKIP TO 442)← | |
| 432 | How long after birth did you first put (NAME) to the breast? IF LESS THAN 1 HOUR, RECORD '00' HOURS. IF LESS THAN 24 HOURS, RECORD HOURS. OTHERWISE, RECORD DAYS. | IMMEDIATELY.....000 HOURS.....1 <input type="text"/> <input type="text"/> DAYS.....2 <input type="text"/> <input type="text"/> | | |
| 433 | Did you squeeze out the milk from the breast before you first put (NAME) to the breast? YES.....1 NO.....2 | | | |
| 434 | CHECK 220: CHILD ALIVE? | ALIVE <input type="checkbox"/> DEAD <input type="checkbox"/> (SKIP TO 440) | | |
| 435 | Are you still breastfeeding (NAME)? YES.....1 NO.....2 (SKIP TO 440)← | | | |
| 436 | How many times did you breastfeed last night between sunset and sunrise? IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE ANSWER. | NUMBER OF NIGHTTIME FEEDINGS <input type="text"/> | | |
| 437 | How many times did you breastfeed yesterday during the daylight hours? IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE ANSWER. | NUMBER OF DAYTIME FEEDINGS <input type="text"/> | | |

| | LAST BIRTH NAME _____ | NEXT-TO-LAST BIRTH NAME _____ | SECOND-FROM-LAST BIRTH NAME _____ |
|--|--------------------------|----------------------------------|--------------------------------------|
|--|--------------------------|----------------------------------|--------------------------------------|

438

At any time yesterday or last night, was (NAME) given any of the following?:

| | YES | NO |
|--------------------------|------------------------|----|
| Plain water? | PLAIN WATER.....1 | 2 |
| Sugar/honey water? | SUGAR/HONEY WATER....1 | 2 |
| Juice? | JUICE.....1 | 2 |
| Tea? | TEA.....1 | 2 |
| Baby formula? | BABY FORMULA.....1 | 2 |
| Fresh milk? | FRESH MILK.....1 | 2 |
| Tinned/powdered milk? | TINNED/POWDERED MILK.1 | 2 |
| Other liquids? | OTHER LIQUIDS.....1 | 2 |
| Any solid or mushy food? | SOLID/MUSHY FOOD.....1 | 2 |

439 CHECK 438:
FOOD OR LIQUID GIVEN
YESTERDAY?

"YES" TO ONE OR MORE

"NO" TO ALL

(SKIP TO 444)

(SKIP TO 443)

440

For how many months did you breastfeed (NAME)?

| MONTHS..... | MONTHS..... | MONTHS..... |
|-------------------------------------|-------------------------------------|-------------------------------------|
| UNTIL DIED.....96 (SKIP TO 443)← | UNTIL DIED.....96 (SKIP TO 443)← | UNTIL DIED.....96 (SKIP TO 443)← |

STILL BREASTFEEDING.....95
(SKIP TO 442)←

441

Why did you stop breastfeeding (NAME)?

| | | |
|------------------------------------|------------------------------------|------------------------------------|
| MOTHER ILL/WEAK.....01 | MOTHER ILL/WEAK.....01 | MOTHER ILL/WEAK.....01 |
| CHILD ILL/WEAK.....02 | CHILD ILL/WEAK.....02 | CHILD ILL/WEAK.....02 |
| CHILD DIED.....03 | CHILD DIED.....03 | CHILD DIED.....03 |
| NIPPLE/BREAST PROBLEM...04 | NIPPLE/BREAST PROBLEM...04 | NIPPLE/BREAST PROBLEM...04 |
| INSUFFICIENT MILK.....05 | INSUFFICIENT MILK.....05 | INSUFFICIENT MILK.....05 |
| MOTHER WORKING.....06 | MOTHER WORKING.....06 | MOTHER WORKING.....06 |
| CHILD REFUSED.....07 | CHILD REFUSED.....07 | CHILD REFUSED.....07 |
| WEANING AGE.....08 | WEANING AGE.....08 | WEANING AGE.....08 |
| BECAME PREGNANT.....09 | BECAME PREGNANT.....09 | BECAME PREGNANT.....09 |
| STARTED USING CONTRACEPTION.....10 | STARTED USING CONTRACEPTION.....10 | STARTED USING CONTRACEPTION.....10 |
| OTHER (SPECIFY).....11 | OTHER (SPECIFY).....11 | OTHER (SPECIFY).....11 |

442 CHECK 220:
CHILD ALIVE?

| | | |
|---|---|---|
| ALIVE <input type="checkbox"/> DEAD <input type="checkbox"/> (SKIP TO 444) | ALIVE <input type="checkbox"/> DEAD <input type="checkbox"/> (SKIP TO 444) | ALIVE <input type="checkbox"/> DEAD <input type="checkbox"/> (SKIP TO 444) |
|---|---|---|

| | NAME | LAST BIRTH | NAME | NEXT-TO-LAST BIRTH | NAME | SECOND-FROM-LAST BIRTH |
|--|--|--|--|--|--|--|
| 443 | | YES.....1 NO.....2 (SKIP TO 447) ← | | YES.....1 NO.....2 (SKIP TO 447) ← | | YES.....1 NO.....2 (SKIP TO 447) ← |
| Was (NAME) ever given water or anything else to drink or eat (other than breastmilk)? | | | | | | |
| 444 | | AGE IN MONTHS..... <input type="text"/> <input type="text"/> NOT GIVEN.....96 | | AGE IN MONTHS..... <input type="text"/> <input type="text"/> NOT GIVEN.....96 | | AGE IN MONTHS..... <input type="text"/> <input type="text"/> NOT GIVEN.....96 |
| How many months old was (NAME) when you started giving the following on a regular basis? | | | | | | |
| Plain water? | | AGE IN MONTHS..... <input type="text"/> <input type="text"/> NOT GIVEN.....96 | AGE IN MONTHS..... <input type="text"/> <input type="text"/> NOT GIVEN.....96 | | AGE IN MONTHS..... <input type="text"/> <input type="text"/> NOT GIVEN.....96 | |
| Formula or milk other than breastmilk? | | AGE IN MONTHS..... <input type="text"/> <input type="text"/> NOT GIVEN.....96 | AGE IN MONTHS..... <input type="text"/> <input type="text"/> NOT GIVEN.....96 | | AGE IN MONTHS..... <input type="text"/> <input type="text"/> NOT GIVEN.....96 | |
| Other liquids? | | AGE IN MONTHS..... <input type="text"/> <input type="text"/> NOT GIVEN.....96 | AGE IN MONTHS..... <input type="text"/> <input type="text"/> NOT GIVEN.....96 | | AGE IN MONTHS..... <input type="text"/> <input type="text"/> NOT GIVEN.....96 | |
| Any solid or mushy food? | | AGE IN MONTHS..... <input type="text"/> <input type="text"/> NOT GIVEN.....96 | AGE IN MONTHS..... <input type="text"/> <input type="text"/> NOT GIVEN.....96 | | AGE IN MONTHS..... <input type="text"/> <input type="text"/> NOT GIVEN.....96 | |
| IF LESS THAN 1 MONTH, RECORD '00'. | | | (SKIP TO 447) | | (SKIP TO 447) | |
| 445 | CHECK 220: CHILD ALIVE? | ALIVE <input type="checkbox"/> ↓ (SKIP TO 447) | DEAD <input type="checkbox"/> ↓ (SKIP TO 447) | | | |
| 446 | Did (NAME) drink anything from a bottle with a nipple yesterday or last night? | YES.....1 NO.....2 DK.....8 | | | | |
| 447 | → GO BACK TO 403 FOR NEXT BIRTH; OR, IF NO MORE BIRTHS, GO TO FIRST COLUMN OF 448. | | | | | |

SECTION 4B. IMMUNIZATION AND HEALTH

448 ENTER THE LINE NUMBER AND NAME OF EACH BIRTH SINCE JANUARY 1989 IN THE TABLE. ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS. BEGIN WITH THE LAST BIRTH. (IF THERE ARE MORE THAN 3 BIRTHS, RECORD ONLY THE LAST 3 BIRTHS).

| | | | |
|----------------------------|-----|-----|-----|
| LINE NUMBER FROM Q. 216 | □ □ | □ □ | □ □ |
|----------------------------|-----|-----|-----|

| | | | |
|---------------------------|--|--|--|
| FROM Q. 216 AND Q. 220 | LAST BIRTH NAME _____ ALIVE <input type="checkbox"/> DEAD <input type="checkbox"/> | NEXT-TO-LAST BIRTH NAME _____ ALIVE <input type="checkbox"/> DEAD <input type="checkbox"/> | SECOND-FROM-LAST BIRTH NAME _____ ALIVE <input type="checkbox"/> DEAD <input type="checkbox"/> |
|---------------------------|--|--|--|

| | | | |
|--|---|---|---|
| 449 Do you have a card where (NAME'S) vaccinations are written down? IF YES: May I see it, please? | YES, SEEN.....1 (SKIP TO 451)← YES, NOT SEEN.....2 (SKIP TO 453)← NO CARD.....3 | YES, SEEN.....1 (SKIP TO 451)← YES, NOT SEEN.....2 (SKIP TO 453)← NO CARD.....3 | YES, SEEN.....1 (SKIP TO 451)← YES, NOT SEEN.....2 (SKIP TO 453)← NO CARD.....3 |
|--|---|---|---|

| | | | |
|--|---|---|---|
| 450 Did you ever have a vaccination card for (NAME)? | YES.....1 (SKIP TO 453)← NO.....2 | YES.....1 (SKIP TO 453)← NO.....2 | YES.....1 (SKIP TO 453)← NO.....2 |
|--|---|---|---|

| | | | |
|---|---|---|---|
| 451 (1) COPY VACCINATION DATES FOR EACH VACCINE FROM THE CARD. (2) WRITE '44' IN 'DAY' COLUMN IF CARD SHOWS THAT A VACCINATION WAS GIVEN, BUT NO DATE RECORDED. | DAY MO YR BCG P0 D1 D2 D3 P1 P2 P3 MEA | DAY MO YR BCG P0 D1 D2 D3 P1 P2 P3 MEA | DAY MO YR BCG P0 D1 D2 D3 P1 P2 P3 MEA |
|---|---|---|---|

| | LAST BIRTH NAME _____ | NEXT-TO-LAST BIRTH NAME _____ | SECOND-FROM-LAST BIRTH NAME _____ | |
|-----|--|--|--|--|
| 452 | <p>Has (NAME) received any vaccinations that are not recorded on this card?</p> <p>RECORD 'YES' ONLY IF RESPONDENT MENTIONS BCG, DPT 1-3, POLIO 0-3 AND/OR MEASLES VACCINE(S).</p> | <p>YES.....1 (PROBE FOR VACCINATIONS AND WRITE '66' IN THE CORRESPONDING DAY COLUMN IN 451) (SKIP TO 455) ←</p> <p>NO.....2 DK.....8 (SKIP TO 455) ←</p> | <p>YES.....1 (PROBE FOR VACCINATIONS AND WRITE '66' IN THE CORRESPONDING DAY COLUMN IN 451) (SKIP TO 455) ←</p> <p>NO.....2 DK.....8 (SKIP TO 455) ←</p> | <p>YES.....1 (PROBE FOR VACCINATIONS AND WRITE '66' IN THE CORRESPONDING DAY COLUMN IN 451) (SKIP TO 455) ←</p> <p>NO.....2 DK.....8 (SKIP TO 455) ←</p> |
| 453 | <p>Did (NAME) ever receive any vaccinations to prevent him/her from getting diseases?</p> | <p>YES.....1 NO.....2 (SKIP TO 455) ← DK.....8</p> | <p>YES.....1 NO.....2 (SKIP TO 455) ← DK.....8</p> | <p>YES.....1 NO.....2 (SKIP TO 455) ← DK.....8</p> |
| 454 | <p>Please tell me if (NAME) (has) received any of the following vaccinations:</p> | | | |
| | <p>A BCG vaccination against tuberculosis, that is, an injection in the left shoulder that caused a scar?</p> | <p>YES.....1 NO.....2 DK.....8</p> | <p>YES.....1 NO.....2 DK.....8</p> | <p>YES.....1 NO.....2 DK.....8</p> |
| | <p>A vaccination against diphtheria, whooping cough and tetanus given as an injection?</p> <p>IF YES: How many times?</p> | <p>NUMBER OF TIMES..... <input type="text"/></p> | <p>NUMBER OF TIMES..... <input type="text"/></p> | <p>NUMBER OF TIMES..... <input type="text"/></p> |
| | <p>Polio vaccine, that is, drops in the mouth?</p> <p>IF YES: How many times?</p> <p>IF YES:</p> | <p>NUMBER OF TIMES..... <input type="text"/></p> | <p>NUMBER OF TIMES..... <input type="text"/></p> | <p>NUMBER OF TIMES..... <input type="text"/></p> |
| | <p>When was the first polio vaccine given -- just after birth or later?</p> | <p>JUST AFTER BIRTH.....1 LATER.....2 DK.....8</p> | <p>JUST AFTER BIRTH.....1 LATER.....2 DK.....8</p> | <p>JUST AFTER BIRTH.....1 LATER.....2 DK.....8</p> |
| | <p>An injection against measles?</p> | <p>YES.....1 NO.....2 DK.....8</p> | <p>YES.....1 NO.....2 DK.....8</p> | <p>YES.....1 NO.....2 DK.....8</p> |

| | LAST BIRTH NAME _____ | NEXT-TO-LAST BIRTH NAME _____ | SECOND-FROM-LAST BIRTH NAME _____ | |
|-----|---|---|---|---|
| 455 | Was a dose of vitamin A liquid ever given to (NAME) to protect him/her from night blindness? YES.....1 NO.....2 DK.....8 | YES.....1 NO.....2 DK.....8 | YES.....1 NO.....2 DK.....8 | |
| 456 | Did (NAME) ever have: Whooping cough? Measles? Polio? Diphtheria? Chicken pox? Rickets? | YES NO WHOOPING COUGH.... 1 2 MEASLES..... 1 2 POLIO..... 1 2 DIPHTHERIA..... 1 2 CHICKEN POX..... 1 2 RICKETS..... 1 2 | YES NO WHOOPING COUGH.... 1 2 MEASLES..... 1 2 POLIO..... 1 2 DIPHTHERIA..... 1 2 CHICKEN POX..... 1 2 RICKETS..... 1 2 | YES NO WHOOPING COUGH.... 1 2 MEASLES..... 1 2 POLIO..... 1 2 DIPHTHERIA..... 1 2 CHICKEN POX..... 1 2 RICKETS..... 1 2 |
| 457 | CHECK 220: CHILD ALIVE? | ALIVE <input type="checkbox"/> DEAD <input type="checkbox"/> (SKIP TO 459) | ALIVE <input type="checkbox"/> DEAD <input type="checkbox"/> (SKIP TO 459) | ALIVE <input type="checkbox"/> DEAD <input type="checkbox"/> (SKIP TO 459) |
| 458 | GO BACK TO 449 FOR NEXT BIRTH; OR, IF NO MORE BIRTHS, SKIP TO 489. | | | |
| 459 | Has (NAME) been ill with a fever at any time in the last 2 weeks? YES.....1 NO.....2 DK.....8 | YES.....1 NO.....2 DK.....8 | YES.....1 NO.....2 DK.....8 | |
| 460 | Has (NAME) been ill with a cough at any time in the last 2 weeks? YES.....1 NO.....2 DK.....8 (SKIP TO 464) ← | YES.....1 NO.....2 DK.....8 (SKIP TO 464) ← | YES.....1 NO.....2 DK.....8 (SKIP TO 464) ← | |
| 461 | Has (NAME) been ill with a cough in the last 24 hours? YES.....1 NO.....2 DK.....8 | YES.....1 NO.....2 DK.....8 | YES.....1 NO.....2 DK.....8 | |

| | LAST BIRTH NAME _____ | NEXT-TO-LAST BIRTH NAME _____ | SECOND-FROM-LAST BIRTH NAME _____ | |
|-----|--|--|--|---|
| 468 | INJECTION.....A ANTIBIOTIC (PILL OR SYRUP).....B ANTIMALARIAL (PILL OR SYRUP).....C COUGH SYRUP.....D OTHER PILL OR SYRUP.....E UNKNOWN PILL OR SYRUP....F HOME REMEDY/ HERBAL MEDICINE.....G OTHER.....H (SPECIFY) | INJECTION.....A ANTIBIOTIC (PILL OR SYRUP).....B ANTIMALARIAL (PILL OR SYRUP).....C COUGH SYRUP.....D OTHER PILL OR SYRUP.....E UNKNOWN PILL OR SYRUP....F HOME REMEDY/ HERBAL MEDICINE.....G OTHER.....H (SPECIFY) | INJECTION.....A ANTIBIOTIC (PILL OR SYRUP).....B ANTIMALARIAL (PILL OR SYRUP).....C COUGH SYRUP.....D OTHER PILL OR SYRUP.....E UNKNOWN PILL OR SYRUP....F HOME REMEDY/ HERBAL MEDICINE.....G OTHER.....H (SPECIFY) | |
| 469 | What was given to treat the fever/cough? Anything else? RECORD ALL MENTIONED. | YES.....1 (SKIP TO 471)← NO.....2 DK.....8 | YES.....1 (SKIP TO 471)← NO.....2 DK.....8 | YES.....1 (SKIP TO 471)← NO.....2 DK.....8 |
| 470 | → GO BACK TO 449 FOR NEXT BIRTH; OR, IF NO MORE BIRTHS, SKIP TO 489. | | | |
| 471 | Has (NAME) had diarrhoea in the last 24 hours? | YES.....1 NO.....2 DK.....8 | YES.....1 NO.....2 DK.....8 | YES.....1 NO.....2 DK.....8 |
| 472 | For how many days (has the diarrhoea lasted/did the diarrhoea last)? IF LESS THAN 1 DAY, RECORD '00' | DAYS..... <input type="text"/> <input type="text"/> | DAYS..... <input type="text"/> <input type="text"/> | DAYS..... <input type="text"/> <input type="text"/> |
| 473 | Was there any blood in the stools? | YES.....1 NO.....2 DK.....8 | YES.....1 NO.....2 DK.....8 (SKIP TO 477) | YES.....1 NO.....2 DK.....8 (SKIP TO 477) |
| 474 | CHECK 430/435: LAST CHILD STILL BREASTFEEDING? | YES <input type="checkbox"/> NO <input type="checkbox"/> ↓ (SKIP TO 477) | | |
| 475 | During (NAME)'s diarrhoea, did you change the frequency of breastfeeding? | YES.....1 NO.....2 (SKIP TO 477)← | | |
| 476 | Did you <u>increase</u> the number of breastfeeds or <u>reduce</u> them, or did you <u>stop completely</u> ? | INCREASED.....1 REDUCED.....2 STOPPED COMPLETELY.....3 | | |

| | NAME _____ LAST BIRTH | NAME _____ NEXT-TO-LAST BIRTH | NAME _____ SECOND-FROM-LAST BIRTH | |
|-----|--|--|--|--|
| 477 | (Aside from breastmilk) Was he/she given the same amount of fluids to drink as before the diarrhoea, or more, or less? | SAME.....1 MORE.....2 LESS.....3 DK.....8 | SAME.....1 MORE.....2 LESS.....3 DK.....8 | |
| 478 | Did you seek advice or treatment for the diarrhoea? | YES.....1 NO.....2 (SKIP TO 480)← | YES.....1 NO.....2 (SKIP TO 480)← | |
| 479 | Where did you seek advice or treatment? Anywhere else? RECORD ALL MENTIONED. | PUBLIC SECTOR GVT/MUNICIPAL HOSPITAL...A PRIMARY HEALTH CENTRE...B SUB-CENTRE.....C MOBILE CLINIC.....D VILLAGE HEALTH GUIDE...E GOVERNMENT PARAMEDIC...F PRIVATE MEDICAL SECTOR PVT. HOSPITAL/CLINIC...G PHARMACY/DRUGSTORE...H PRIVATE DOCTOR.....I MOBILE CLINIC.....J COMMUNITY HEALTH WORKER.K OTHER PRIVATE SECTOR SHOP.....L TRADITIONAL PRACTITIONER.....M OTHER _____ N (SPECIFY) | PUBLIC SECTOR GVT/MUNICIPAL HOSPITAL...A PRIMARY HEALTH CENTRE...B SUB-CENTRE.....C MOBILE CLINIC.....D VILLAGE HEALTH GUIDE...E GOVERNMENT PARAMEDIC...F PRIVATE MEDICAL SECTOR PVT. HOSPITAL/CLINIC...G PHARMACY/DRUGSTORE...H PRIVATE DOCTOR.....I MOBILE CLINIC.....J COMMUNITY HEALTH WORKER.K OTHER PRIVATE SECTOR SHOP.....L TRADITIONAL PRACTITIONER.....M OTHER _____ N (SPECIFY) | PUBLIC SECTOR GVT/MUNICIPAL HOSPITAL...A PRIMARY HEALTH CENTRE...B SUB-CENTRE.....C MOBILE CLINIC.....D VILLAGE HEALTH GUIDE...E GOVERNMENT PARAMEDIC...F PRIVATE MEDICAL SECTOR PVT. HOSPITAL/CLINIC...G PHARMACY/DRUGSTORE...H PRIVATE DOCTOR.....I MOBILE CLINIC.....J COMMUNITY HEALTH WORKER.K OTHER PRIVATE SECTOR SHOP.....L TRADITIONAL PRACTITIONER.....M OTHER _____ N (SPECIFY) |
| 480 | Was anything given to treat the diarrhoea? | YES.....1 NO.....2 (SKIP TO 482)← DK.....8 | YES.....1 NO.....2 (SKIP TO 482)← DK.....8 | |
| 481 | What was given to treat the diarrhoea? Anything else? RECORD ALL MENTIONED. | ORS FLUID FROM PACKET...A RECOMMENDED HOME FLUID...B ANTIBIOTIC (PILL OR SYRUP).....C OTHER PILL OR SYRUP.....D INJECTION.....E (I.V.) INTRAVENOUS.....F HOME REMEDIES/ HERBAL MEDICINES.....G OTHER _____ H (SPECIFY) | ORS FLUID FROM PACKET...A RECOMMENDED HOME FLUID...B ANTIBIOTIC (PILL OR SYRUP).....C OTHER PILL OR SYRUP.....D INJECTION.....E (I.V.) INTRAVENOUS.....F HOME REMEDIES/ HERBAL MEDICINES.....G OTHER _____ H (SPECIFY) | ORS FLUID FROM PACKET...A RECOMMENDED HOME FLUID...B ANTIBIOTIC (PILL OR SYRUP).....C OTHER PILL OR SYRUP.....D INJECTION.....E (I.V.) INTRAVENOUS.....F HOME REMEDIES/ HERBAL MEDICINES.....G OTHER _____ H (SPECIFY) |

| | | LAST BIRTH NAME _____ | NEXT-TO-LAST BIRTH NAME _____ | SECOND-FROM-LAST BIRTH NAME _____ | | | |
|-----|--|---|---|---|---|---|---|
| 482 | CHECK 481: ORS FLUID FROM PACKET MENTIONED? | YES, ORS FLUID MENTIONED <input type="checkbox"/> ↓ (SKIP TO 484) | NO, ORS FLUID NOT MENTIONED <input type="checkbox"/> ↓ | YES, ORS FLUID MENTIONED <input type="checkbox"/> ↓ (SKIP TO 484) | NO, ORS FLUID NOT MENTIONED <input type="checkbox"/> ↓ | YES, ORS FLUID MENTIONED <input type="checkbox"/> ↓ (SKIP TO 484) | NO, ORS FLUID NOT MENTIONED <input type="checkbox"/> ↓ |
| 483 | Was (NAME) given fluid made from an ORS packet when he/she had the diarrhoea? | YES.....1 NO.....2 (SKIP TO 485) ← DK.....8 | YES.....1 NO.....2 (SKIP TO 485) ← DK.....8 | YES.....1 NO.....2 (SKIP TO 485) ← DK.....8 | YES.....1 NO.....2 (SKIP TO 485) ← DK.....8 | YES.....1 NO.....2 (SKIP TO 485) ← DK.....8 | YES.....1 NO.....2 (SKIP TO 485) ← DK.....8 |
| 484 | For how many days was (NAME) given the ORS fluid? IF LESS THAN 1 DAY, RECORD '00' | DAYS..... <input type="text"/> <input type="text"/> DK.....98 | DAYS..... <input type="text"/> <input type="text"/> DK.....98 | DAYS..... <input type="text"/> <input type="text"/> DK.....98 | DAYS..... <input type="text"/> <input type="text"/> DK.....98 | DAYS..... <input type="text"/> <input type="text"/> DK.....98 | DAYS..... <input type="text"/> <input type="text"/> DK.....98 |
| 485 | CHECK 481: RECOMMENDED HOME FLUID MENTIONED? | YES, HOME FLUID MENTIONED <input type="checkbox"/> ↓ (SKIP TO 487) | NO, HOME FLUID NOT MENTIONED <input type="checkbox"/> ↓ | YES, HOME FLUID MENTIONED <input type="checkbox"/> ↓ (SKIP TO 487) | NO, HOME FLUID NOT MENTIONED <input type="checkbox"/> ↓ | YES, HOME FLUID MENTIONED <input type="checkbox"/> ↓ (SKIP TO 487) | NO, HOME FLUID NOT MENTIONED <input type="checkbox"/> ↓ |
| 486 | Was (NAME) given a recommended home fluid made from sugar, salt and water when he/she had the diarrhoea? | YES.....1 NO.....2 (SKIP TO 488) ← DK.....8 | YES.....1 NO.....2 (SKIP TO 488) ← DK.....8 | YES.....1 NO.....2 (SKIP TO 488) ← DK.....8 | YES.....1 NO.....2 (SKIP TO 488) ← DK.....8 | YES.....1 NO.....2 (SKIP TO 488) ← DK.....8 | YES.....1 NO.....2 (SKIP TO 488) ← DK.....8 |
| 487 | For how many days was (NAME) given the fluid made from sugar, salt and water? IF LESS THAN 1 DAY, RECORD '00'. | DAYS..... <input type="text"/> <input type="text"/> DK.....98 | DAYS..... <input type="text"/> <input type="text"/> DK.....98 | DAYS..... <input type="text"/> <input type="text"/> DK.....98 | DAYS..... <input type="text"/> <input type="text"/> DK.....98 | DAYS..... <input type="text"/> <input type="text"/> DK.....98 | DAYS..... <input type="text"/> <input type="text"/> DK.....98 |
| 488 | → GO BACK TO 449 FOR NEXT BIRTH; OR, IF NO MORE BIRTHS, GO TO 489. | | | | | | |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP TO |
|------|---|---|---------|
| 489 | <p>CHECK 481 AND 483 (ALL COLUMNS):</p> <p>ORS FLUID FROM PACKET <input type="checkbox"/> _____</p> <p>GIVEN TO ANY CHILD</p> <p>ORS FLUID FROM PACKET NOT GIVEN TO ANY CHILD OR 481 AND 483 NOT ASKED <input type="checkbox"/> _____</p> | | 492 |
| 490 | <p>Have you ever heard of a special product called ORS you can get for the treatment of diarrhoea?</p> | <p>YES.....1</p> <p>NO.....2</p> | 492 |
| 491 | <p>Have you ever seen a packet like one of these before?</p> <p>SHOW BOTH THE W.H.O. AND A COMMERCIAL PACKET.</p> | <p>YES.....1</p> <p>NO.....2</p> | 496 |
| 492 | <p>Have you ever prepared a solution with one of these packets to treat diarrhoea for yourself or someone else?</p> <p>SHOW BOTH THE W.H.O. AND A COMMERCIAL PACKET.</p> | <p>YES.....1</p> <p>NO.....2</p> | 495 |
| 493A | <p>The last time you prepared the ORS, did you use the free W.H.O. packet(SHOW THE W.H.O. PACKET) or an alternative commercial packet (SHOW THE COMMERCIAL PACKET)?</p> | <p>FREE WHO PACKET.....1</p> <p>ALTERNATIVE COMMERCIAL PACKET....2</p> | |
| 493 | <p>The last time you prepared the ORS, did you prepare the whole packet at once or only part of the packet?</p> | <p>WHOLE PACKET AT ONCE.....1</p> <p>PART OF PACKET.....2</p> <p>DK.....8</p> | 495 |
| 494 | <p>How much water did you use to prepare ORS the last time you made it?</p> | <p>200 ML. GLASSES.....1 <input type="checkbox"/></p> <p>1 1/2 LITER.....901 <input type="checkbox"/></p> <p>1 LITER.....902</p> <p>1 1/2 LITERS.....903</p> <p>2 LITERS.....904</p> <p>FOLLOWED PACKAGE INSTRUCTIONS.905</p> <p>OTHER _____ 906</p> <p>(SPECIFY)</p> <p>DK.....998</p> | |
| 495 | <p>Where can you get the ORS packet?</p> <p>PROBE: Anywhere else?</p> <p>RECORD ALL PLACES MENTIONED.</p> | <p>PUBLIC SECTOR</p> <p>GVT/MUNICIPAL HOSPITAL.....A</p> <p>PRIMARY HEALTH CENTRE.....B</p> <p>SUB-CENTRE.....C</p> <p>MOBILE CLINIC.....D</p> <p>VILLAGE HEALTH GUIDE.....E</p> <p>GOVERNMENT PARAMEDICF</p> <p>PRIVATE MEDICAL SECTOR</p> <p>PVT. HOSPITAL/CLINIC.....G</p> <p>PHARMACY/DRUGSTORE.....H</p> <p>PRIVATE DOCTOR.....I</p> <p>MOBILE CLINIC.....J</p> <p>COMMUNITY HEALTH WORKER.....K</p> <p>OTHER PRIVATE SECTOR</p> <p>SHOP.....L</p> <p>TRADITIONAL PRACTITIONER.....M</p> <p>OTHER _____ N</p> <p>(SPECIFY)</p> | |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP TO |
|-----|---|-------------------|---------|
| 496 | CHECK 481 AND 486 (ALL COLUMNS): HOME-MADE FLUID GIVEN TO ANY CHILD <input type="checkbox"/> HOME-MADE FLUID NOT GIVEN TO ANY CHILD OR 481 AND 486 NOT ASKED <input type="checkbox"/> | | 501 |

497

Where did you learn to prepare the recommended home fluid made from sugar, salt and water given to (NAME) when he/she had diarrhoea?

| | |
|-------------------------------|----|
| PUBLIC SECTOR | |
| GVT/MUNICIPAL HOSPITAL..... | 11 |
| PRIMARY HEALTH CENTRE..... | 12 |
| SUB-CENTRE..... | 13 |
| MOBILE CLINIC..... | 14 |
| VILLAGE HEALTH GUIDE..... | 15 |
| GOVERNMENT PARAMEDIC | 16 |
| PRIVATE MEDICAL SECTOR | |
| PVT. HOSPITAL/CLINIC..... | 21 |
| PHARMACY/DRUGSTORE..... | 22 |
| PRIVATE DOCTOR..... | 23 |
| MOBILE CLINIC..... | 24 |
| COMMUNITY HEALTH WORKER..... | 25 |
| OTHER PRIVATE SECTOR | |
| SHOP..... | 31 |
| TRADITIONAL PRACTITIONER..... | 32 |
| MASS MEDIA | |
| TELEVISION..... | 41 |
| RADIO..... | 42 |
| PRINTED MATERIAL..... | 43 |
| OTHER..... | 51 |
| (SPECIFY) | |

SECTION 5. FERTILITY PREFERENCES

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP TO |
|-----|---|--|---------|
| 501 | <p>CHECK 107:</p> <p>CURRENTLY MARRIED <input type="checkbox"/> WIDOWED <input type="checkbox"/></p> <p>DIVORCED <input type="checkbox"/> SEPARATED <input type="checkbox"/></p> | | 514 |
| 502 | <p>CHECK 313:</p> <p>NEITHER STERILIZED <input type="checkbox"/> HE OR SHE STERILIZED <input type="checkbox"/></p> | | 508 |
| 503 | <p>CHECK 227:</p> <p>NOT PREGNANT OR UNSURE <input type="checkbox"/> PREGNANT <input type="checkbox"/></p> <p>Now I have some questions about the future. Would you like to have (a/another) child or would you prefer not to have any (more) children?</p> <p>Now I have some questions about the future. After the child you are expecting, would you like to have another child or would you prefer not to have any more children?</p> | <p>HAVE A (ANOTHER) CHILD.....1</p> <p>NO MORE/NONE.....2</p> <p>SAYS SHE CAN'T GET PREGNANT.....3</p> <p>UP TO GOD.....4</p> <p>UNDECIDED OR DK.....8</p> | 510 |
| 504 | <p>Would you prefer your next child to be a boy or a girl or doesn't it matter?</p> | <p>BOY.....1</p> <p>GIRL.....2</p> <p>DOESN'T MATTER.....3</p> <p>UP TO GOD.....4</p> | |
| 505 | <p>CHECK 227:</p> <p>NOT PREGNANT OR UNSURE <input type="checkbox"/> PREGNANT <input type="checkbox"/></p> <p>How long would you like to wait from now before the birth of (a/another) child?</p> <p>How long would you like to wait after the birth of the child you are expecting before the birth of another child?</p> | <p>MONTHS.....1</p> <p>YEARS.....2</p> <p>SOON/NOW.....994</p> <p>SAYS SHE CAN'T GET PREGNANT...995</p> <p>OTHER _____ 996 (SPECIFY)</p> <p>DK.....998</p> | 510 |

SECTION 5A. STATE SPECIFIC QUESTIONS: AIDS

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP TO | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------|--|--|---------|-----|----|-------------------|---|---|--------------|---|---|--------------|---|---|----------------------|---|---|-----------------------------|---|---|-----------------------------|---|---|-----------------------------|---|---|--|
| 519 | <p>Now I have a few questions about a very important topic. Have you heard of an illness called AIDS?</p> | <p>YES.....1 NO.....2</p> | →601 | | | | | | | | | | | | | | | | | | | | | | | | |
| 520 | <p>From which sources of information or persons have you heard about AIDS? RECORD ALL MENTIONED</p> | <p>RADIO.....A TV.....B NEWS PAPERS.....C MAGAZINES.....D SLOGANS/PAMPHLETS/POSTERS.....E HEALTH WORKERS.....F SCHOOL TEACHERS.....G COMMUNITY MEETINGS.....H FRIENDS/RELATIVES.....I OTHER _____ J (SPECIFY)</p> | | | | | | | | | | | | | | | | | | | | | | | | | |
| 521 | <p>How is AIDS transmitted? RECORD ALL MENTIONED</p> | <p>SEXUAL INTERCOURSE.....A HOMOSEXUAL INTERCOURSE.....B HETEROSEXUAL INTERCOURSE.....C NEEDLES/BLADES/SKIN PUNCTURE...D MOTHER TO CHILD.....E TRANSFUSION OF INFECTED BLOOD...F OTHER _____ G (SPECIFY) DON'T KNOW.....H</p> | | | | | | | | | | | | | | | | | | | | | | | | | |
| 522 | <p>Do you think that you can get AIDS from:</p> <p>shaking hands with someone who has AIDS?</p> <p>hugging someone who has AIDS?</p> <p>kissing someone who has AIDS?</p> <p>wearing the clothes of someone who has AIDS?</p> <p>sharing eating utensils with someone who has AIDS?</p> <p>stepping on the urine or stool of someone with AIDS?</p> <p>mosquito, flea or bedbug bites?</p> | <table border="0"> <thead> <tr> <th></th> <th>YES</th> <th>NO</th> </tr> </thead> <tbody> <tr> <td>HAND SHAKING.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>HUGGING.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>KISSING.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>SHARING CLOTHES.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>SHARING EATING UTENSILS....</td> <td>1</td> <td>2</td> </tr> <tr> <td>STEPPING ON URINE/STOOL....</td> <td>1</td> <td>2</td> </tr> <tr> <td>MOSQUITO/FLEA/BEDBUG BITES.</td> <td>1</td> <td>2</td> </tr> </tbody> </table> | | YES | NO | HAND SHAKING..... | 1 | 2 | HUGGING..... | 1 | 2 | KISSING..... | 1 | 2 | SHARING CLOTHES..... | 1 | 2 | SHARING EATING UTENSILS.... | 1 | 2 | STEPPING ON URINE/STOOL.... | 1 | 2 | MOSQUITO/FLEA/BEDBUG BITES. | 1 | 2 | |
| | YES | NO | | | | | | | | | | | | | | | | | | | | | | | | | |
| HAND SHAKING..... | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | |
| HUGGING..... | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | |
| KISSING..... | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | |
| SHARING CLOTHES..... | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | |
| SHARING EATING UTENSILS.... | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | |
| STEPPING ON URINE/STOOL.... | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | |
| MOSQUITO/FLEA/BEDBUG BITES. | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 523 | <p>Is it possible for a healthy looking person to be infected with the AIDS virus?</p> | <p>YES.....1 NO.....2 DK.....8</p> | | | | | | | | | | | | | | | | | | | | | | | | | |
| 524 | <p>Do you think AIDS is a curable disease?</p> | <p>YES.....1 NO.....2 DK.....8</p> | | | | | | | | | | | | | | | | | | | | | | | | | |
| 525 | <p>In your knowledge, is there any vaccine to prevent AIDS?</p> | <p>YES.....1 NO.....2 DK.....8</p> | | | | | | | | | | | | | | | | | | | | | | | | | |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | TO |
|-----|---|--|----|
| 526 | <p>How do you think one can avoid AIDS?</p> <p>RECORD ALL MENTIONED</p> | <p>USING CONDOMS DURING EACH SEXUAL INTERCOURSE.....A SAFE SEX.....B CHECKING BLOOD PRIOR TO TRANSFUSION.....C STERILIZING NEEDLES AND SYRINGES FOR INJECTION.....D AVOIDING PREGNANCY WHEN HAVING AIDS VIRUS.....E OTHER _____ F (SPECIFY) DK.....G</p> | |
| 527 | <p>Is it possible for a woman who has the AIDS virus to give birth to a child with the AIDS virus?</p> | <p>YES.....1 NO.....2 DK.....8</p> | |
| 528 | <p>What do you suggest the government should do for the people who are suffering from AIDS?</p> <p>RECORD ALL MENTIONED</p> | <p>PROVIDE MEDICAL TREATMENT.....A HELP RELATIVES PROVIDE CARE.....B ISOLATE/QUARANTINE/JAIL.....C NOT TO BE INVOLVED.....D OTHER _____ E (SPECIFY) DK.....F</p> | |

SECTION 6. HUSBAND'S BACKGROUND AND WOMAN'S WORK

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP TO |
|-----|---|---|------------|
| 601 | <p>CHECK 107:</p> <p>CURRENTLY MARRIED <input type="checkbox"/> WIDOWED DIVORCED SEPARATED <input type="checkbox"/></p> <p>ASK QUESTIONS ABOUT CURRENT OR MOST RECENT HUSBAND.</p> | | 603 |
| 602 | <p>How old was your husband on his last birthday?</p> | <p>AGE IN COMPLETED YEARS..... <input type="text"/></p> | |
| 603 | <p>Did your (last) husband ever attend school?</p> | <p>YES.....1 NO.....2</p> | 606 |
| 604 | <p>What is the highest grade he completed?</p> | <p>GRADE..... <input type="text"/></p> | |
| 605 | <p>CHECK 604:</p> <p>GRADE 0-5 <input type="checkbox"/> GRADE 6-12 <input type="checkbox"/> GRADE 13+ <input type="checkbox"/></p> | | 608 607 |
| 606 | <p>(Can/Could) he read and write?</p> | <p>YES.....1 NO.....2</p> | 608 |
| 607 | <p>What is the highest degree he obtained?</p> | <p>DEGREE NOT COMPLETED.....01 NON-TECHNICAL DEGREE BACHELOR'S DEGREE.....02 MASTER'S DEGREE.....03 Ph.D.....04 TECHNICAL DEGREE BACHELOR'S DEGREE.....05 MASTER'S DEGREE.....06 TECHNICAL DIPLOMA/CERTIFICATE NOT EQUIVALENT TO DEGREE.....07 NON-TECHNICAL DIPLOMA/CERTIF. NOT EQUIVALENT TO DEGREE.....08 OTHER DEGREE.....09 (SPECIFY)</p> | |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP TO |
|-----|---|---|---------|
| 608 | What kind of work does (did) your (last) husband mainly do? | <div style="float: right; border: 1px solid black; width: 40px; height: 20px; margin-bottom: 5px;"></div> <hr/> <hr/> <hr/> | |
| 609 | CHECK 608: WORKS (WORKED) IN AGRICULTURE <input type="checkbox"/> DOES (DID) NOT WORK IN AGRICULTURE <input type="checkbox"/> | | →611 |
| 610 | (Does/did) your husband work mainly on his own land or family land, or (does/did) he rent land, or (does/did) he work on someone else's land? | HIS/FAMILY LAND.....1 RENTED LAND.....2 SOMEONE ELSE'S LAND.....3 | |
| 611 | Aside from your own housework, are you currently working? | YES.....1 NO.....2 | →613 |
| 612 | As you know, some women take up jobs for which they are paid in cash or kind. Others sell things, have a small business or work on the family farm or in the family business. Are you currently doing any of these things or any other work? | YES.....1 NO.....2 | →620 |
| 613 | What is your occupation, that is, what kind of work do you do? | <div style="float: right; border: 1px solid black; width: 40px; height: 20px; margin-bottom: 5px;"></div> <hr/> <hr/> <hr/> | |
| 614 | In your current work, do you work on the family farm/business, are you employed by someone else, or are you self-employed? | FAMILY FARM/BUSINESS.....1 EMPLOYED BY SOMEONE ELSE.....2 SELF-EMPLOYED.....3 | |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP TO | | | | | | | | | | | | | | | | | | |
|-------------------------|--|---|---------|-----|----|-------------------------|---|---|---------------|---|---|---------------------|---|---|-------------------|---|---|---------------------|---|---|--|
| 615 | Do you earn cash for this work? PROBE: Do you make money for working? | YES.....1 NO.....2 | | | | | | | | | | | | | | | | | | | |
| 616 | Do you do this work at home or away from home? | HOME.....1 AWAY.....2 | | | | | | | | | | | | | | | | | | | |
| 617 | CHECK 219/220/222: HAS CHILD BORN SINCE JAN. 1989 AND LIVING AT HOME? YES NO <input type="checkbox"/> <input type="checkbox"/> | | 620 | | | | | | | | | | | | | | | | | | |
| 618 | While you are working, do you <u>usually</u> have (NAME OF YOUNGEST CHILD AT HOME) with you, <u>sometimes</u> have him/her with you, or <u>never</u> have him/her with you? | USUALLY.....1 SOMETIMES.....2 NEVER.....3 | 620 | | | | | | | | | | | | | | | | | | |
| 619 | Who usually takes care of (NAME OF YOUNGEST CHILD AT HOME) while you are working? | HUSBAND.....01 OLDER CHILD(REN).....02 OTHER RELATIVES.....03 NEIGHBORS.....04 FRIENDS.....05 SERVANTS/HIRED HELP.....06 CHILD IS IN SCHOOL.....07 INSTITUTIONAL CHILDCARE.....08 OTHER _____ 09 (SPECIFY) | | | | | | | | | | | | | | | | | | | |
| 620 | RECORD THE TIME | HOUR..... <table border="1"><tr><td> </td><td> </td></tr></table> MINUTES..... <table border="1"><tr><td> </td><td> </td></tr></table> | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
| 621 | PRESENCE OF OTHERS DURING MOST OF THE INTERVIEW TIME. | <table border="1"> <thead> <tr> <th></th> <th>YES</th> <th>NO</th> </tr> </thead> <tbody> <tr> <td>CHILDREN UNDER 10.....1</td> <td>1</td> <td>2</td> </tr> <tr> <td>HUSBAND.....1</td> <td>1</td> <td>2</td> </tr> <tr> <td>MOTHER-IN-LAW.....1</td> <td>1</td> <td>2</td> </tr> <tr> <td>OTHER MALES.....1</td> <td>1</td> <td>2</td> </tr> <tr> <td>OTHER FEMALES.....1</td> <td>1</td> <td>2</td> </tr> </tbody> </table> | | YES | NO | CHILDREN UNDER 10.....1 | 1 | 2 | HUSBAND.....1 | 1 | 2 | MOTHER-IN-LAW.....1 | 1 | 2 | OTHER MALES.....1 | 1 | 2 | OTHER FEMALES.....1 | 1 | 2 | |
| | YES | NO | | | | | | | | | | | | | | | | | | | |
| CHILDREN UNDER 10.....1 | 1 | 2 | | | | | | | | | | | | | | | | | | | |
| HUSBAND.....1 | 1 | 2 | | | | | | | | | | | | | | | | | | | |
| MOTHER-IN-LAW.....1 | 1 | 2 | | | | | | | | | | | | | | | | | | | |
| OTHER MALES.....1 | 1 | 2 | | | | | | | | | | | | | | | | | | | |
| OTHER FEMALES.....1 | 1 | 2 | | | | | | | | | | | | | | | | | | | |

SECTION 7. HEIGHT AND WEIGHT

| | | | |
|-----|----------------|---|--|
| 701 | CHECK 219/220: | ONE OR MORE LIVING CHILDREN BORN SINCE JAN. 1989 <input type="checkbox"/> | NO LIVING CHILDREN BORN SINCE JAN. 1989 <input type="checkbox"/> END |
|-----|----------------|---|--|

INTERVIEWER: IN 702 (COLUMNS 1-3) RECORD THE LINE NUMBER FOR EACH CHILD BORN SINCE JANUARY 1989 AND STILL ALIVE. IN 703 AND 704 RECORD THE NAME AND BIRTH DATE FOR ALL LIVING CHILDREN BORN SINCE JANUARY 1989. IN 705 AND 707 RECORD THE HEIGHT AND WEIGHT OF THE LIVING CHILDREN. (NOTE: IF THERE ARE MORE THAN 3 LIVING CHILDREN BORN SINCE JANUARY 1989, USE ADDITIONAL FORMS).

| | 1 YOUNGEST LIVING CHILD | 2 NEXT-TO-YOUNGEST LIVING CHILD | 3 SECOND-TO-YOUNGEST LIVING CHILD |
|--|--|--|--|
| 702 LINE NO. FROM Q.216 | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| 703 NAME FROM Q.216 FOR CHILDREN | (NAME) _____ | (NAME) _____ | (NAME) _____ |
| 704 DATE OF BIRTH FROM Q.219 FOR CHILDREN, COPY MONTH AND YEAR OF BIRTH AND ASK FOR DAY OF BIRTH | DAY..... <input type="text"/> <input type="text"/> MONTH.... <input type="text"/> <input type="text"/> YEAR..... <input type="text"/> <input type="text"/> | DAY..... <input type="text"/> <input type="text"/> MONTH.... <input type="text"/> <input type="text"/> YEAR..... <input type="text"/> <input type="text"/> | DAY..... <input type="text"/> <input type="text"/> MONTH.... <input type="text"/> <input type="text"/> YEAR..... <input type="text"/> <input type="text"/> |
| 705 HEIGHT (in centimeters) | <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> |
| 706 WAS HEIGHT/LENGTH OF CHILD MEASURED LYING DOWN OR STANDING UP? | LYING.....1 STANDING.....2 | LYING.....1 STANDING.....2 | LYING.....1 STANDING.....2 |
| 707 WEIGHT (in kilograms) | <input type="text"/> <input type="text"/> . <input type="text"/> | <input type="text"/> <input type="text"/> . <input type="text"/> | <input type="text"/> <input type="text"/> . <input type="text"/> |
| 708 DATE WEIGHED AND MEASURED | DAY..... <input type="text"/> <input type="text"/> MONTH.... <input type="text"/> <input type="text"/> YEAR..... <input type="text"/> <input type="text"/> | DAY..... <input type="text"/> <input type="text"/> MONTH.... <input type="text"/> <input type="text"/> YEAR..... <input type="text"/> <input type="text"/> | DAY..... <input type="text"/> <input type="text"/> MONTH.... <input type="text"/> <input type="text"/> YEAR..... <input type="text"/> <input type="text"/> |
| 709 RESULT | CHILD MEASURED.1 CHILD SICK.....2 CHILD NOT PRESENT.....3 CHILD REFUSED..4 MOTHER REFUSED.5 OTHER.....6 (SPECIFY) _____ | CHILD MEASURED.1 CHILD SICK.....2 CHILD NOT PRESENT.....3 CHILD REFUSED..4 MOTHER REFUSED.5 OTHER.....6 (SPECIFY) _____ | CHILD MEASURED.1 CHILD SICK.....2 CHILD NOT PRESENT.....3 CHILD REFUSED..4 MOTHER REFUSED.5 OTHER.....6 (SPECIFY) _____ |
| 710 NAME OF MEASURER: _____ | <input type="text"/> | NAME OF ASSISTANT: _____ | <input type="text"/> |

INTERVIEWER'S OBSERVATIONS
(To be filled in after completing interview)

Comments About Respondent: _____

Comments on Specific Questions: _____

Any Other Comments: _____

SUPERVISOR'S OBSERVATIONS

Name of Supervisor: _____ Date: _____

EDITOR'S OBSERVATIONS

NATIONAL FAMILY HEALTH SURVEY
(MCH AND FAMILY PLANNING)
VILLAGE SHCHEDULE

CONFIDENTIAL
For Research
Purpose only

INDIA 1992-1993

| IDENTIFICATION | | | | | | | | | | | | | | | | | | | | | |
|--|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| NAME OF STATE _____ | <table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr><td> </td><td> </td><td> </td><td> </td></tr> </table> | | | | | | | | | | | | | | | | | | | | |
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| PSU NUMBER..... | | | | | | | | | | | | | | | | | | | | | |
| NAME OF DISTRICT _____ | | | | | | | | | | | | | | | | | | | | | |
| NAME OF TEHSIL/TALUK _____ | | | | | | | | | | | | | | | | | | | | | |
| NAME OF THE VILLAGE _____ | | | | | | | | | | | | | | | | | | | | | |
| TOTAL POPULATION OF THE VILLAGE ACCORDING TO THE 1981 CENSUS..... | <table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr><td> </td><td> </td><td> </td><td> </td></tr> </table> | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |

1. Current population of the village:

| | | | | |
|--|--|--|--|--|
| | | | | |
|--|--|--|--|--|

2. Area of the village (in Hectares):

| | | |
|--|--|--|
| | | |
|--|--|--|

3. Total number of households in the village:

| | | |
|--|--|--|
| | | |
|--|--|--|

4. Total arable land in the village (in Hectares):
(1) Irrigated land.....1

| | |
|--|--|
| | |
|--|--|

(2) Non-irrigated land.....2

| | |
|--|--|
| | |
|--|--|

5. Main sources of irrigation in the village: RAIN WATER.....A
TANK/POND.....B
STREAM/RIVER.....C
CANAL.....D
WELL.....E
TUBE WELL.....F
OTHERS.....G
(SPECIFY)

6. Distance from the nearest town (in kilometers):

| | |
|--|--|
| | |
|--|--|

7. Distance from the Block Headquarters (in kilometers):

| | |
|--|--|
| | |
|--|--|

8. Distance from the Tehsil Headquarters (in kilometers):

| | |
|--|--|
| | |
|--|--|

9. Distance from the nearest railway station (in kilometers):

| | |
|--|--|
| | |
|--|--|

10. Distance from the nearest bus stand (in kilometers):

| | |
|--|--|
| | |
|--|--|

11. Whether the village is connected by all-weather road: YES.....1
(SKIP TO 13) ↙
NO.....2

12. Distance from the nearest pucca road (in kilometers):

| | |
|--|--|
| | |
|--|--|

13. Main sources of drinking water in the village: PIPED WATER.....A
OPEN WELL.....B
TUBE WELL/BORE WELL....C
RIVER/SPRING/POND/LAKE.D
OTHERS.....E
(SPECIFY)

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14. Is the village electrified?

YES.....1

NO.....2

15. Educational facilities in the village:

| Facilities | Whether available in the village | Distance from the nearest facility available (in Kms) |
|-------------------------|--|---|
| Primary School | YES.....1 (GO TO NEXT FACILITY) } NO.....2 | <input type="text"/> <input type="text"/> |
| Middle School | YES.....1 (GO TO NEXT FACILITY) } NO.....2 | <input type="text"/> <input type="text"/> |
| Secondary School | YES.....1 (GO TO NEXT FACILITY) } NO.....2 | <input type="text"/> <input type="text"/> |
| Higher Secondary School | YES.....1 (GO TO NEXT FACILITY) } NO.....2 | <input type="text"/> <input type="text"/> |
| College | YES.....1 (GO TO NEXT FACILITY) } NO.....2 | <input type="text"/> <input type="text"/> |
| Adult Education Classes | YES.....1 (GO TO NEXT FACILITY) } NO.....2 | <input type="text"/> <input type="text"/> |
| Anganawadi | YES.....1 (GO TO NEXT FACILITY) } NO.....2 | <input type="text"/> <input type="text"/> |
| Jana Sikshana Nilayam | YES.....1 NO.....2 | <input type="text"/> <input type="text"/> |

16. Health Facilities:

| Facilities | Whether available in the village | Distance from the nearest facility available (in Kms) |
|--------------------------------|--|---|
| Primary Health Centre | YES.....1 (GO TO NEXT FACILITY) ←] NO.....2 | <input type="text"/> <input type="text"/> |
| Sub-Centre | YES.....1 (GO TO NEXT FACILITY) ←] NO.....2 | <input type="text"/> <input type="text"/> |
| Government Hospital | YES.....1 (GO TO NEXT FACILITY) ←] NO.....2 | <input type="text"/> <input type="text"/> |
| Hospital by NGO | YES.....1 (GO TO NEXT FACILITY) ←] NO.....2 | <input type="text"/> <input type="text"/> |
| Private Hospital | YES.....1 (GO TO NEXT FACILITY) ←] NO.....2 | <input type="text"/> <input type="text"/> |
| Dispensary/Clinic | YES.....1 (GO TO NEXT FACILITY) ←] NO.....2 | <input type="text"/> <input type="text"/> |
| Village Health Guide | YES.....1 (GO TO NEXT FACILITY) ←] NO.....2 | <input type="text"/> <input type="text"/> |
| Trained Birth Attendent | YES.....1 (GO TO NEXT FACILITY) ←] NO.....2 | <input type="text"/> <input type="text"/> |
| Family Planning/ Health by NGO | YES.....1 (GO TO NEXT FACILITY) ←] NO.....2 | <input type="text"/> <input type="text"/> |
| Mobile Health Unit/ Visit | YES.....1 NO.....2 | <input type="text"/> <input type="text"/> |

17. Total number of Television sets in the Village:

18. The type of drainage facility in the village:

UNDERGROUND DRAINAGE....1

OPEN DRAINAGE..... 2

NO.....3

19. Total number of tractors in the village:

20. Total number of thrashers in the village:

21. Total number of Gobar gas plants in the village:

22. Total number of cars in the village:

23. Total number of vans/matadors in the village:

24. Total number of trucks in the village:

25. Total number of motor cycles/scooters in the village:

26. Other facilities:

| Facilities | Whether available in the village | |
|--|----------------------------------|----|
| | YES | NO |
| Bank.....1 | | 2 |
| Credit cooperative society.....1 | | 2 |
| Agricultural cooperative society.....1 | | 2 |
| Fishermen's cooperative society.....1 | | 2 |
| Milk cooperative society.....1 | | 2 |
| Post Office.....1 | | 2 |
| Market / Shop.....1 | | 2 |
| Fair price shop.....1 | | 2 |
| Cinema house/Tent.....1 | | 2 |
| Pharmacy / Medical shop.....1 | | 2 |
| Mahila Mandal.....1 | | 2 |
| Youth club.....1 | | 2 |

27. Did the village experience any natural calamity during last two years? YES.....1
 (SKIP TO 29)
 NO.....2

28. What was the nature of the calamity?

- FLOOD.....A
- DROUGHT.....B
- CYCLONE.....C
- EARTH QUAKE.....D
- ANY OTHER _____ E
 (SPECIFY)

29. Major epidemics and diseases in the village during the last one year:

1. _____
2. _____
3. _____
4. _____

30. Mass media / other educational activities for Health and Family Welfare carried out during the last one year in the village:

1. Number of film shows held:

| | |
|--|--|
| | |
|--|--|
2. Number of exhibitions held:

| | |
|--|--|
| | |
|--|--|
3. Number of drama / song performances held:

| | |
|--|--|
| | |
|--|--|
4. Number of group meetings held:

| | |
|--|--|
| | |
|--|--|
5. Number of times family welfare/health worker visited the village in a month:

| | |
|--|--|
| | |
|--|--|

31. Any Family welfare / health posters distributed? YES.....1
 NO.....2

32. Any Leader's Orientation Training Camp held? YES.....1
 NO.....2
 (SKIP TO 34)

33. Number of local leaders trained at the camp:

| | |
|--|--|
| | |
|--|--|

34. Rural Development Programmes :

| Programme | Whether there are any beneficiaries in the village: | Total number of beneficiaries |
|---|---|-------------------------------|
| Integrated Rural Development Programme (IRDP) | YES.....1 | <input type="text"/> |
| | NO.....2 (GO TO NEXT PROGRAMME) ↙ | |
| National Rural Employment Programme (NREP) | YES.....1 | <input type="text"/> |
| | NO.....2 (GO TO NEXT PROGRAMME) ↙ | |
| Training Rural Youth for Self Employment (TRYSEM) | YES.....1 | <input type="text"/> |
| | NO.....2 (GO TO NEXT PROGRAMME) ↙ | |
| Employment Guarantee Scheme | YES.....1 | <input type="text"/> |
| | NO.....2 | |

35. Major sources of information for filling in the Village Schedule:
(RECORD ALL THE SOURCES)

- Sarpanch.....A
- Patwari.....B
- Gram Sevak.....C
- School Teacher.....D
- Health personnel.....E
- Others.....F

(Specify)

36. Any other relevant comments:
