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National Family Health Survey 1993

Population Research Centre
University of Kashmir
Srinagar

International Institute for Population Sciences
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NATIONAL FAMILY HEALTH SURVEY
(MCH and Family Planning)

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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 recently attained statehood), 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.

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 Jammu region of Jammu and Kashmir. 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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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.

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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.

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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 Jammu and Kashmir, Srinagar, 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 on 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 conducting the 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. It is only due to their hard work that the NFHS could be completed successfully, according to schedule. Sincere efforts and involvement of Dr. Parveen Nangia of IIPS and Mr. Bashir Ahmad Bhat of PRC, Srinagar during the training of the field staff for NFHS in Jammu region of Jammu and Kashmir are gratefully acknowledged. The help of Mrs. Vaidehi Yelamanchili and Mr. Suhas Narkhede in the preparation of the report and that of Dr. B.S. Singh in producing graphs for the report, is acknowledged.

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Last but not least, the credit goes to the 2,766 ever-married women of Jammu 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 effort to strengthen 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. 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.

Because of security problems, the NFHS was not conducted in the whole of Jammu and Kashmir. The survey covered only 6 districts in Jammu region of Jammu and Kashmir. The NFHS in the Jammu region, which was conducted between 6 May 1993 and 30 July 1993, gathered information on a representative sample of 2,766 ever-married women age 13-49 from 2,839 households. The survey also collected extensive health-related information on 1,540 children born to these women during the four years preceding the survey. In this report, the survey findings are generally shown for the Jammu region of Jammu and Kashmir as well as for the urban and rural areas of the region.

The survey collected a variety of socioeconomic background information about the population of Jammu. According to the NFHS, 37 percent of the population is below age 15, and 5 percent is age 65 or older at the time of the interview. The population sex ratio of usual residents is 980 females per 1,000 males. Nearly three-quarters of the males and half of the females age 6 and above are literate. The median number of years of schooling is relatively higher for males (6.0 years) than for females (1.7 years). In the Jammu region as a whole, 86 percent of the children age 6-14 are attending school. As expected, male attendance is higher than female attendance and school attendance is higher in urban areas than in rural areas. Seventy-two percent of ever-married women age 13-49 have some exposure to electronic mass media. Overall, 77 percent of household heads are Hindu, 17 percent Muslim and 6 percent Sikh. One-third of household heads belong to scheduled castes and only a small proportion of household heads are reported as belonging to scheduled tribes.

Although marriage is universal in Jammu, marriages do not take place at very young ages. At the time of survey, only 18 percent of women age 15-19 were married and 98 percent of women age 30-34 were married. The singulate mean age at marriage estimated for the region is 26.3 years for males and 21.2 years for females. Overall, the median age at marriage has increased from 16.6 years in the 45-49 age cohort to 19.1 years for the 25-29 age cohort. In almost all cases, formal marriage is immediately followed by cohabitation with the husband.

Fertility is relatively low in Jammu. According to the NFHS, at current fertility levels, women will have an average of 3.1 children each during their childbearing years. The fertility rate in Jammu is 8 percent lower than the rate for all of India. The fertility rate in urban areas is 2.1 children per woman which is considerably lower than the rural fertility rate of 3.4 children per woman.

Analysis of current fertility and cohort fertility reveals that in Jammu there is a decline of fertility. The gap between the TFR of 3.1 and mean number of children ever born of 5.1 (for women age 40-49) suggests that a substantial decline of fertility has taken place in Jammu. Educational differentials are quite large with current fertility declining steadily from 3.7 children per woman for illiterate women to 2.3 children per woman for women with at least a high school education.

Knowledge of family planning is universal in Jammu, with 100 percent of the currently married women in both urban and rural areas reporting knowledge of at least one modern method of family planning. Currently married women are most familiar with female sterilization (99 percent). Approximately three-fourths know about the pill, IUD and condoms. Injection is the least heard-of method (51 percent). Traditional methods of contraception are known to 72 percent of women, with periodic abstinence and withdrawal known to 60 and 54 percent, respectively. Urban and rural women are about equal in their knowledge of male and female sterilization, but rural women are less likely to know about other methods. Knowledge of sources of contraceptives is very high, with 98 percent knowing where to obtain at least one method of family planning. Women are more knowledgeable about the source of female and male sterilization than other methods, and knowledge about sources of spacing methods is relatively lower.

Almost one-half of currently married women age 15-49 are currently using a contraceptive method, with 40 percent using a modern method and 10 percent using a traditional method. Female sterilization is the most popular method (25 percent), followed by the condom (6 percent), male sterilization (4 percent), the IUD (3 percent) and the pill (1 percent). Overall, the use of spacing methods is very low. Withdrawal is used by a sizeable proportion (6 percent) of the couple. The current use of any contraceptive method is higher in urban areas (64 percent) than in rural areas (46 percent). Except for female sterilization, the use of every method is higher in urban areas than in rural areas.

The use of modern methods of contraception peaks in the age groups 35-39 and 40-44, at 60 percent. Although current use of any family planning method is positively related to education, the relationship is reversed in the case of current use of sterilization. Interestingly, the current use of traditional methods is higher among women with a high school education than among illiterate women. Comparing religious groups, the current use of any method is lower among Muslims (34 percent) than either Sikhs (62 percent) or Hindus (52 percent). A positive association exists between the number of living children a woman has and current use. Preference for sons is indicated by the fact that at each parity, current use of family planning is lowest for women with no sons and highest for women with all sons.

Among current users of contraception, the public sector supplies 81 percent of all modern methods, and the private medical sector supplies 9 percent. Other nonmedical sources supply 10 percent. The public sector is the major source of supply for sterilization and IUDs, and other nonmedical sources are the primary source for condoms. The public and the private medical sectors supply the pill in approximately equal amounts.

Overall, only 32 percent of currently married women say they want another child sometime in the future, and over half of these women (17 percent of all currently married women) say they would like to wait at least two years before having the next child. Only 15 percent of women express a desire to have a child within two years. Over one-third (36 percent) of women report that they want no more children at all in the future, and 30 percent of women (or their husbands) are sterilized and cannot have any more children. These latter two groups together constitute 66 percent of all currently married women.

Regarding future use of family planning methods, 34 percent of currently married nonusers report that they do not intend to use contraception in the future, 54 percent report that they will use it in the future and 12 percent are not certain of their intentions. Desire for additional children is the main reason for not intending to use a family planning method in the future. For those currently married nonusers who intend to use in the future, 62 percent say that they prefer to use female sterilization, 20 percent prefer to use modern spacing methods and only 3 percent prefer traditional methods.

Overall, only 18 percent of currently married women in Jammu region 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 both for spacing births and limiting births (9 percent). Together with the 49 percent of currently married women who are using contraception, a total of 67 percent of currently married women have a demand for family planning. The NFHS data show that current family planning services do not meet the needs of currently married women for spacing children, particularly for women with less than two children.

The ideal number of children falls within the fairly narrow range of 2 to 3 children for a large majority of women in Jammu. The mean ideal number of children ranges from 2.4 for women with less than two children to 3.5 for those who already have six or more children. Overall, women have stronger preference for sons and son preference is stronger in rural areas.

The NFHS also provides information on maternal and child health and the prevalence of specific medical problems (malaria, blindness, tuberculosis, leprosy and physical impairment of the limbs) among all household members. All five health conditions show an overall incidence of less than 10 persons per 1,000 population. Malaria has the highest prevalence, afflicting 9 persons per 1,000 population. The overall prevalence of other diseases, namely physical impairment of the limbs, partial blindness, complete blindness and tuberculosis, are 7, 6, 3 and 2 per 1,000 population, respectively. The reported prevalence of leprosy is practically negligible.

The crude death rate for Jammu region is 8.5 per 1,000 population for the two years preceding the survey, with male death rates higher than female death rates at all ages except age 5-14. Analysis of levels and trends in infant and child mortality shows substantial decline in infant mortality rates during the 15 years prior to the survey. The rate declined from 70 per 1,000 live births during 1978-82 to 45 per 1,000 live births during 1988-92. During the same period the child mortality rate declined from 29 per 1,000 live births to 14 per 1,000 live births. The infant mortality rate is higher for children of illiterate women, Muslim women and women belonging to scheduled castes. It is also higher for children of mothers age 30 and above (69

per 1,000) and less than age 20 (54 per 1,000) than for those of mothers in the prime childbearing years, age 20-29 (46 per 1,000). There is also a strong association between child spacing and the survival chances of children. Infant mortality risks increase sharply as the length of the preceding birth interval decreases (76 per 1,000 for children with a preceding interval of less than 24 months compared with 35 per 1,000 for children with a preceding interval of 24 to 47 months and 41 per 1,000 for children with a preceding interval of 48 months or more).

Mothers received antenatal care for 80 percent of their births during the four years preceding the survey. Allopathic doctors provided antenatal care for approximately one-half of births and other health professionals (such as nurse/midwives, ayurvedic and homoeopathic doctors) provided care for 29 percent of births. Utilization of antenatal care is higher in urban areas (96 percent) than in rural areas (77 percent).

Twenty-two percent of births were to mothers who did not receive a single dose of tetanus toxoid vaccine, 9 percent were to mothers who received only one dose and 69 percent were to those who received two or more doses. Seventy-one percent of births in Jammu were to mothers who received iron and folic acid tablets. Only 22 percent of births in the four years preceding the survey occurred in medical institutions. The practise of utilizing a health facility at the time of delivery is higher in urban areas (47 percent) than in rural areas (18 percent). Home deliveries are most prevalent for births whose mothers did not receive antenatal care. In Jammu, a very large majority of live births (77 percent) are delivered at home. Among home deliveries the majority (75 percent) are attended by traditional birth attendants and untrained persons. This situation is not conducive to child survival and safe motherhood.

The Jammu region ranks second after Goa in the percentage of children who are fully vaccinated. Sixty-six percent of children age 12-23 months are fully vaccinated and 16 percent did not receive any vaccination. The highest coverage is for BCG (81 percent) and for the first doses of DPT and polio (both 84 percent), and the lowest coverage is for measles (69 percent). With the exception of polio at birth, coverage is somewhat higher among male children for every type of vaccine.

Twenty-two percent of children under age four suffered from fever during the two weeks before the survey. Seventy-one percent of children with fever were taken to a health facility or provided treatment. Approximately 4 percent of children were affected by acute respiratory infection during the two weeks before the survey and 78 percent were taken to a health facility for treatment. Twenty-two percent of children had diarrhoea during the two weeks before the survey; and 71 percent were taken to a health facility or provider for treatment. Thirty-three percent of children with diarrhoea were treated with ORS packets and 22 percent received a recommended home rehydration solution. ORS is known to 66 percent of mothers, but only 44 percent had ever used ORS to treat diarrhoea.

Breastfeeding is nearly universal in Jammu, with 96 percent of all children having been breastfed. However, it is rare for breastfeeding to begin very soon after delivery. In fact, only 7 percent of children received breastfeeding within one hour of birth and only 41 percent received it during the first 24 hours of birth. Although it is recommended that the first breast milk should be given to children because it contains colostrum which provides natural immunity

to children, the majority of mothers squeeze the first milk from their breast before breastfeeding their newly born babies. It is also recommended that children should be exclusively breastfed through age 4-6 months, but more than four-fifths of babies as young as 0-3 months are fed water and other supplements, thus jeopardizing their nutritional status and increasing the risk of infection. Solid and semi-solid foods are generally not added to the diet at an early enough stage in the child's development. Only 49 percent of children are given solid or semi-solid food in addition to breastmilk at the recommended age of 6-9 months. The median duration of breastfeeding is just over 22 months and the mean duration of breastfeeding is 23.6 months.

In general, the nutritional status of children in Jammu is better than in most states in India. However, 45 percent of all children under age four are underweight, including 14 percent who are severely so, and 41 percent are stunted. The most serious problem is wasting (underweight compared to height). Although the percentage of wasted children (15 percent) is much lower than that underweight (45 percent) or stunted (41 percent), wasting is a more serious condition because such children are at a higher risk of dying than other groups of children.

Except for stunting, female children are nutritionally disadvantaged compared with male children. Undernutrition is consistently higher in rural areas than in urban areas, and the differences are substantial. Sikh children are better nourished than Hindu children who are relatively better nourished than Muslim children. Scheduled caste children are more undernourished than other children. The largest differentials in nutrition are by mother's level of education. For all three indices of undernutrition used in the NFHS, undernutrition declines steadily and sharply with the increase in the mother's level of educational attainment.

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 one 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.

The Centre for Research in Rural and Industrial Development (CRRID), an autonomous research organization in Chandigarh affiliated with the Indian Council of Social Science Research, was selected to be the CO for the NFHS in the Jammu region of Jammu and Kashmir state. The Population Research Centre situated in the Department of Economics, University of Kashmir, Srinagar, collaborated with the CO in the implementation of the survey in Jammu.

1.2 Origin of the State

The state of Jammu and Kashmir embodies one of the oldest civilisations and has a rich historical and cultural heritage. According to Kalhana, the legendary historian, the valley of Kashmir was once a large lake and Kashyap Rishi drained off the water, making it an attractive place of abode. Actually, geological changes made way for the outflow of water by subsidence

of the mountains at Khadinyar near Baramulla.

Emperor Ashoka introduced Buddhism to Kashmir in the third century B.C. Control of the valley passed to the Huns in the early sixth century. Between 697 and 738 A.D. the state was ruled by the famous Hindu Lalitadiya. Islam was introduced during the 13th and 14th centuries A.D and Zain-ul-Abidin (1420-1476) was considered to be the most tolerant and benevolent of the Kashmir rulers. Since then, the state has been ruled by Hindus, Moguls, Afghans, Sikhs, and Dogras. During the Dogra dynasty (1846-1947) the paramountcy rested with the British Crown representative in India. Maharajah Hari Singh, who was the last Dogra ruler, finally acceded the state to the Union of India in 1948.

1.3 Geographic Features

Physical Characteristics

Jammu and Kashmir is located between $32^{\circ} 17' N$ and $37^{\circ} 6' N$ latitude, and $73^{\circ} 26' E$ and $80^{\circ} 30' E$ longitude. From north to south it extends over 640 km and from east to west 480 km. Situated on the northern extremity of India, the state occupies a position of strategic importance with its borders touching the neighbouring countries of Afghanistan in the northwest, Pakistan in the west and China in the northeast. To the south lie two other states of India, Punjab and Himachal Pradesh.

Jammu and Kashmir is a land mass of diversified relief with a vast plain in the south and a series of majestic Himalayan mountain ranges of various elevations in the north (running in a northwest to southeast direction) containing picturesque valleys, snow clad peaks, and glaciers and lakes. The state of Jammu and Kashmir is made up of three distinct geographic regions: (1) Jammu Province, (2) Kashmir Valley and (3) Ladakh Plateau. These three regions differ widely with regard to physical, socioeconomic and cultural characteristics.

The Jammu Province has an area of about 26,090 km² and is situated in the south-southeast area of the state. The region lies between the Outer Hills bounding the Kashmir Valley on the south and the hilly tract extending to the plains of Punjab. This region consists mostly of sub-mountainous and semi-mountainous tracts and rising slopes extending from the plains of Punjab to the sub-Himalayan Shivalik ranges with altitudes varying from 600 m to 1,200 m above sea level. Below the Shivalik hills is the outer plain area, including parts of Kathua, Hiranagar, Samba and Ranbir Singh Pora, with an altitude up to 400 m. The famous temple of Vaishnav Devi is located in this region. The Outer Hills consist of Udhampur, Ramnagar and Rampur. There is a continuous rise in elevation to the Middle Himalayas where small narrow valleys give way to deep gorges and picturesque valleys, largely formed by fast flowing rivers over thousands of years. The middle Himalaya belt is among the least developed areas of the state because of its rough terrain.

The Kashmir Valley, with an area of about 15,120 km², lies at an average altitude of 1,800 m above sea level. The valley is nestled among the Pir Panjal ranges on the south and the off-shoot of the Zanaskar ranges on the north. The mountains which surround the valley include Harmukh (5,150 m) to the east and Mahadev Gwasha Brari (5,425 m), and Amarnath (5,280 m) to the south. To the southwest are peaks of the Pir Panjal range that rise to 4,500

m and to the north are the lofty Karakoram and Greater Himalayas, dominated by the majestic Nanga Parbat mountain.

The Ladakh Plateau, with an average altitude of about 4,000-5,000 m above sea level, is a vast mountainous territory which extends from Zanaskar in the south to Karokaram, Nun-Kun and Nanga Parbat in the north. Bounded by these high mountains is the valley of Indus. Ladakh is, for the most part, a cool desert plateau with barren mountains and devoid of vegetation. It is economically the least developed region of the state.

Jammu and Kashmir is drained by the Indus, Jhelum and Chinab rivers and their tributaries. The Indus and Chinab originate to the north of the Greater Himalayas and pierce the main ranges of the Himalayas. The Indus originates in the vicinity of Mansarovar Lake from Sengge-Khambab Glacier and flows in a northwesterly direction between the Kailash and Ladakh ranges. It then flows west across the Kashmir border and into Pakistan. The Chinab, which is the largest river of the state, has its origin in the glaciers of the Middle Mountains. The river flows between the Greater Himalayas and Pir Panjal ranges, enters the plains at Akhnoor, and eventually flows into Pakistan. The Jhelum rises from the Pir Panjal range near Verinag and flows in a northwesterly direction. It passes through the cities of Srinagar and Baramulla and eventually into Pakistan through the Baramulla-Uri Gorge.

Climate, Rainfall and Seasons

Jammu and Kashmir has a continental subtropical climate, characterized by extreme variations of temperature and rainfall in the three geographic regions. Therefore the climate of each region is considered separately.

Except for the areas lying in the Shivalik and Pir Panjal, Jammu Province resembles the Punjab plains with respect to climate. The year has three distinct seasons -- winter from November to February, summer from March to mid-July and monsoon from July to October. In summer the temperatures rise as high as 48° C with hot winds known as *loo* blowing from the southwest. The summer mean temperature is 24° C. In winter the temperature varies between 20° C and 3° C. The 'outer plain' areas and Outer Hills region receive summer precipitation from the southwest monsoon (about 800 mm). The amount of rainfall increases with the altitude. The region also receives some rainfall during winter.

The Kashmir Valley and the areas lying in the Shivalik and Pir Panjal have a temperate climate. The year has four distinct seasons -- winter from December to February, spring from March to May, summer from June to August and autumn from September to November. The maximum summer temperature is 36° C and the minimum temperature is 20° C. July is the hottest month and January is the coldest month. The temperatures in the winter months usually fall below 0° C. The region has 700 mm annual rainfall, of which 30 percent occurs during the monsoon, mostly in August. Most of the other precipitation comes in the form of snow during the winter.

The Ladakh Plateau has extreme climatic conditions with a mean summer maximum temperature of 25° C and mean minimum temperature of 7° C (at night). Winters are very severe with mean temperatures below zero and a minimum temperature of -30° C. The area has

a prolonged winter from October to April. The area is dry: the annual rainfall is 230 mm in Kargil and only 90 mm in Leh.

1.4 Area and People

Area and Administrative Divisions

The total area of Jammu and Kashmir at the time of partition was 222,236¹ km². Presently one-third of the original area of the state lies on the Pakistan side of the Line of Actual Control. Srinagar is the summer capital and Jammu is the winter capital of the state. The state is divided into two administrative divisions, the Jammu and Kashmir divisions, and into 14 districts. The NFHS was conducted in the Jammu division only which includes 6 districts: Kathua, Udhampur, Jammu, Doda, Poonch and Rajouri. Due to security reasons, the Kashmir division was excluded from the survey.

People, Culture, Religion and Language

Jammu and Kashmir, the land of *Sufis, Rishis and Saints*, has been a seat of ancient culture, religion and learning. The culture of the state is a product of mixed heritage of Hindu, Sikh and Muslim influences. The state has attracted migrants from the former Soviet Union countries of Turkmenistan, Uzbekistan, Kazakstan, Georgia and Azerbaijan, and from Turkey, Iran and Iraq (Hussain, 1988). The dominant racial group in the state is Aryan, but Tibetan, Mongol, Gujjar and Dardic racial groups also inhabit the state.

A variety of communities inhabit the Jammu region. It is the home of the Dogras, who belong to Aryan stock. Dogras belong primarily to the Hindu community, and are divided into several castes and sects. They are concentrated in the districts of Kathua, Udhampur and Jammu. The Dogras are accomplished painters. Khattris and Mahajans are of Punjabi stock. Most follow occupations like trade and commerce. Harijans comprise another significant segment of the population. They are agriculturists and also pursue semi-skilled professions. The inhabitants of the middle mountains are the Pahari people, some of whom are Muslims. They lead an arduous life, rearing sheep and cultivating the sparse terraces for barley, wheat and maize. The Gujjar people are semi-nomadic, moving in summer to the colder valley in Kashmir and in winter back to the Jammu and Punjab plains. They are primarily Islamic. Lack of communication with the outside world until recently has isolated the Paharis and Gujjars, and has contributed to their poverty. The life and thinking of people in the Jammu region is governed by deep-rooted traditional values and religious and cultural norms (Sofi, 1979).

Kashmiris are mostly concentrated in the Kashmir Valley and in the Pir Panjal belt. They belong to the Indo-Aryan race. The Kashmiri ethos has been largely shaped by the two religious orders -- the *Sufis* and the *Rishis*. The influence of Sanskrit is also very strong on the culture of Kashmir (Sofi, 1979). Kashmiris are hard working, but have lived in considerable poverty.

¹ Represents provisional geographical area figures supplied by Surveyor General of India and includes 78,114 km² under the occupation of Pakistan and 5,180 km² handed over by Pakistan to China. Also includes 37,555 km² under illegal occupation of China in Leh district.

Under modern influences, however, this may be slowly changing. The people of Ladakh are a mixture of Mongoloid and Aryan races, and are similar in features to the Tibetans.

According to the 1981 Census, 62 percent of the population of the state is Muslim and 32 percent Hindu (Office of the Registrar General and Census Commissioner, 1984a). Additionally, Sikhs and Buddhists account for 2 and 1 percent, respectively. However, Muslims account for 92 percent of the total population in the Kashmir division, Hindus account for 62 percent of total population in the Jammu division and Buddhists account for 62 percent of the population in Ladakh.

Urdu is the official language of the state. However, other languages predominate among the people. The primary language of the people in the Jammu division is Dogri, but Punjabi and Pahari are also spoken by considerable numbers; the predominant language of the people in Kashmir is Kashmiri which is spoken by most of the religious groups in the valley; and the primary language of the people in Ladakh is Ladakhi.

1.5 Economy

In Jammu and Kashmir, as in other states of India, agriculture is the mainstay of the economy. Being the dominant sector, it contributes 38 percent to the state domestic product and provides employment to more than 60 percent of the working population (Directorate of Economics and Statistics, 1991a). Cereals, fruits and cash crops are the main food products of the state. The major cereal products include wheat, rice and maize. As a result of the Intensive Agriculture Programme and the introduction of high yield variety seeds, the agriculture sector in the state has undergone tremendous change. However, due to limited arable land, the state has not been able to attain self sufficiency in cereal production. The state has always been famous for its horticultural products since ancient days and the fruit industry has been a source of income to the state economy. In recent years, as a result of economic and technological advancement in the state, the horticulture sector has received a great boost, leading to increased production and export of produce. The state is also rich in forest resources with considerable growth of spruce, fir, pine, hazel, wild oak, maple, and beech. However, the forests contribute less than 2 percent of the net state domestic product, despite the fact that 23 percent of the total geographical area is under forestation.

Industrially, Jammu and Kashmir is one of the most backward states of the country. The opportunity for large and heavy industry in the state is limited because of topographical and other factors. The manufacturing sector contributes only 5 percent to the net state domestic product. The state has a few medium scale industries in the capital cities of Jammu and Srinagar which manufacture such products as cement, wool and silk, furniture and watches. However, its handicrafts are well known worldwide.

Kashmir is a popular tourist resort, not only for Indians but also for foreigners. The tourist trade plays a vital role in the state economy. The total number of tourists who visited the valley in 1988 was 720,000 which included 60,000 tourists from other countries (Directorate of Economics and Statistics, 1991a).

The per capita income of the state in 1991-92 at constant prices was Rs. 1687.00 compared with Rs. 2142.00 at the national level (Directorate of Economics and Statistics, 1991b). During 1987-88, 13 percent of the total population of the state and 15 percent of the total rural population were below the poverty line² (Centre for Monitoring Indian Economy, 1991).

1.6 Basic Demographic Indicators

The basic demographic indicators of Jammu and Kashmir compared to the whole of India are presented in Table 1.1. The 1991 population census was not conducted in Jammu and Kashmir. According to the standing Committee of Experts on Population, the total population of Jammu and Kashmir in 1991 was 7.7 million. Its population constituted 0.9 percent of the total population of the country. The Kashmir division constitutes 53 percent of the total population of the state, the Jammu division 45 percent and the Ladakh division 2 percent. The decadal population growth rate in the state during 1981-91 (28.9 percent) was higher than that of the country as a whole (23.9 percent). The population density in 1991 was 76 (per km²) in Jammu and Kashmir compared to 273 in all India.

Index	Jammu and Kashmir	India
Population (1991)	7,718,700	846,302,688
Percent population increase (1981-91)	28.9	23.9
Density (Population/km ²) (1991)	76	273
Percent urban (1991)	23.8	26.1
Sex ratio (1991)	923	927
Percent 0-14 years old (1981)	41.0	39.6
Percent 65+ years old (1981)	3.3	3.8
Exponential growth rate (1981-91)	2.54	2.14
Life expectancy (1986-90)		
Male	59.4	57.7
Female	64.2	58.1
Couple protection rate (1992)	20.0	43.5

Note: Figures for 1991 for Jammu and Kashmir are projected values.
Source: Office of the Registrar General (1994a, 1994b), Office of the Registrar General and Census Commissioner (1987, 1992), Ministry of Health and Family Welfare (1991, 1992)

² The Task Force on "Minimum Needs and Effective Consumption Demand" constituted by the Planning Commission in 1979 defined the poverty line as per capita monthly expenditure of Rs. 49.09 in rural areas and Rs. 56.64 in urban areas at 1973-74 prices, corresponding to the per capita daily calorie requirement of 2,400 in rural areas and 2,100 in urban areas. For subsequent years, the poverty line has been adjusted because of price changes, using the price indices which are implicit in the private consumption expenditure series reported in the National Accounts Statistics. The corresponding levels at 1987-88 price levels are Rs. 131.80 in rural areas and Rs. 152.13 in urban areas.

India is predominantly an agricultural country and most of the people live in rural areas. Seventy-six percent of the population of Jammu and Kashmir live in rural areas compared to 74 percent in India. The proportion of rural population is higher in the Jammu division than in the Kashmir division. The sex ratio of the population (number of females per 1,000 males) in 1991 was 923 for the state compared to 927 for all India. The sex ratio is higher in the Jammu division than in other parts of the state. The percentage of the child population (0-14 years) within the total population in 1981 was similar in the state (41.0) and in India (39.6). On the other hand, 3.3 percent of the state's population was age 65 and above which was slightly lower than the national percentage of 3.8.

The life expectancy during the period 1986-90 is higher in the state (59.4 years for males and 64.2 years for females) than in India (57.7 years for males and 58.1 years for females). The life expectancy for females in Jammu and Kashmir is about five years higher than that for males, whereas the gap between the all-India life expectancies for females and males is only 0.4 year.

Jammu and Kashmir has been lagging behind in family planning performance. The couple protection rate (defined as the percentage of eligible couples effectively protected against pregnancy) in Jammu and Kashmir was only 20.0 in 1992, as reported by the Evaluation and Information Division, Department of Family Welfare, Ministry of Health and Family Welfare, compared to 43.5 in India.

Major demographic trends in the state are shown in Table 1.2. It can be seen from the table that the total population of the state was 4.6 million in 1971, 5.9 million in 1981 and 7.7 million (projected) in 1991. The decadal growth rate of 29.7 percent remained constant for the decades 1961-71 and 1971-81. However, the growth rate declined to 28.9 percent during the decade 1981-91. The density of population (per km²) increased from 59 in 1981 to 76 in 1991.

Table 1.2 further shows that the percentage of the urban population increased from 18.6 percent in 1971 to 21.1 percent in 1981 and 23.8 percent in 1991. The sex ratio (number of females per 1,000 males) declined from 957 in 1971 to 892 in 1981, but then increased to 923 in 1991. The percentage of population age 0-14 years dropped from 42.9 percent in 1971 to 41.0 percent in 1981. The percentage of the population age 65 and above slightly increased from 3.1 percent in 1971 to 3.3 percent in 1981.

The percentage of the population belonging to scheduled castes (8.3) did not change significantly between 1971 and 1981. Literacy increased during the period 1971-81, although the level of literacy for females was very low in 1981. The proportion of males age 5 and above who are literate increased by 9.5 percentage points from 26.8 in 1971 to 36.3 in 1981 while for females the increase was only 6.6 percentage points, from 9.3 percent to 15.9 percent during the same period.

The crude birth rate in the state remained stable at 31.6 per 1,000 population during 1971-81. However, the total fertility rate declined marginally from 4.8 children per woman in

Table 1.2 Trends in basic demographic indicators

Trends in basic demographic indicators, Jammu and Kashmir, 1971-91

Index	1971	1981	1991
Population	4,616,632	5,987,389	7,718,700
Percent population increase (previous decade)	29.7	29.7	28.9
Density (Population/km ²)	U	59	76
Percent urban	18.6	21.1	23.8
Sex ratio	957	892	923
Percent 0-14 years old	42.9	41.0	U
Percent 65+ years old	3.1	3.3	U
Percent scheduled caste	8.3	8.3	U
Percent scheduled tribe	0.0	0.0	U
Percent literate			
Male	26.8	36.3	U
Female	9.3	15.9	U
Total	18.6	26.7	U
Crude birth rate	31.6	31.6	U
Crude death rate	10.8	9.0	U
Exponential growth rate	2.60	2.60	2.54
Total fertility rate	4.8	4.5	U
Infant mortality rate	71	72	U
Life expectancy			
Male	U	U	59.4 ^a
Female	U	U	64.2 ^a
Couple protection rate	8.2	11.5	20.0 ^b

^a1986-90^b1992

U: Not available

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

1971 to 4.5 in 1981. The crude death rate also declined from 10.8 per 1,000 population in 1971 to 9.0 in 1981. The exponential rate of population growth, which was constant at 2.60 percent from 1961-71 to 1971-1981, slightly declined to 2.54 during 1981-91 .

The state has not witnessed any decline in the infant mortality rate during the period 1971-81, as the rate remained constant at just above 70. Life expectancy increased by about three years for both males and females between 1981-86 and 1986-91 (data for 1981-86 not shown).

According to government service statistics, the percentage of couples effectively protected by various methods of family planning in Jammu and Kashmir increased steadily from 8.2 percent in 1971 to 11.5 in 1981 and 20.0 in 1992. Progress in the couple protection rate in Jammu and Kashmir during 1981-91, however, was considerably lower than witnessed by the country as a whole and the gap over the years has steadily widened.

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 Jammu and Kashmir, as in other states, are provided through a network of sub-centres, Primary Health Centres, community health 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 education 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 (PHCs), sub-centres and referral centres called Community Health Centres.

In Jammu and Kashmir, as in other states, the family welfare programme is voluntary, leaving the choice of the method to the individual couple. Although the programme has relied principally on sterilization, temporary contraceptive methods, such as the IUD, condom, and pill, are offered under a cafeteria approach. Mass media and interpersonal communications are utilized to explain the various methods of contraception and to remove sociocultural barriers among the people. To give a boost to the programme, the state government has modified from time to time the rates of incentive money and other charges allowed to the acceptors and service providers. The latest such revision was effected in 1983. Further, to popularise the sterilization programme among government employees during the Governor's Special Campaign Period in 1986-87, employees fulfilling certain conditions and whose spouses accepted sterilization were entitled to two personal increments in salary. 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

During the pre-Independence era Jammu and Kashmir lacked basic health care facilities. Both fertility and mortality in the state were very high. Natural calamities and absence of medical care took a heavy toll on life. However, with the advent of developmental planning the state has increased its health infrastructure and improved its health centres. Delivery of health services 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.

After India became a signatory to the Alma Ata Declaration of 1978 by committing itself to attain the goal of "Health for All" by 2000 A.D., the government started to concentrate on the development of the rural health infrastructure. This was done to provide health care services to the rural population which had, by and large, remained neglected. Efforts are now being made to ensure that health care facilities reach the most remote corners of the state. For example, the Rehabari-Sehat Programme (alternative to the Village Health Guide Programme) has been revitalized and extended. As of March 1991, there were 267 Primary Health Centres and 1,460 sub-centres in the state providing health and family welfare services to the rural population (Ministry of Health and Family Welfare, 1992).

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 policymakers, 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 socio-cultural 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 the interviewers and supervisors was conducted at the PRC. For the pretesting of the questionnaire, 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 Jammu used the standard Household Questionnaire, Woman's Questionnaire and Village Questionnaire which had been pretested. No state-specific questions were added to the NFHS questionnaires in Jammu. Questionnaires used in the Jammu NFHS

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.

were bilingual, consisting of questions in both Hindi and English. A pretest of the Hindi version of the questionnaire was carried out by the PRC during January, 1993. For the pretest, four female investigators were given training for one week. Pretesting was carried out in the districts of Jammu and Kathua. The Hindi version of the questionnaire was finalized on the basis of the pretest results.

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 their age, sex, marital status, education, occupation and relationship to the head of the household, as well as their 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 also included household birth and death records wherein all the live births and deaths that took place within the last two years in the household were recorded.

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.

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 of the child was measured using adjustable boards made of acrylic and other synthetic materials with a metal frame providing strength, suitable for measuring either the length or the height of children.

The Village Questionnaire was used to collect information on the villages covered in the NFHS. The Village Questionnaire collected information on various amenities available in the village such as electricity, water, transportation, and educational and health facilities.

2.3 Sample Design

The sample design adopted for the NFHS is a systematic, multi-stage stratified sample of households. The sample for the Jammu survey was designed to provide statistical estimates for the Jammu region as a whole and for urban and rural areas of the region. The universe consists of all urban and rural areas of the Jammu region of Jammu and Kashmir state.

Sample Size and Allocation

The overall target sample size for Jammu was 3,000 completed interviews with eligible women. The target sample size was set considering the size of the state and the time and resources available for the survey. In order to allow for nonresponse at the household and individual respondent levels, the target sample of women (ever-married women age 13-49 years) was increased to a total of 3,300 women. The proportion of the urban population within the total population was estimated to be only 17 percent in the Jammu region. Thus a proportional allocation to the urban area would require only slightly more than 500 cases which is fewer than the desirable minimum sample of 1,000. Therefore, to ensure that the urban sample size is large enough to provide reliable estimates, the required sampling rates were determined separately for urban and rural domains. However, within each domain, the sample is self-weighted.

The overall sampling fraction (f , the probability of selecting a woman) in Jammu was .005230 and was computed for each of the urban and rural domains as:

$$f = \frac{n \times 1.12}{N}$$

where n = number of women to be interviewed in a domain adjusted for 12 percent to account for nonresponse and other loss; and
 N = projected population of eligible women in a domain in November, 1992.

The Rural Sample: The Frame, Stratification and Selection

In rural areas, the 1981 Census list of villages served as the sampling frame, and a two-stage sample design was adopted with the selection of villages in the first stage and households in selected villages in the next stage, using only geographic stratification. Each district in the Jammu region was treated as a geographic region. All districts in Jammu were ordered so that they were geographically contiguous. Within each district the tahsils were ordered contiguously so that the last tahsil in one district bordered the first tahsil in the next. Within each tahsil the villages followed the census ordering, assuming this ordering was already contiguous. Villages with less than ten households were dropped when finalizing the sample. After the frame of the villages was thus arranged, 68 rural PSUs were selected systematically with probability proportion to size (PPS). The selected PSUs were listed and 30 households were selected systematically per sampling unit (PSU), which was either a village or a group of villages.

The probability of selecting a PSU from a strata (f_i) was computed as:

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

where a = number of PSUs selected (68, in this case)
 s_i = the population size of the selected PSU
 $\sum s_i$ = total rural population of the Jammu region

A household listing operation carried out in each of the selected PSUs about two weeks prior to the data collection provided the necessary frame for selecting households at the second sampling stage. The household listing operation consisted of preparing up-to-date notional and layout sketch maps of each selected PSU, 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 in the selected PSU. Eight household listing teams, each team comprising a lister and a mapper, were trained at CRRID, Chandigarh during 9-10 February 1993 by staff from the PRC, IIPS and CRRID. The household listing operation started on 2 May 1993. This operation was supervised by a supervisor in each of the survey zones. Attempts were made not to miss any household in the selected PSU while listing. The households to be interviewed were selected from the household lists using systematic sampling with equal probability.

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

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

During data collection, efforts were made to contact all the selected households 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 frame of urban blocks provided by the National Sample Survey Organization (NSSO) served as the sampling frame. The NSSO, which conducts regular socioeconomic surveys in the country, has sub-divided each of the cities/towns into blocks consisting of approximately 150-200 households. However the selection of cities/towns was based on the 1981 Census. In the first level of stratification, all cities and towns were sub-divided into three strata; self-selected cities, district headquarter towns and other towns. A self-selecting city was defined as one whose selection probability was unity. Such cities had a 1981 population larger than the sampling interval. In self-selecting cities, the sample was selected according to a two-stage design: selection of the required number of NSS urban blocks with equal probabilities, followed by selection of households in each of the selected blocks. The urban sample allocation was proportionate to the size of the city/town.

For district headquarters and other non-self selecting cities and towns, a three-stage sample was used: selection of towns with PPS, followed by selection of two NSS blocks per selected town with equal probabilities, followed by selection of households from each selected block.

A total of 50 blocks within 12 cities/towns were selected in Jammu. The probability of selecting a block (f_1) in a city/town was calculated as follows:

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

where a = number of blocks selected in the city/town
 s_i = the population size of the selected block
 Σs_i = the population size of the city/town

As in the rural areas, a household listing was carried out in the selected blocks and an average of 20 households per block was selected systematically. The probability of selecting a household from a selected block (f_2) was computed as:

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

Sample Weights

In Jammu, the sample was weighted at the level of sampling domains (urban and rural areas) in the state. The final weights included in the state data sets are design weights (as per the sample design) adjusted for nonresponse, and normalized so that the total number of weighted cases is equal to the total number of unweighted cases.

Design Weights

Let w_{Di} be the design weight for the i^{th} domain. Then

$$w_{Di} = \frac{f}{f_i}$$

in which

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

and

$$f_i = \frac{n_i}{N_i}$$

where f is the overall sampling fraction (i.e., for the entire sample in Jammu) and f_i is the domain sampling fraction. Note that $n = \sum n_i$ and $N = \sum N_i$, where n is the number of women selected for the survey, and N is the total number of women age 13-49.

Adjustment for Nonresponse

Let R_{Hi} and R_{wi} be the household response rate and the individual (women's) response rate, respectively. Then the household weight w_{Hi} is calculated as follows:

$$w_{Hi} = \frac{w_{Di}}{R_{Hi}}$$

The individual weight w_{wi} is calculated as follows:

$$w_{wi} = \frac{w_{Di}}{R_{Hi} \times R_{wi}}$$

Normalized Weights for Households and Women

After adjustment for nonresponse, the weights are normalized so that the total number of weighted cases is equal to the total number of unweighted cases. The final household weight is:

$$W_{HI} = \frac{\sum n_i}{\sum w_{HI} \cdot n_i} \times w_{HI}$$

Similarly for the individual weight:

$$W_{WI} = \frac{\sum n_i}{\sum w_{WI} \cdot n_i} \times w_{WI}$$

Village Weights

Let f_{1hi} be the selection probability of the i^{th} village in the h^{th} stratum², and let W_D be the design weight for the domain in which the village is located. Then the village weights are calculated as follows:

$$w_{hi}' = \frac{1}{f_{1hi}} \times W_D$$

These weights are then normalized so that the weighted number of villages is equal to the unweighted number of villages. The normalized village weights are calculated as follows:

$$w_{hi} = w_{hi}' \times \frac{A}{\sum_{hj} w_{hj}'}$$

where A is the total number of villages selected in Jammu.

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

² Within each sampling domain in Jammu, the villages were ordered according to a specified stratification scheme prior to selection.

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 CRRID were trained at the first and second Training of the Trainers Workshops held at Lonavala in December 1991 and July 1992, respectively. Two persons from the PRC were trained at the third Training of the Trainers Workshop held at IIPS, Bombay in October 1992.

The selection of field interviewers and household listers was initially done at Jammu. However, due to the poor response from local female candidates, some field interviewers who had already worked in the NFHS in Himachal Pradesh and Haryana were also selected. All the field interviewers and editors were females and had received either a bachelor's or a master's degree. The supervisors were male. Two persons from the PRC were deputed to the survey as intermediate supervisors.

Training of field staff for the main survey was conducted at CRRID, Chandigarh during 9-29 February 1993. Thirty persons (18 females and 12 males) were trained by the staff from the PRC, IIPS and CRRID. Representatives of Macro International were also present during training and field practice sessions.

The three-week training course consisted of instruction in interviewing techniques and field procedures for the survey, a detailed review of each item in the questionnaire, instruction 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 family planning at the beginning of the section on contraception in the Woman's Questionnaire and one on maternal and child health practices, including immunizations, at the beginning of the section on health of children. Medical doctors conversant with the state's Maternal and Child Health (MCH) programme were the resource persons for these lectures. 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 Jammu was carried out by two interviewing teams, each team consisting of one field supervisor, one field editor and eight female interviewers (see Appendix C for a complete list of survey staff). The fieldwork started on 6 May 1993 and ended by the middle of August, 1993. Assignment of Primary Sampling Units (PSUs) to the teams and various logistical decisions were made by the staff of CRRID. Each team was allowed a fixed period of time to complete fieldwork in a PSU before moving to the next PSU.

The two teams worked independently in the same district. 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 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 collected information on the village using the Village Questionnaire. In addition, the field supervisor conducted spot-checks to verify the accuracy of information collected on the eligibility of respondents. Throughout the survey, the staff from CRRID, 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

Every survey is subject to a variety of field problems, which cannot be fully anticipated. The major problems encountered in the Jammu NFHS are highlighted below.

Transportation

Each field team was provided with a vehicle to visit the selected PSUs. However, both teams experienced difficulty in reaching PSUs located in hilly regions due to the absence of proper approachable roads. These PSUs were covered by foot and by using local means of transportation. Unexpected heavy rains during the month of July caused landslides in some parts of the Udhampur district. Consequently, road links to some of the remote areas were blocked and data collection in two selected PSUs could not be undertaken.

Household Identification

Most of the Jammu region has hilly terrain, and villages and households are scattered. Consequently, good village maps were required to identify the sample households from the selected PSU, which in some cases was previously a group of villages. Maps drawn during house listing were not always satisfactory and sometimes even missed some households. Often the interviewers were forced to abandon the map and rely on knowledgeable local people to identify the sample households.

Village Questionnaire

The village Panchayat which normally keeps information regarding the village was not functioning in the state. Thus it was difficult for the supervisors to get knowledgeable respondents for the Village Questionnaire. Responses vary greatly on some aspects of the village, therefore, some information from the Village Questionnaire may be subject to response errors.

Security of Teams

Some of the selected PSUs were situated near the India-Pakistan border. Due to security problems, the teams were advised to take full precautions before surveying these PSUs. On some occasions, both the household listing and interviewing teams had to pass through security checks, causing substantial delays.

When the teams started data collection in Doda district, security problems in the district were critical and the field work in the rural PSUs of the district could not be undertaken. Consequently these PSUs had to be replaced.

2.6 Data Processing

All completed questionnaires for the Jammu NFHS were sent to the office of CRRID in Chandigarh for data processing. This process consisted of office editing, coding, data entry and machine editing. Although field editors examined the completed questionnaires in the field, the questionnaires were re-edited at the CRRID 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 included 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 four data entry operators were responsible for data entry and computer editing operations. The data were processed with four microcomputers using 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 30 August 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 Jammu was prepared in September, 1993. The preliminary report was primarily meant for disseminating the data on basic demographic and health parameters among programme planners, policymakers and administrators soon after the data collection was over. The report contained fifteen tables, five graphs and a short description of the findings on fertility, knowledge and use of contraception, utilization of antenatal services, immunization, feeding practices and health of children, and infant and child mortality.

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, 1993. The final tables for Jammu were produced at IIPS based on this tabulation plan.

2.7 Areas for Reporting Survey Results

In this report, survey results are reported for the Jammu region of Jammu and Kashmir as well as separately for the urban and rural areas of the region.

2.8 Sample Implementation

Table 2.1 shows the results of household and individual interviews, response rates for the survey, and reasons for nonresponse. Of the 2,960 households selected in Jammu, interviews were completed in 96 percent of the cases. In 0.5 percent of the cases, the selected households were found to be vacant. The household response rate (the number of households interviewed per 100 occupied households) was 97 percent. A slightly higher response rate for the household interview was recorded in rural areas of Jammu (97 percent) than in urban areas (96 percent).

In the interviewed households, 2,992 women were identified as eligible for the individual interview. Interviews were successfully completed with 92 percent of the eligible women. The individual response rate was almost the same in urban and rural areas.

Nonresponse at both the household and individual levels was primarily 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 give the interview were few (overall, only 0.3 percent). As in most sample surveys, refusals were slightly higher in urban areas than in rural areas.

Table 2.1 Sample results

Sample results for households and eligible women (unweighted), Jammu region of J & K, 1993

Result	Urban		Rural		Total	
	Number	Percent	Number	Percent	Number	Percent
Households selected	1033	100.0	1927	100.0	2960	100.0
Households completed (C)	988	95.6	1851	96.1	2839	95.9
Households with no						
competent respondent (HP)	2	0.2	22	1.1	24	0.8
Households absent (HA)	32	3.1	34	1.8	66	2.2
Households postponed (P)	1	0.1	0	--	1	--
Households refused (R)	4	0.4	2	0.1	6	0.2
Households vacant/no dwelling (DV)	6	0.6	10	0.5	16	0.5
Dwellings destroyed (DD)	0	--	1	0.1	1	--
Other (O)	0	--	7	0.4	7	0.2
Households occupied	1027	100.0	1909	100.0	2936	100.0
Households interviewed	988	96.2	1851	97.0	2839	96.7
Households not interviewed	39	3.8	58	3.0	97	3.3
Household response rate (HHR) ¹	NA	96.2	NA	97.0	NA	96.7
Eligible women	1022	100.0	1970	100.0	2992	100.0
Women interviewed (EWC)	945	92.5	1821	92.4	2766	92.4
Women not at home (EWNH)	64	6.3	128	6.5	192	6.4
Women refused (EWR)	6	0.6	3	0.2	9	0.3
Women partly interviewed (EWPC)	0	--	2	0.1	2	0.1
Other (EWO)	7	0.7	16	0.8	23	0.8
Individual response rate (EWRR) ²	NA	93.1	NA	93.2	NA	93.2
Overall response rate (ORR) ³	NA	89.6	NA	90.4	NA	90.1

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:

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

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

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

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 household and individual respondents in the NFHS. It should be emphasized that the results presented here and in succeeding chapters apply only to the Jammu region of Jammu and Kashmir and are not comparable with results from the censuses of India and the Sample Registration System, which ordinarily refer to the entire state of Jammu and Kashmir.

3.1 Age-Sex Distribution of the Household Population

The NFHS household population can be tabulated in two ways: *de facto* (the place where each person slept the night before the survey interview) or *de jure* (the place of usual residence). The *de facto* and *de jure* populations in Jammu may differ because of temporary population movements. Table 3.1 shows the *de facto* population in the NFHS household sample, classified by age, sex and residence. The total weighted *de facto* sample population is 16,810. The sample is 17 percent urban and 83 percent rural.

The age distribution is typical of high fertility populations, with a higher proportion of the population in the younger age groups. Thirty-seven percent of the population is below 15 years of age and only 9 percent is 60 years or more. The child population (below age 15) is higher in rural areas (39 percent) than in urban areas (31 percent).

Examination of the single-year age distributions (see Appendix Table B.1 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 Myer's Index (United Nations, 1955). This index provides an overall summary of preferences for, or avoidance of, each of the ten digits 0 to 9. The Myer's Indices computed for the male and female populations are 49.1 and 22.8 respectively, indicating better age reporting for females than males. Figure 3.1 also indicates that the age distribution in general is smoother for women in the age group 13-49 than for males and other females. The better age reporting for females in this age group 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 used 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. The age in the Woman's Questionnaire is based on the month and year of her birth, if known, or on her reported age otherwise. A variety of probing techniques were adopted to elicit accurate age information from the respondent to the Woman's Questionnaire.

Age of the woman is one of the most important items of information collected in any demographic survey, because many demographic statistics, and especially fertility estimates, depend on accurate reporting of women's ages. Recognizing the difficulties of obtaining

Table 3.1 Household population by age and sexPercent distribution of the *de facto* household population by age, according to sex and residence, Jammu Region of J & K, 1993

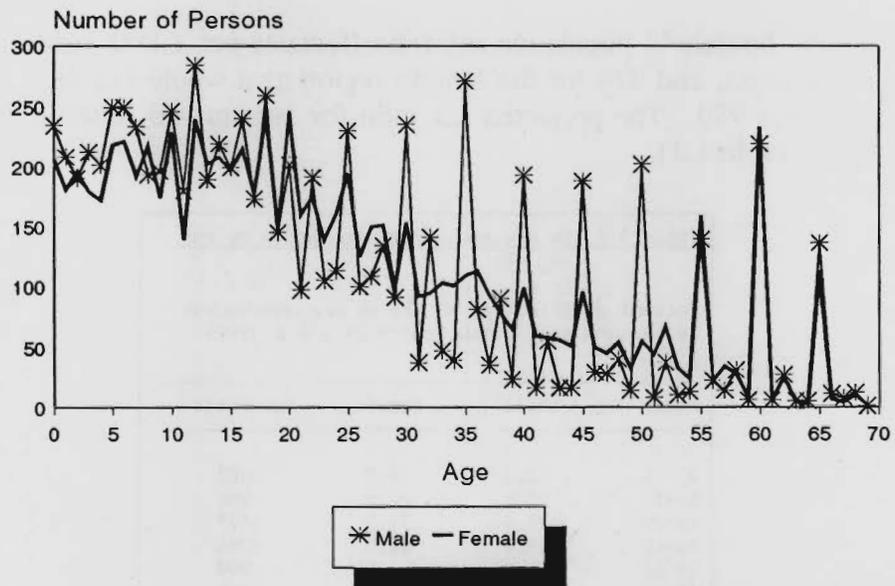
Age	Urban			Rural			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
< 1	2.2	1.8	2.0	2.9	2.6	2.7	2.7	2.5	2.6
1 - 4	8.4	7.2	7.8	9.8	9.1	9.4	9.5	8.8	9.2
5 - 9	10.4	10.0	10.2	13.7	12.8	13.3	13.2	12.3	12.7
10-14	10.7	10.5	10.6	13.6	12.6	13.1	13.1	12.3	12.7
15-19	10.6	10.5	10.5	12.2	12.1	12.2	11.9	11.8	11.9
20-24	9.4	11.9	10.6	8.1	10.4	9.2	8.3	10.6	9.4
25-29	9.4	9.7	9.5	7.5	8.5	8.0	7.8	8.7	8.2
30-34	8.0	8.0	8.0	5.4	6.3	5.9	5.9	6.6	6.2
35-39	7.3	6.1	6.7	5.6	5.4	5.5	5.9	5.5	5.7
40-44	4.6	4.9	4.7	3.3	3.7	3.5	3.5	3.9	3.7
45-49	3.8	4.4	4.1	3.4	3.2	3.3	3.5	3.4	3.4
50-54	3.7	3.9	3.8	3.1	2.4	2.8	3.2	2.7	2.9
55-59	2.9	3.7	3.3	2.4	2.9	2.6	2.5	3.0	2.8
60-64	3.6	2.6	3.1	3.0	3.4	3.2	3.1	3.3	3.2
65-69	2.2	1.9	2.0	1.9	1.6	1.8	2.0	1.6	1.8
70-74	1.5	1.3	1.4	2.0	1.4	1.7	1.9	1.4	1.7
75-79	0.5	0.4	0.4	0.7	0.4	0.6	0.7	0.4	0.5
80+	1.0	1.2	1.1	1.4	1.2	1.3	1.3	1.2	1.3
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	1449	1409	2858	7065	6887	13952	8514	8295	16810
Sex ratio	NA	NA	972	NA	NA	975	NA	NA	974

NA: Not applicable

accurate age data in India, the NFHS made special efforts to minimize age reporting errors. The training of interviewers placed great emphasis on procedures for obtaining as accurate information as possible on women's ages. For women who did not know their age or date of birth, several procedures for probing age were used. One method was based on the age of the woman at different significant events in her life, such as the birth of her first child, her age at marriage, age at menarche, and on the time gap between these events. Reference calendars were also used to locate the women's births in relation to the dates of major national events. Although age errors can not be totally eliminated, the comparisons with the single-year age distribution of the males suggest that probing and other elaborate measures used for arriving at the age of the eligible women have helped in reducing the biases in age reporting due to digit preference.

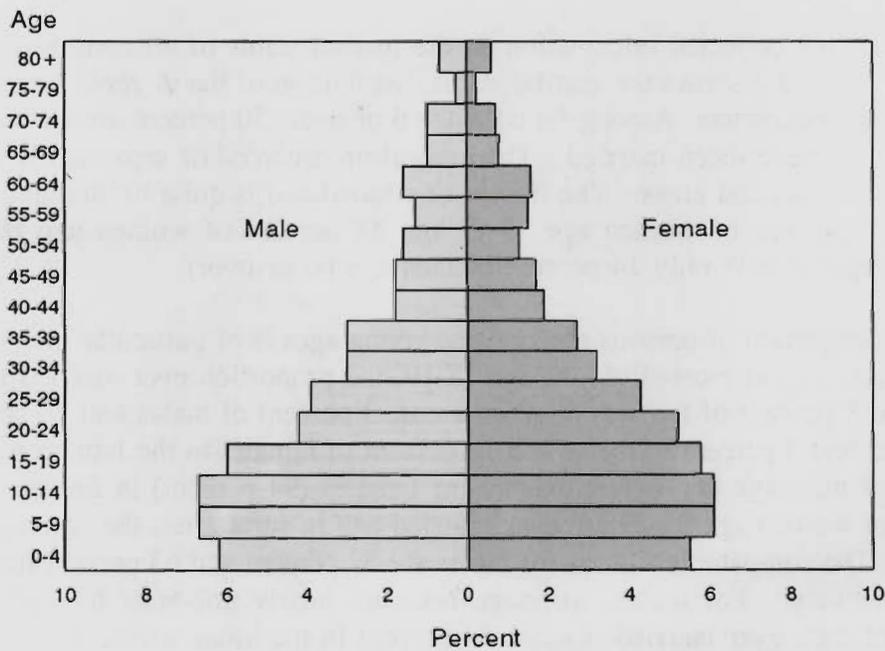
The distribution of five-year age groups is shown in the population pyramid in Figure 3.2. The irregular dip in the proportion of women age 50-54 is indicative of a possible shifting of women's ages from the 50-54 age group to the 45-49 and 55-59 age groups. This is unusual, because in Demographic and Health Surveys, there is usually a slight tendency to increase the age, presumably to reduce the workload of the interviewer (Rutstein and Bicego, 1990). However, the impact of this apparent shifting on the quality of data on fertility and contraception is minimal because of the small number of older women involved.

Figure 3.1
 Number of Persons Reported at Each Age
 by Sex



NFHS, Jammu Region of J & K, 1993

Figure 3.2
 Population Pyramid of Jammu



NFHS, Jammu Region of J & K, 1993

Table 3.2 provides information from the NFHS on sex ratios (number of females per 1,000 males) by age and on population proportions by age and sex for Jammu. The pattern of sex ratios by age is highly irregular, rising sharply up to age 15-29, then falling thereafter (precipitously between age 50-64 and 65+). About two-thirds of the male and female populations are below age 30.

The *de facto* household population sex ratio (females per 1,000 males) is 972 in urban areas, 975 in rural areas, and 974 for the Jammu region as a whole (Table 3.1). The *de jure* population sex ratio is 980. The projected sex ratio for Jammu and Kashmir state as a whole for 1991 was 922 (Table 1.1).

Age	Male	Female	Sex ratio
0 - 4	12.2	11.0	882
5 -14	26.2	24.5	916
15-29	28.4	31.3	1077
30-49	18.1	19.5	1054
50-64	9.0	9.1	999
65+	6.0	4.6	745
Total	100.0	100.0	980
Median age	19.7	20.9	NA

NA: Not applicable

3.2 Marital Status

The NFHS collected information on the marital status of all household members age 6 and above. Table 3.3 shows the marital status distribution of the *de facto* household population by age, sex and residence. Among females age 6 or over, 50 percent are currently married and 42 percent have never been married. The proportion divorced or separated is small in Jammu, in urban as well as rural areas. The impact of widowhood is quite limited until the older ages. However, 23 percent of women age 55-59 and 54 percent of women age 60 and above are widows (compared with only 14 percent of men age 60 or over).

The proportion of persons marrying at young ages is of particular interest because of its impact on fertility and morbidity. At age 15-19, the proportion ever married is only 1 percent of males and 8 percent of females in urban areas, 3 percent of males and 20 percent of females in rural areas and 3 percent of males and 18 percent of females in the Jammu region as a whole. By age 25-29 marriage is nearly universal for females (94 percent) in Jammu. In urban areas 85 percent of women age 25-29 are ever married and in rural areas the corresponding figure is 96 percent. The comparable figures for males are 52 percent and 63 percent for urban and rural areas, respectively. For males, marriage becomes nearly universal by age 30-34 when the proportion of men ever married reaches 89 percent in the urban areas, 93 percent in the rural areas and 92 percent in the Jammu region as a whole. Overall women marry at much

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, sex and residence, Jammu Region of J & K, 1993

Age	Marital status						Total percent
	Never married	Currently married	Widowed	Divorced	Separated	DK/missing	
URBAN							
Male							
6 -12	100.0	--	--	--	--	--	100.0
13-14	100.0	--	--	--	--	--	100.0
15-19	99.0	0.7	0.3	--	--	--	100.0
20-24	90.4	9.6	--	--	--	--	100.0
25-29	47.9	51.7	0.4	--	--	--	100.0
30-34	10.8	88.8	--	0.4	--	--	100.0
35-39	4.5	95.0	0.5	--	--	--	100.0
40-44	0.8	99.2	--	--	--	--	100.0
45-49	1.9	97.2	0.9	--	--	--	100.0
50-54	--	97.1	2.9	--	--	--	100.0
55-59	--	97.6	2.4	--	--	--	100.0
60+	2.1	83.5	14.5	--	--	--	100.0
Total	50.0	48.1	1.8	--	--	--	100.0
Female							
6 -12	99.7	--	0.3	--	--	--	100.0
13-14	99.1	0.9	--	--	--	--	100.0
15-19	92.3	7.7	--	--	--	--	100.0
20-24	53.1	46.3	0.3	--	0.3	--	100.0
25-29	14.8	83.7	1.1	--	0.4	--	100.0
30-34	2.8	94.9	0.9	--	1.4	--	100.0
35-39	--	94.5	3.6	0.6	1.2	--	100.0
40-44	0.8	84.1	13.6	0.8	0.8	--	100.0
45-49	--	89.9	10.1	--	--	--	100.0
50-54	1.0	84.8	13.3	--	1.0	--	100.0
55-59	1.0	78.0	21.0	--	--	--	100.0
60+	--	36.9	63.1	--	--	--	100.0
Total	40.3	50.7	8.5	0.1	0.4	--	100.0
RURAL							
Male							
6 -12	99.4	0.2	0.2	--	0.2	0.1	100.0
13-14	100.0	--	--	--	--	--	100.0
15-19	96.7	2.6	0.1	0.1	0.4	--	100.0
20-24	81.5	18.2	--	0.2	--	--	100.0
25-29	37.4	61.9	--	0.2	0.5	--	100.0
30-34	7.2	92.5	--	--	0.3	--	100.0
35-39	2.9	95.2	1.0	0.3	0.6	--	100.0
40-44	0.5	97.3	2.2	--	--	--	100.0
45-49	1.0	97.4	1.5	--	--	--	100.0
50-54	2.3	90.8	5.8	--	1.2	--	100.0
55-59	--	91.1	7.4	--	1.5	--	100.0
60+	1.6	84.5	13.3	0.2	0.4	--	100.0
Total	54.8	42.6	2.1	0.1	0.3	--	100.0

Table 3.3 Marital status of the household population (Contd.)

Percent distribution of the *de facto* household population age 6 and above by marital status, according to age, sex and residence, Jammu Region of J & K, 1993

Age	Marital status						Total percent
	Never married	Currently married	Widowed	Divorced	Separated	DK/missing	
RURAL Female							
6 -12	99.7	0.1	0.2	--	--	--	100.0
13-14	99.6	0.4	--	--	--	--	100.0
15-19	79.9	20.1	--	--	--	--	100.0
20-24	32.6	66.5	0.5	--	0.4	--	100.0
25-29	4.5	93.5	1.1	0.6	0.2	--	100.0
30-34	1.4	94.8	3.2	0.3	0.3	--	100.0
35-39	--	93.9	4.1	0.7	1.4	--	100.0
40-44	--	92.6	6.4	--	1.0	--	100.0
45-49	--	89.0	10.4	--	0.6	--	100.0
50-54	--	86.6	12.7	0.7	--	--	100.0
55-59	--	76.1	23.3	0.6	--	--	100.0
60+	0.2	47.2	51.7	0.9	--	--	100.0
Total	42.3	49.8	7.4	0.3	0.2	--	100.0
TOTAL Male							
6 -12	99.4	0.2	0.2	--	0.2	0.1	100.0
13-14	100.0	--	--	--	--	--	100.0
15-19	97.0	2.3	0.2	0.1	0.4	--	100.0
20-24	83.2	16.6	--	0.2	--	--	100.0
25-29	39.5	59.8	0.1	0.2	0.4	--	100.0
30-34	8.0	91.6	--	0.1	0.3	--	100.0
35-39	3.2	95.2	0.9	0.3	0.5	--	100.0
40-44	0.6	97.7	1.7	--	--	--	100.0
45-49	1.2	97.4	1.4	--	--	--	100.0
50-54	1.9	92.0	5.2	--	0.9	--	100.0
55-59	--	92.4	6.4	--	1.2	--	100.0
60+	1.7	84.3	13.5	0.2	0.3	--	100.0
Total	54.0	43.6	2.1	0.1	0.3	--	100.0
Female							
6 -12	99.7	0.1	0.2	--	--	--	100.0
13-14	99.6	0.4	--	--	--	--	100.0
15-19	81.8	18.2	--	--	--	--	100.0
20-24	36.5	62.7	0.5	--	0.3	--	100.0
25-29	6.5	91.7	1.1	0.5	0.2	--	100.0
30-34	1.7	94.8	2.7	0.2	0.5	--	100.0
35-39	--	94.0	4.0	0.7	1.3	--	100.0
40-44	0.2	90.8	7.9	0.2	0.9	--	100.0
45-49	--	89.2	10.3	--	0.4	--	100.0
50-54	0.2	86.1	12.8	0.6	0.2	--	100.0
55-59	0.2	76.5	22.8	0.5	--	--	100.0
60+	0.2	45.6	53.5	0.8	--	--	100.0
Total	42.0	50.0	7.6	0.2	0.3	--	100.0
DK: Don't know							
-- Less than 0.05 percent							

younger ages than men and both men and women in rural areas marry at much younger ages than in urban areas. 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 (age, sex, marital status, religion and caste/tribe) as well as the number of usual household members. About 87 percent and 85 percent of household heads in urban and rural areas, respectively, are males. The median age of household heads also varies slightly by residence, being about 48 years in urban areas and 46 years in rural areas. In urban areas, household heads are slightly more concentrated in the middle age groups of 30-44 and 45-59 than in rural areas. Overall 77 percent of household heads are Hindus, 17 percent are Muslims and 6 percent are christians. The majority of Muslims live in rural areas, and their proportion there (20 percent) is also greater than in urban areas. Thirty percent of household heads are classified as belonging to scheduled castes. Unlike in other states in India, no tribe in Jammu and Kashmir is identified as scheduled tribe by the state government. However, in the case of 26 households (1 percent) the heads have been reported as belonging to scheduled tribes and they are included in the "other" category. The mean NFHS household size is 5.9 persons per household. It is somewhat lower in urban areas (5.4 persons per household) than in rural areas (6.0 persons per household).

Table 3.5 shows the percent distribution of the *de facto* household population by age, residence and sex. All subsequent tables in this chapter and in the following chapters are based on the *de facto* sample, unless otherwise specified¹. Overall, 6 percent of the *de facto* population listed in the sample households at the time of the interview are visitors who do not usually live in the household. Visiting is common among women in their early childbearing years and their children. This pattern results from the practice of women returning to their parents' house for delivery (particularly of the first or second child) and remaining there during the postpartum period. Among males, visiting is more common in the age groups 30-34 and 35-39, whereas among females visiting is more common in the age groups 20-24, 25-29 and 30-34. Visits occur at a higher rate in urban areas (7 percent) than in rural areas (5 percent).

3.4 Educational Attainment

The educational level of household members is an important determinant of socioeconomic development. The level of educational achievement 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* male and female household population age 6 and above, by age and residence. In the age group 6 and above male illiteracy is 12 percent in urban areas compared with 29 percent in rural areas. The comparable figures for females are 23 percent and 54 percent in urban and rural areas, respectively. With respect

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

Table 3.4 Household composition

Percent distribution of households by selected characteristics of household head and size, according to residence, Jammu Region of J & K, 1993

Characteristic	Residence		
	Urban	Rural	Total
Sex of household head			
Male	86.9	85.1	85.5
Female	13.1	14.9	14.5
Age of household head			
Less than 30	6.6	10.6	9.9
30-44	35.2	34.6	34.7
45-59	31.0	28.5	29.0
60+	27.2	26.3	26.4
Median age	48.1	45.7	45.9
Marital status of household head			
Never married	1.8	1.3	1.4
Currently married	86.3	88.8	88.3
Widowed	11.8	9.3	9.8
Divorced	--	0.2	0.2
Separated	--	0.4	0.4
Religion of household head			
Hindu	86.9	75.0	77.2
Muslim	4.8	19.7	17.0
Christian	7.7	5.2	5.7
Other	0.6	0.1	0.2
Caste/tribe of household head			
Scheduled caste	16.5	33.3	30.2
Scheduled tribe	0.1	1.0	0.9
Other	83.4	65.7	68.9
Number of usual members			
1	2.1	1.4	1.5
2	6.6	5.7	5.8
3	9.3	7.8	8.1
4	20.6	13.5	14.8
5	19.9	17.2	17.7
6	16.9	18.2	17.9
7	9.3	13.0	12.3
8	5.9	8.8	8.3
9+	9.3	14.6	13.6
Mean size	5.4	6.0	5.9
Total percent	100.0	100.0	100.0
Number of households	515	2325	2839

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

-- Less than 0.05 percent

Table 3.5 Usual residents and visitors

Percent distribution of the *de facto* household population by resident status in the household according to age, residence and sex, Jammu Region of J & K, 1993

Characteristic	Resident status		Total percent	Number
	Usual resident	Visitor		
MALE				
Age				
< 1	88.5	11.5	100.0	234
1 - 4	93.1	6.9	100.0	811
5 -14	96.9	3.1	100.0	2238
15-19	96.6	3.4	100.0	1016
20-24	93.8	6.2	100.0	707
25-29	92.6	7.4	100.0	663
30-34	89.9	10.1	100.0	499
35-39	91.2	8.8	100.0	501
40-44	92.3	7.7	100.0	296
45-49	94.6	5.4	100.0	299
50+	98.3	1.7	100.0	1250
Residence				
Urban	94.3	5.7	100.0	1449
Rural	95.0	5.0	100.0	7065
Total	94.9	5.1	100.0	8514
FEMALE				
Age				
< 1	88.5	11.5	100.0	206
1 - 4	91.6	8.4	100.0	727
5 -14	95.4	4.6	100.0	2040
15-19	94.8	5.2	100.0	980
20-24	90.7	9.3	100.0	881
25-29	91.4	8.6	100.0	721
30-34	91.6	8.4	100.0	546
35-39	95.8	4.2	100.0	458
40-44	98.8	1.2	100.0	324
45-49	99.4	0.6	100.0	279
50+	96.4	3.6	100.0	1134
Residence				
Urban	92.1	7.9	100.0	1409
Rural	94.6	5.4	100.0	6887
Total	94.2	5.8	100.0	8295
TOTAL				
Age				
< 1	88.5	11.5	100.0	440
1 - 4	92.4	7.6	100.0	1538
5 -14	96.2	3.8	100.0	4278
15-19	95.7	4.3	100.0	1996
20-24	92.1	7.9	100.0	1588
25-29	92.0	8.0	100.0	1384
30-34	90.8	9.2	100.0	1045
35-39	93.4	6.6	100.0	958
40-44	95.7	4.3	100.0	620
45-49	96.9	3.1	100.0	578
50+	97.4	2.6	100.0	2384
Residence				
Urban	93.2	6.8	100.0	2858
Rural	94.8	5.2	100.0	13952
Total	94.5	5.5	100.0	16810

Table 3.6 Educational level of the household population

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, sex and residence, Jammu Region of J & K, 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			
URBAN Male									
6 - 9	11.8	88.2	--	--	--	--	100.0	115	1.6
10-14	4.7	31.6	47.1	16.5	--	--	100.0	155	5.8
15-19	9.5	2.4	13.9	40.5	30.6	3.1	100.0	153	9.5
20-24	5.7	1.9	6.1	24.1	38.7	23.4	100.0	136	10.6
25-29	9.2	2.3	4.6	23.4	33.3	27.2	100.0	136	10.5
30-34	7.2	1.3	6.3	15.2	34.1	35.9	100.0	116	10.8
35-39	5.0	0.5	7.9	16.8	41.1	28.7	100.0	105	10.8
40-44	10.2	0.8	8.6	10.9	30.5	39.1	100.0	67	10.9
45-49	15.1	2.8	6.6	15.1	21.7	38.7	100.0	55	10.6
50+	28.6	5.2	10.3	11.7	24.6	19.7	100.0	222	8.8
Total	11.7	13.9	12.4	18.2	25.0	18.8	100.0	1260	9.4
Female									
6 - 9	18.0	82.0	--	--	--	--	100.0	104	2.0
10-14	2.8	26.1	54.2	16.9	--	--	100.0	148	6.1
15-19	8.8	2.8	9.2	40.1	36.3	2.8	100.0	148	9.7
20-24	12.4	1.2	6.2	16.8	32.3	31.1	100.0	168	10.7
25-29	12.2	1.5	6.8	12.2	37.3	30.0	100.0	137	10.6
30-34	14.8	1.9	7.4	15.7	33.3	26.9	100.0	112	10.5
35-39	24.8	3.0	13.3	13.3	27.9	17.6	100.0	86	9.4
40-44	26.5	0.8	13.6	14.4	22.7	22.0	100.0	69	9.1
45-49	37.8	1.7	15.1	10.1	17.6	17.6	100.0	62	5.9
50+	62.3	4.7	10.7	10.7	7.9	3.7	100.0	210	0.0
Total	22.8	11.9	14.0	15.8	21.2	14.2	100.0	1244	8.2
Total									
6 - 9	14.7	85.3	--	--	--	--	100.0	219	1.8
10-14	3.8	28.9	50.6	16.7	--	--	100.0	303	5.9
15-19	9.2	2.6	11.6	40.3	33.4	2.9	100.0	301	9.6
20-24	9.4	1.5	6.2	20.1	35.2	27.6	100.0	304	10.7
25-29	10.7	1.9	5.7	17.7	35.3	28.6	100.0	273	10.6
30-34	10.9	1.6	6.8	15.5	33.7	31.4	100.0	229	10.7
35-39	13.9	1.6	10.4	15.3	35.1	23.7	100.0	191	10.4
40-44	18.5	0.8	11.2	12.7	26.5	30.4	100.0	135	10.4
45-49	27.1	2.2	11.1	12.4	19.6	27.6	100.0	117	9.3
50+	44.9	4.9	10.5	11.2	16.5	11.9	100.0	432	5.1
Total	17.2	12.9	13.2	17.0	23.1	16.5	100.0	2504	8.9
RURAL Male									
6 - 9	37.0	63.0	--	--	--	--	100.0	756	1.3
10-14	8.7	44.5	41.7	5.1	--	--	100.0	963	4.8
15-19	8.4	3.6	28.1	45.6	13.7	0.6	100.0	863	8.6
20-24	14.1	1.8	11.0	34.5	32.1	6.6	100.0	571	9.5
25-29	20.5	1.7	11.4	30.5	26.2	9.8	100.0	527	9.1
30-34	24.6	2.0	12.1	26.9	27.2	7.2	100.0	383	8.8
35-39	32.4	3.2	11.1	16.8	29.8	6.7	100.0	396	8.4
40-44	36.6	4.4	10.4	19.1	21.3	8.2	100.0	230	7.4
45-49	39.2	5.2	14.4	16.5	21.1	3.6	100.0	244	5.7
50+	67.0	5.7	12.6	6.8	6.4	1.5	100.0	1027	0.0
Total	28.8	17.7	17.6	18.9	13.9	3.2	100.0	5960	5.5

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, sex and residence, Jammu Region of J & K, 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			
RURAL Female									
6 - 9	40.2	59.8	0.0	--	--	--	100.0	699	1.2
10-14	21.2	35.6	36.7	6.5	--	--	100.0	870	4.5
15-19	33.9	3.6	24.7	28.5	8.9	0.3	100.0	833	6.5
20-24	41.4	1.4	14.1	18.5	20.6	4.0	100.0	713	5.7
25-29	53.5	1.9	13.5	13.3	13.3	4.3	100.0	584	0.0
30-34	62.3	1.7	10.4	11.0	11.9	2.6	100.0	433	0.0
35-39	70.6	1.0	10.8	6.8	9.5	1.4	100.0	372	0.0
40-44	78.8	0.5	12.8	3.4	3.0	1.5	100.0	255	0.0
45-49	89.0	1.7	2.9	2.3	2.9	1.2	100.0	217	0.0
50+	94.7	1.0	3.0	1.1	0.3	--	100.0	924	0.0
Total	53.5	13.6	14.5	10.2	6.8	1.3	100.0	5901	0.0
Total									
6 - 9	38.6	61.4	--	--	--	--	100.0	1455	1.2
10-14	14.7	40.3	39.3	5.8	--	--	100.0	1833	4.7
15-19	21.0	3.6	26.4	37.2	11.3	0.4	100.0	1695	7.9
20-24	29.2	1.6	12.7	25.6	25.7	5.2	100.0	1285	8.5
25-29	37.9	1.8	12.5	21.5	19.4	6.9	100.0	1111	6.9
30-34	44.6	1.8	11.2	18.5	19.1	4.8	100.0	816	5.6
35-39	50.9	2.1	11.0	11.9	20.0	4.1	100.0	767	0.0
40-44	58.8	2.3	11.7	10.9	11.7	4.7	100.0	485	0.0
45-49	62.7	3.5	9.0	9.8	12.5	2.5	100.0	461	0.0
50+	80.1	3.5	8.0	4.1	3.5	0.8	100.0	1951	0.0
Total	41.1	15.7	16.0	14.5	10.4	2.3	100.0	11861	3.3
TOTAL Male									
6 - 9	33.7	66.3	--	--	--	--	100.0	871	1.3
10-14	8.2	42.7	42.5	6.7	--	--	100.0	1118	5.0
15-19	8.6	3.4	26.0	44.8	16.2	1.0	100.0	1016	8.8
20-24	12.5	1.8	10.1	32.5	33.4	9.8	100.0	707	9.7
25-29	18.2	1.8	10.0	29.0	27.7	13.3	100.0	663	9.4
30-34	20.5	1.8	10.8	24.2	28.8	13.9	100.0	499	9.3
35-39	26.6	2.6	10.4	16.8	32.2	11.3	100.0	501	9.3
40-44	30.7	3.6	10.0	17.3	23.4	15.1	100.0	296	9.0
45-49	34.7	4.7	13.0	16.2	21.2	10.1	100.0	299	7.3
50+	60.2	5.6	12.2	7.7	9.6	4.7	100.0	1250	0.0
Total	25.8	17.1	16.7	18.7	15.8	5.9	100.0	7220	6.0
Female									
6 - 9	37.3	62.7	--	--	--	--	100.0	804	1.2
10-14	18.5	34.2	39.2	8.0	--	--	100.0	1018	4.8
15-19	30.1	3.5	22.4	30.3	13.0	0.7	100.0	980	7.3
20-24	35.9	1.4	12.6	18.2	22.8	9.2	100.0	881	8.0
25-29	45.7	1.9	12.3	13.1	17.9	9.2	100.0	721	5.3
30-34	52.5	1.8	9.8	12.0	16.3	7.6	100.0	546	0.0
35-39	62.0	1.4	11.3	8.0	12.9	4.4	100.0	458	0.0
40-44	67.7	0.5	13.0	5.8	7.2	5.8	100.0	324	0.0
45-49	77.7	1.7	5.6	4.0	6.2	4.8	100.0	279	0.0
50+	88.7	1.6	4.4	2.9	1.7	0.7	100.0	1134	0.0
Total	48.2	13.3	14.4	11.2	9.3	3.6	100.0	7145	1.7

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, sex and residence, Jammu Region of J & K, 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			
	TOTAL								
							Total		
6 - 9	35.4	64.6	--	--	--	--	100.0	1675	1.3
10-14	13.1	38.7	40.9	7.3	--	--	100.0	2136	4.9
15-19	19.2	3.5	24.2	37.7	14.7	0.8	100.0	1996	8.3
20-24	25.4	1.6	11.5	24.6	27.5	9.5	100.0	1588	9.0
25-29	32.5	1.8	11.2	20.7	22.6	11.2	100.0	1384	8.4
30-34	37.2	1.8	10.3	17.8	22.3	10.6	100.0	1045	8.1
35-39	43.5	2.0	10.8	12.6	23.0	8.0	100.0	958	5.8
40-44	50.0	2.0	11.5	11.3	14.9	10.3	100.0	620	2.8
45-49	55.5	3.3	9.4	10.3	14.0	7.5	100.0	578	0.0
50+	73.7	3.7	8.5	5.4	5.8	2.8	100.0	2384	0.0
Total	36.9	15.2	15.6	15.0	12.6	4.8	100.0	14365	4.5

-- Less than 0.05 percent

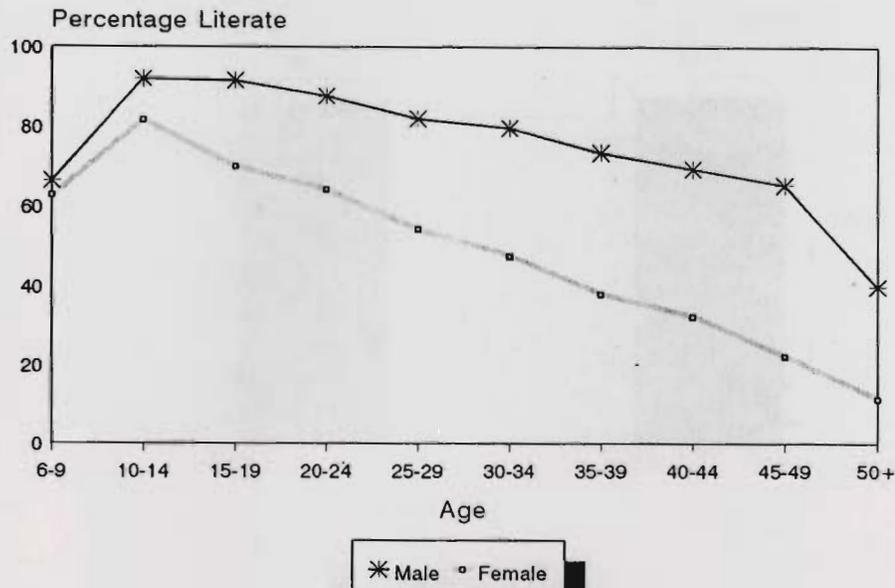
to educational attainment, a higher percentage of males than females in urban areas have completed schooling at all levels except at the primary school level where the percentage among females is slightly higher. In the rural areas, a higher percentage of males than females have completed schooling at all levels.

Interestingly, in urban areas the percentage of population completing primary education is higher among females than males in all age groups except the age group 15-19. However, in rural areas, males lead females in percentage completing primary education in most age groups. The percentage of the population completing middle school education in urban and rural areas is higher among males than females in most age groups. Above the high school level the male advantage is more marked and occurs at all ages in both urban and rural areas.

Despite the overall low level of literacy, there has been steady progress over time (Figure 3.3). For example, although only 11 percent of women age 50 and over are literate, the literacy rate for females increases to 32 percent for those age 40-44, 64 percent for those age 20-24 and 81 percent for those age 10-14. The gap in literacy between males and females has also narrowed over time.

Table 3.7 and Figure 3.4 show school attendance rates for the school-age household population by age, sex and residence. 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 Jammu, as a whole, 86 percent of children age 6-14 are attending school. As expected, the attendance rate is much higher for males than females in rural areas. However, it is encouraging to note that the attendance rate is slightly higher among females in urban areas. Among children age 6-14, attendance rates by sex in the Jammu region as a whole

Figure 3.3
Percentage Literate by Age and Sex



NFHS, Jammu Region of J & K, 1993

are 91 percent for males and 80 percent for females.

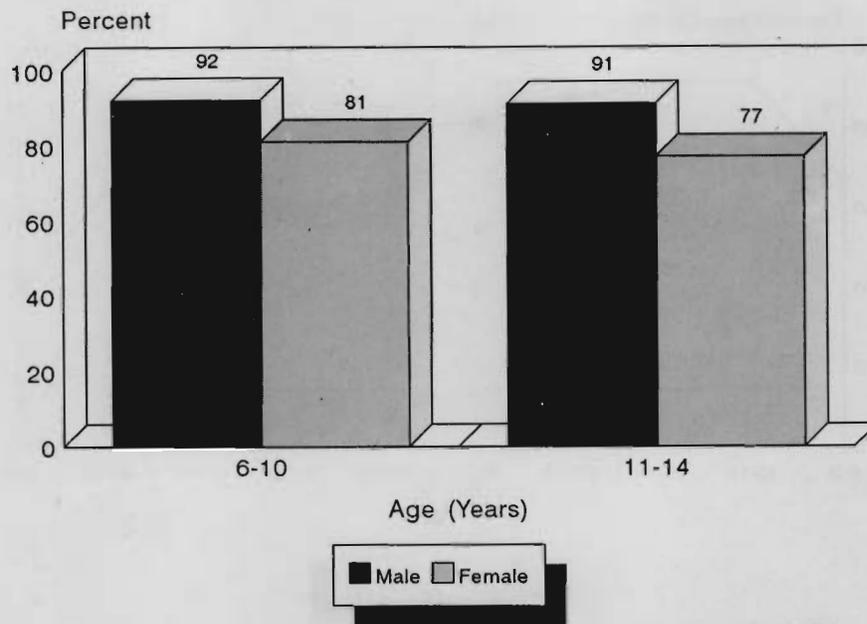
Urban-rural differences in male school attendance rates are 7.0 percentage points at age 6-10 (in favour of urban areas) and only 1.4 percentage points at age 11-14. Thus for males the urban advantage in attendance rates is not large. The urban-rural differences in female school attendance rates are much larger (16.7 percentage points at age 6-10 and 22.8 percentage points at age 11-14).

Table 3.7 School attendance

Percentage of the *de facto* household population age 6-14 years attending school by age, sex and residence, Jammu Region of J & K, 1993

Age	Male			Female			Total		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
6 -10	97.9	90.9	91.9	95.8	79.1	81.3	96.9	85.2	86.8
11-14	91.7	90.3	90.5	96.9	74.1	77.4	94.2	82.6	84.3
6-14	95.2	90.7	91.3	96.3	77.0	79.6	95.7	84.1	85.7

Figure 3.4
School Attendance by Age and Sex



NFHS, Jammu Region of J & K, 1993

3.5 Housing Characteristics

Table 3.8 provides information on housing characteristics by residence. Total electrification of urban households in the Jammu region seems to have been achieved as nearly 100 percent of households have electricity in urban areas. However, 16 percent of households in rural areas are still without electricity. In the region as a whole, 87 percent of households have electricity.

The types of water and sanitary facilities are important determinants of the health status of household members, particularly of children. The seriousness of major childhood diseases such as diarrhoea and respiratory infections can be reduced by proper hygienic practices. The NFHS contained questions pertaining to sanitary facilities and the sources of water the household uses for bathing, washing and drinking purposes. Regarding the source of drinking water, 42 percent of households have piped water, 15 percent get water from a handpump, 26 percent consume water from open wells, and 16 percent use surface water. Urban-rural differences are pronounced with respect to source of drinking water. The proportion of households with piped drinking water is 90 percent in urban areas compared with 32 percent in rural areas. The sources used for bathing and washing are very similar to the sources of drinking water.

Regarding sanitation facilities, only 14 percent of households have a flush toilet (using either piped water or water from a bucket for flushing), 5 percent have a pit toilet or latrine, and 81 percent have no facility. Large urban-rural differences are again present; 55 percent of

Table 3.8 Housing characteristics

Percent distribution of households by housing characteristics, according to residence, Jammu Region of J & K, 1993

Housing characteristic	Residence		
	Urban	Rural	Total
Electricity			
Yes	99.7	83.8	86.7
No	0.3	16.2	13.3
Source of bathing/washing water			
Piped	87.4	29.9	40.3
Handpump	5.5	15.9	14.0
Well water	3.8	27.6	23.3
Surface water	2.9	26.0	21.9
Other	0.3	0.6	0.5
Source of drinking water			
Piped	89.7	31.5	42.0
Handpump	6.1	17.3	15.3
Well water	3.2	31.2	26.2
Surface water	0.6	19.0	15.7
Other	0.4	0.9	0.8
Sanitation facility			
Flush	54.9	4.5	13.7
Pit toilet/latrine	22.0	1.7	5.4
Other	0.1	--	--
No facility	23.1	93.7	80.9
Type of fuel for cooking			
Wood	15.3	75.9	64.9
Cow dung cakes	0.8	7.9	6.6
Coal/coke/lignite/charcoal	0.3	0.2	0.2
Kerosene	22.3	5.9	8.9
Electricity	1.9	0.5	0.7
Liquid petroleum gas	59.0	9.6	18.5
Other	0.4	--	0.1
Type of house			
Kachcha	3.6	22.8	19.3
Semi-pucca	17.0	55.1	48.2
Pucca	79.4	22.2	32.5
Place where livestock is kept			
Inside the house	7.0	44.6	37.8
Outside the house	6.6	36.6	31.1
No livestock	86.4	18.8	31.1
Persons per room			
< 3.0	65.9	58.9	60.2
3.0-4.9	23.8	26.9	26.3
5.0-6.9	8.3	9.6	9.4
7.0 +	2.0	4.6	4.1
Mean	2.5	2.9	2.8
Total percent	100.0	100.0	100.0
Number of households	515	2324	2839

-- Less than 0.05 percent

households have a flush toilet in urban areas in contrast to only 5 percent in rural areas, while 23 percent in urban areas and 94 percent in rural areas have no facility.

Several types of fuel are used for cooking in Jammu, but wood is the most common fuel. In Jammu as a whole, 65 percent of households rely on wood, 7 percent on cow-dung cakes and 28 percent on other fuels, mainly liquid petroleum gas. Again there are marked urban-rural differences, with the majority of urban households (81 percent) relying on liquid petroleum gas and kerosene, while 76 percent of rural households use wood for cooking.

Regarding type of housing construction, only 19 percent of houses are *kachcha* (made from mud, thatch, or other low-quality material), 48 percent are semi-*pucca* (partly low-quality and partly high-quality materials), and 33 percent are *pucca* (high-quality materials throughout including roof, walls and floor). There are large urban-rural differences; nearly 23 percent houses in rural areas are classified as *kachcha* whereas about 79 percent of houses in urban areas are *pucca*.

The NFHS also collected information on ownership of livestock. More than two-thirds of households in Jammu own livestock, 14 percent in urban areas and 81 percent in rural areas. The NFHS also gathered information on where the livestock are kept at night, since keeping them inside the house may adversely affect the health of the residents. Forty-five percent of rural households and only 7 percent of urban households have livestock that are kept inside the house at night.

Crowded conditions may affect the health as well as the quality of life of members of the household. There is little variation by residence in congestion of households; an average of 2.5 and 2.9 persons per room live in urban and rural households, respectively. A majority of households have fewer than three persons per room. The percentage of households with less than three persons per room is higher in urban areas (66 percent) than rural households (59 percent). Fourteen percent of households are very crowded with five or more persons per room.

Table 3.9 contains a number of variables relating to the socioeconomic status of the household, for example, household ownership of land, livestock by type, and durable goods by type. Overall about one-third of households are landless, and urban households are more than four times as likely to be landless as rural households. In rural areas, among those who own some land, 41 percent irrigate at least some of their land. Among all who have land, most have less than five acres. Ownership of livestock is closely associated with ownership of land, as shown in Table 3.9. More than two-thirds of all households have livestock, and rural households are almost six times as likely to have livestock as urban households. More than half (57 percent) of rural households have one or more head of cow, 52 percent have buffaloes, 41 percent have bullocks, 17 percent have goats, 11 percent have sheep, and less than 2 percent have other kinds of livestock.

Table 3.9 shows that in the Jammu region as a whole, a large majority of households have a clock/watch (76 percent), radio (63 percent) or sewing machine (60 percent). Other durable goods often found in households are television sets (38 percent), refrigerators (14 percent), bicycles (19 percent), motorcycles/scooters (9 percent) and cars (1 percent). As expected, urban households are much more likely to possess each of these durable goods than

Table 3.9 Household ownership of land, livestock and durable goods

Percentage of households owning agricultural land, livestock and various consumer durable goods according to residence, Jammu Region of J & K, 1993

Item owned	Residence		
	Urban	Rural	Total
Agricultural land			
No land	83.5	20.0	31.5
Irrigated land only			
< 1 acre	0.4	2.9	2.5
1-5 acres	4.4	8.0	7.4
6+ acres	1.0	1.5	1.4
Non-irrigated land only			
< 1 acre	3.1	13.7	11.8
1-5 acres	3.5	29.6	24.9
6+ acres	0.3	3.9	3.2
Irrigated and non-irrigated land			
< 1 acre	0.6	4.2	3.6
1-5 acres	2.5	12.4	10.6
6+ acres	0.6	3.8	3.2
Total percent	100.0	100.0	100.0
Livestock			
Bullock	2.3	41.1	34.0
Cow	11.6	56.6	48.5
Buffalo	2.8	51.5	42.7
Goat	0.7	16.8	13.9
Sheep	0.3	11.2	9.2
Camel	--	0.9	0.7
Other	0.1	0.6	0.5
No livestock	86.4	18.8	31.1
Consumer durable goods			
Sewing machine	73.4	56.5	59.6
Clock/watch	93.2	71.8	75.7
Radio	79.3	59.0	62.7
Television	76.3	29.4	37.9
Refrigerator	46.1	6.8	13.9
Bicycle	19.5	18.9	19.0
Motorcycle/scooter	25.4	4.9	8.6
Car	7.1	0.2	1.4
Bullock cart	0.4	0.6	0.6
Thresher	0.6	1.2	1.1
Tractor	0.7	0.6	0.7
Water pump	1.8	2.6	2.5
Number of households	515	2324	2839

-- Less than 0.05 percent

rural households, except for bicycles, where the urban and rural percentages are virtually the same. In Jammu as a whole, a little less than 3 percent of households have a water pump, and the proportions owning other types of agricultural equipment are very small.

3.6 Background Characteristics of Respondents

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

Table 3.10 shows several important background characteristics of respondents. Through age 25-29, the percentage in each age group increases, reflecting the increase in the proportion married in successive age groups. The decline after age 25-29, by which time most women have already married, reflects the normal pyramidal shape of the age distribution. This age pattern is similar for urban and rural residents (Figure 3.5), although the percentages in the younger age groups are smaller in urban areas, reflecting somewhat later age at marriage in urban areas (see the earlier discussion of Table 3.3). Ninety-six percent of respondents (ever-married women) are currently married and among the remainder most are widowed. Only 1 percent are divorced or separated. 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. Seventy-three percent of respondents report that they are not working², and this percentage is higher in urban areas (85 percent) than rural areas (70 percent). The proportion currently working on a family farm or in some other family business differs greatly between urban and rural areas. Whereas only 1 percent of urban women work on a family farm or business, 25 percent of rural women do. In Jammu as a whole, only 5 percent are employed in nonfamily businesses and 2 percent report that they are self-employed. The low level of outside employment is compatible with the belief among some groups that it is socially disgraceful for women to work for wages or profits (Jejeebhoy, 1991). Twenty-nine percent of husbands are illiterate. The proportion of husbands who are illiterate is 10 percent in urban areas and 33 percent in rural areas. The percentage of husbands with at least a high school education is slightly more than twice as high in urban areas (64 percent) as in rural areas (31 percent).

More than half of all respondents are illiterate and only 19 percent have completed high school and above. Table 3.11 shows further details about the respondent's education, broken down by selected background characteristics. The proportion illiterate generally increases with age, reflecting improvements in the level of education over time. The proportion illiterate in the age group 15-19 (62 percent) is higher than average (57 percent) because about 20 percent of those age 15-19 are married (Table 3.3) and women who marry young tend to be drawn selectively from among the less educated. Comparing religious groups, the percentage illiterate is 53 percent among Hindus, 85 percent among Muslims and 20 percent among Sikhs. Three-

² In the NFHS work includes any kind of job for which woman is paid in cash or kind as well as unpaid work on a family farm or business.

Table 3.10 Background characteristics of respondents

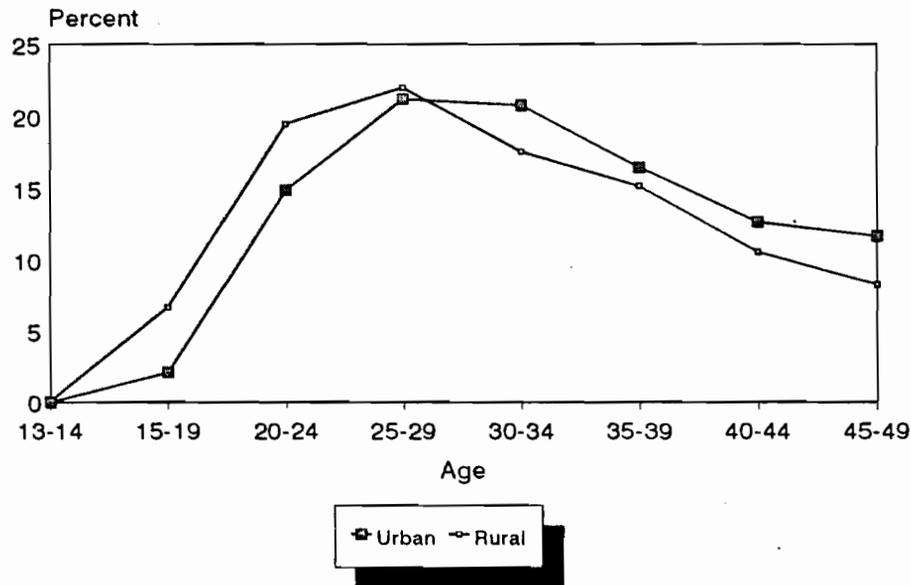
Percent distribution of ever-married women age 13-49, by selected background characteristics, according to residence, Jammu Region of J & K, 1993

Background characteristic	Residence			Total number of women	
	Urban	Rural	Total	Weighted	Unweighted
Age					
13-14	--	0.1	--	1	1
15-19	2.1	6.7	5.9	163	142
20-24	14.9	19.5	18.7	517	496
25-29	21.2	22.0	21.9	605	601
30-34	20.8	17.6	18.2	503	518
35-39	16.5	15.2	15.4	426	432
40-44	12.7	10.6	11.0	303	313
45-49	11.7	8.3	8.9	247	263
Marital status					
Currently married	94.8	95.9	95.7	2647	2642
Widowed	4.2	3.2	3.4	93	98
Divorced	0.1	0.3	0.3	8	7
Separated	0.8	0.6	0.6	18	19
Education					
Illiterate	21.1	64.4	56.7	1568	1371
Literate, < primary complete	2.0	1.4	1.5	42	45
Primary school complete	11.1	12.0	11.8	327	323
Middle school complete	15.2	10.3	11.2	310	332
High school complete	29.1	9.8	13.2	365	453
Above high school	21.5	2.1	5.6	154	242
Religion					
Hindu	87.4	74.6	76.9	2127	2185
Muslim	3.9	19.7	16.9	468	396
Sikh	8.0	5.5	5.9	164	176
Christian	0.5	0.1	0.2	5	7
Jain	0.1	--	--	1	1
Caste/tribe					
Scheduled caste	16.3	31.8	29.1	804	733
Scheduled tribe	0.1	1.3	1.1	29	24
Other	83.6	66.9	69.9	1933	2009
Work status					
Not working	85.0	69.8	72.5	2005	2074
Working in family farm/business	1.2	25.0	20.8	575	466
Employed by someone else	11.5	4.0	5.3	146	181
Self-employed	2.3	1.3	1.5	40	45
Husband's education					
Illiterate	9.6	33.4	29.2	809	700
Literate, < primary complete	2.3	3.1	3.0	83	79
Primary school complete	7.9	11.8	11.1	306	289
Middle school complete	16.1	20.4	19.6	543	523
High school complete	34.1	26.5	27.9	771	805
Above high school	29.8	4.8	9.2	255	369
Don't know/missing	0.1	--	--	1	1
Total percent	100.0	100.0	100.0	NA	NA
Number of women					
Weighted	489	2277	2766	2766	NA
Unweighted	945	1821	2766	NA	2766

NA: Not applicable

-- Less than 0.05 percent

Figure 3.5
Age Distribution of Ever-Married
Women by Residence



NFHS, Jammu Region of J & K, 1993

fourths of women belonging to scheduled castes are illiterate and 48 percent of nonscheduled caste/tribe women are illiterate. A higher percentage of women in the "other" category than those belonging to scheduled castes have completed each level of schooling, except the primary level. With respect to husband's literacy, 93 percent of women with illiterate husbands are illiterate themselves. The percentage of illiterate women declines as the level of husband's education increases, reflecting the fact that more educated husbands tend to prefer more educated wives. The general tendency is for men to marry women with similar or less education than themselves.

Table 3.12 provides information on the exposure of respondents to mass media. Twenty-eight percent of ever married women are not regularly exposed to any kind of mass media (television, radio or cinema). Although 63 percent own a radio and 38 percent own a television (Table 3.9), there is considerable overlap in ownership of the two media sources. The proportion of ever married women exposed to mass media is higher for women age 20-34. Urban-rural differences are quite marked. As expected, the percentage of ever-married women who watch television or listen to the radio at least once a week is higher in urban areas (87 percent and 78 percent, respectively) than in rural areas (42 percent and 61 percent, respectively). The proportion of women who visit the cinema at least once a month is also higher in urban areas (7 percent) than in rural areas (2 percent).

Thus, exposure to all types of media is much greater in urban areas than in rural areas. There are very large differences in media exposure by education, with greater exposure for those

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 and residence, Jammu Region of J & K, 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		
URBAN								
Age								
20-24	17.7	1.4	11.3	27.7	24.1	17.7	100.0	73
25-29	14.5	1.5	8.5	12.5	37.0	26.0	100.0	103
30-34	13.7	3.0	7.1	14.7	35.0	26.4	100.0	102
35-39	24.4	3.2	12.8	14.1	26.9	18.6	100.0	81
40-44	26.7	0.8	14.2	12.5	24.2	21.7	100.0	62
45-49	36.9	1.8	15.3	9.0	19.8	17.1	100.0	57
Religion								
Hindu	21.7	2.2	11.0	14.4	28.9	21.8	100.0	427
Muslim	(43.2)	(--)	(8.1)	(21.6)	(21.6)	(5.4)	100.0	19
Sikh	2.6	1.3	10.5	22.4	36.8	26.3	100.0	39
Caste/tribe								
Scheduled caste	53.2	2.6	14.3	10.4	13.0	6.5	100.0	80
Other (Non-SC/ST)	14.8	1.9	10.4	16.2	32.3	24.4	100.0	409
Husband's education								
Illiterate	79.1	3.3	6.6	9.9	1.1	--	100.0	47
Primary school complete	48.0	4.0	26.7	10.7	10.7	--	100.0	39
Middle school complete	23.7	5.3	20.4	32.2	17.1	1.3	100.0	79
High school complete	11.2	0.6	12.1	21.1	44.4	10.6	100.0	167
Above high school	2.5	--	1.8	2.5	34.4	58.9	100.0	146
Total	21.1	2.0	11.1	15.2	29.1	21.5	100.0	489
RURAL								
Age								
15-19	63.9	1.6	17.2	11.5	5.7	--	100.0	153
20-24	51.0	2.3	16.3	14.9	13.5	2.0	100.0	444
25-29	55.6	2.0	12.2	14.0	12.5	3.7	100.0	501
30-34	63.2	0.3	10.3	11.8	11.8	2.5	100.0	401
35-39	72.1	0.7	10.9	6.2	8.3	1.8	100.0	345
40-44	80.3	0.5	11.4	3.1	3.6	1.0	100.0	241
45-49	86.8	2.6	3.3	2.6	3.3	1.3	100.0	190
Religion								
Hindu	61.4	1.1	13.9	11.7	10.1	1.8	100.0	1702
Muslim	86.9	2.5	3.9	1.4	4.2	1.1	100.0	449
Sikh	25.0	2.0	16.0	24.0	24.0	9.0	100.0	125
Caste/tribe								
Scheduled caste	78.8	1.4	8.1	6.6	4.3	0.9	100.0	724
Other (Non-SC/ST)	57.0	1.4	14.0	12.3	12.5	2.8	100.0	1524
Husband's education								
Illiterate	93.6	1.3	4.1	0.8	0.2	--	100.0	762
Lit., <primary complete	86.0	3.5	8.8	1.8	--	--	100.0	71
Primary school complete	80.4	1.9	9.8	5.6	2.3	--	100.0	268
Middle school complete	58.8	0.8	20.8	13.2	6.5	--	100.0	464
High school complete	31.1	1.9	17.8	22.4	23.8	3.1	100.0	604
Above high school	14.9	--	4.6	14.9	37.9	27.6	100.0	109
Total	64.4	1.4	12.0	10.3	9.8	2.1	100.0	2277

Table 3.11 Respondent's level of education by background characteristics (Contd.)

Percent distribution of ever-married women age 13-49 by highest level of education attained, according to selected background characteristics and residence, Jammu Region of J & K, 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		
TOTAL								
Age								
15-19	62.1	1.5	17.4	12.0	7.0	--	100.0	163
20-24	46.3	2.1	15.6	16.7	15.0	4.2	100.0	517
25-29	48.6	1.9	11.6	13.7	16.7	7.5	100.0	605
30-34	53.2	0.9	9.6	12.4	16.5	7.3	100.0	503
35-39	63.1	1.2	11.2	7.7	11.9	5.0	100.0	426
40-44	69.3	0.6	12.0	5.0	7.8	5.3	100.0	303
45-49	75.3	2.4	6.1	4.1	7.1	5.0	100.0	247
Religion								
Hindu	53.4	1.3	13.3	12.2	13.9	5.8	100.0	2127
Muslim	85.1	2.4	4.1	2.2	4.9	1.3	100.0	468
Sikh	19.6	1.8	14.7	23.6	27.1	13.1	100.0	164
Caste/tribe								
Scheduled caste	76.2	1.5	8.7	6.9	5.2	1.4	100.0	804
Other (Non-SC/ST)	48.1	1.5	13.3	13.1	16.7	7.4	100.0	1933
Husband's education								
Illiterate	92.8	1.4	4.2	1.3	0.2	--	100.0	809
Lit., <primary complete	81.6	4.9	10.1	2.8	--	0.6	100.0	83
Primary school complete	76.3	2.1	11.9	6.2	3.4	--	100.0	306
Middle school complete	53.7	1.5	20.7	16.0	8.0	0.2	100.0	543
High school complete	26.8	1.6	16.6	22.1	28.3	4.7	100.0	771
Above high school	7.8	--	3.0	7.8	35.9	45.5	100.0	255
Total	56.7	1.5	11.8	11.2	13.2	5.6	100.0	2766

Note: Total includes 1 woman age 13-14, 1 woman whose husband's education is not known, 7 women belonging to other religions and 29 women belonging to scheduled tribes, who are not shown separately.

() Based on 25-49 unweighted cases

-- Less than 0.05 percent

with more education. Religious differences in media exposure are also large, Hindus having greater exposure than Muslims to all media, but Sikhs have greater media exposure than either Hindus or Muslims. Relative media exposure among Muslims, Hindus and Sikhs may be related to their relative levels of education (Table 3.11). Women from scheduled castes are much less exposed to mass media than nonscheduled caste/tribe women.

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, Jammu Region of J & K, 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	31.6	64.6	1.7	29.7	163
20-24	49.4	68.9	4.7	25.7	517
25-29	53.7	66.8	3.6	26.2	605
30-34	53.1	65.5	1.5	25.5	503
35-39	46.8	57.8	1.0	33.7	426
40-44	53.3	58.9	1.8	29.1	303
45-49	50.3	62.3	0.6	28.0	247
Residence					
Urban	86.8	77.8	7.0	8.6	489
Rural	42.2	61.3	1.5	32.0	2277
Education					
Illiterate	29.2	50.2	0.5	42.7	1568
Lit., < middle complete	59.2	71.2	1.5	18.6	369
Middle school complete	75.5	83.8	4.5	7.2	310
High school and above	91.5	89.9	7.7	1.8	519
Religion					
Hindu	53.8	65.7	2.6	25.6	2127
Muslim	24.4	54.2	1.6	42.8	468
Sikh	73.6	72.5	2.8	14.6	164
Caste/tribe					
Scheduled caste	34.8	55.9	1.0	38.4	804
Other (Non-SC/ST)	56.7	68.0	3.1	23.2	1933
Total	50.1	64.2	2.5	27.8	2766

Note: Total includes 1 woman age 13-14, 7 women belonging to other religions and 29 scheduled tribe women, who are not shown separately

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. Marriage patterns are also important from a sociological point of view and they are inextricably linked to the status of women in a society.

4.1 Current Marital Status

Table 4.1 shows the current marital status of women by residence and age. Information on marital status comes from the Woman's Questionnaire, except for information on never married women which comes from the Household Questionnaire. Table 4.1 repeats some of the information 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.

It is evident from Table 4.1 that marriage is virtually universal in Jammu and that marriages in rural areas take place at relatively young ages. In Jammu, only 18 percent of women age 15-19 are married whereas 64 percent of women age 20-24 are married. The proportion ever-married at age 15-19 is much lower in urban areas (7 percent) than in rural areas (20 percent). It is also clear from Table 4.1 that the proportion of women age 15-49 who are divorced or separated is negligible (less than 1 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). The SMAM computed from various sources is presented in Table 4.2. Female values of SMAM from the NFHS are 23.1 years in urban areas, 20.9 in rural areas and 21.2 overall. On average, males marry five years later than females. Marriage ages are consistently higher in urban areas, with men marrying 1.5 years later and women 2.2 years later than in rural areas.

More detailed information on the age at first marriage is shown in Table 4.3. The table shows the percentage of all women who get married before specified exact ages and the median age at first marriage¹, by current age and residence.

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 cannot be done 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 4.1 Current marital status

Percent distribution of women age 15-49 by current marital status according to age and residence, Jammu Region of J & K, 1993

Age	Marital status					Total percent
	Never married	Currently married	Widowed	Divorced	Separated	
URBAN						
15-19	92.7	7.3	--	--	--	100.0
20-24	53.1	46.2	0.3	--	0.3	100.0
25-29	14.4	83.9	1.3	--	0.4	100.0
30-34	2.9	94.6	1.0	--	1.5	100.0
35-39	--	94.2	3.8	0.6	1.3	100.0
40-44	0.7	85.2	14.1	--	--	100.0
45-49	--	89.2	9.9	--	0.9	100.0
Total	32.5	64.0	2.9	0.1	0.6	100.0
RURAL						
15-19	80.1	19.9	--	--	--	100.0
20-24	32.4	66.8	0.4	--	0.4	100.0
25-29	4.1	93.7	1.2	0.7	0.2	100.0
30-34	1.3	94.7	3.4	0.3	0.3	100.0
35-39	--	94.2	3.6	0.7	1.4	100.0
40-44	--	92.2	6.7	--	1.0	100.0
45-49	--	88.2	11.2	--	0.7	100.0
Total	27.3	62.7	2.3	0.2	0.4	100.0
TOTAL						
15-19	82.0	18.0	--	--	--	100.0
20-24	36.4	62.9	0.4	--	0.4	100.0
25-29	6.0	91.9	1.2	0.6	0.3	100.0
30-34	1.8	94.6	2.9	0.2	0.5	100.0
35-39	--	94.2	3.7	0.7	1.4	100.0
40-44	0.3	90.7	8.2	--	0.8	100.0
45-49	--	88.4	10.9	--	0.7	100.0
Total	28.2	68.7	2.4	0.2	0.5	100.0

-- Less than 0.05 percent

Table 4.2 Singulate mean age at marriage

Singulate mean age at marriage by sex and residence, Jammu Region of J & K, 1993

Residence	Singulate mean age at marriage		
	Male	Female	Difference
Urban	27.5	23.1	4.4
Rural	26.0	20.9	5.1
Total	26.3	21.2	5.1

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 this 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 4.3 shows some dramatic trends, especially for marriages at very young ages. Marriage before age 15 is now rare in Jammu. The proportion marrying before 15 declined from 23 percent in the 45-49 cohort to 2 percent in the 15-19 cohort. The proportion marrying by age 18 declined from 65 percent in the 45-49 age cohort to 21 percent in the 20-24 cohort. The median age at marriage correspondingly increased from 16.6 years in the 45-49 age cohort to 19.1 years in the 25-29 age cohort, an increase of 2.5 years. The median age has been rising in both urban and rural areas, but the rate of increase has been considerably faster in urban areas. At age 25-29, urban women now marry three years later than rural women.

Table 4.4 shows median ages at first marriage for women by age group and selected background characteristics. As already noted, the median age at first marriage is higher in urban areas than in rural areas. The difference is considerable for all age groups. Furthermore, it increases dramatically with the level of education. In fact, within each age group, the median age at first marriage is about five years higher among women who have completed high school and above than among illiterate women. Differences by religion are notable, with Muslims marrying almost two years earlier than Hindus. The median age at marriage for women belonging to scheduled castes is one year less than for nonscheduled caste/tribe women.

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 Jammu, only 21 percent of women age 20-24 married below the legal minimum age at marriage (Table 4.3), indicating that recently a large majority of couples have been abiding by the legal regulations; however, higher percentages of older women have married before the legal age (36 percent of women age 25-29 and 46 percent age 30-34). Legal compliance is higher among urban women than rural women. In urban areas, only 7 percent of women age 20-24 married before age 18, whereas in rural areas, the corresponding percentage is 24.

One of the important factors determining compliance with the law is awareness of the legal minimum age. Overall, only 34 percent of respondents could correctly identify age 18 as the legal minimum age at marriage for females and only 21 percent could correctly identify age 21 as the legal minimum age at marriage for males (Table 4.5). The provisions of the law are better known in urban areas, where a majority of women (63 percent) could correctly identify the minimum legal age for females. The comparable percent for rural women is only 28. There is also considerable urban-rural differential regarding accurate knowledge of legal age at marriage for males (45 percent in urban compared with 16 percent in rural areas). Accurate knowledge of the legal minimum age requirements is also closely tied to literacy and level of educational attainment. Seventy-eight percent of women with a high school education and above know the legal minimum age at marriage for females and 56 percent are aware of the legal

Table 4.3 Age at first marriage

Percentage of women married by specific exact ages, and median age at first marriage, by current age and residence, Jammu Region of J & K, 1993

Current age ¹	Percentage ever married before age:						Percent never married	Median age at first marriage
	13	15	18	20	22	25		
URBAN								
15-19	--	1.1	NA	NA	NA	NA	92.7	NC
20-24	0.3	1.7	7.3	20.3	NA	NA	53.1	NC
25-29	0.9	2.1	14.6	31.7	54.8	74.9	14.4	21.5
30-34	1.0	2.0	16.8	33.0	57.2	79.4	2.9	21.2
35-39	3.2	12.2	33.3	55.1	70.5	92.3	--	19.2
40-44	5.8	16.5	48.8	68.7	84.4	91.8	0.7	18.1
45-49	1.8	13.5	45.0	66.7	82.0	93.7	--	18.4
20-49	1.7	6.0	22.3	39.6	58.2	74.3	17.8	21.0
25-49	2.2	7.6	27.8	46.6	66.3	84.3	4.9	20.3
RURAL								
15-19	0.3	2.1	NA	NA	NA	NA	80.1	NC
20-24	1.7	5.7	23.6	44.7	NA	NA	32.4	NC
25-29	3.3	10.8	40.7	63.1	78.4	93.7	4.1	18.7
30-34	8.3	21.8	54.1	72.5	87.6	95.3	1.3	17.4
35-39	9.4	27.5	68.5	84.4	93.8	98.2	--	16.4
40-44	13.0	32.6	73.6	87.6	94.3	97.9	--	15.8
45-49	9.2	25.7	70.4	85.5	96.1	99.3	--	16.3
20-49	6.1	17.1	48.0	67.0	80.5	88.3	10.2	18.2
25-49	7.8	21.5	57.5	75.6	87.9	96.2	1.6	17.0
TOTAL								
15-19	0.3	2.0	NA	NA	NA	NA	82.0	NC
20-24	1.4	4.9	20.5	40.1	NA	NA	36.4	NC
25-29	2.9	9.1	35.8	57.3	74.0	90.3	6.0	19.1
30-34	6.8	17.7	46.4	64.4	81.3	91.9	1.8	18.3
35-39	8.2	24.6	61.8	78.9	89.4	97.1	--	16.7
40-44	11.5	29.3	68.4	83.6	92.1	96.6	0.3	16.1
45-49	7.5	22.8	64.5	81.1	92.8	98.0	--	16.6
20-49	5.2	14.9	43.0	61.6	76.1	85.5	11.7	18.6
25-49	6.6	18.8	51.5	69.8	83.6	93.8	2.3	17.8

NA: Not applicable

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

-- Less than 0.05 percent

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

minimum age at marriage for males, but only 14 and 6 percent of illiterate women can correctly specify the legal minimum age at marriage for females and males, respectively. There is considerable difference regarding correct knowledge of legal age of marriage by religion. About 54 percent of the Sikh women can correctly identify the minimum legal age at marriage for females, whereas the percentages among Hindu and Muslim respondents are 37 and 14 percent, respectively. Scheduled caste women are less likely to know the legal age at marriage for either sex than nonscheduled caste/tribe women. 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

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, Jammu Region of J & K, 1993

Background characteristic	Current age						20-49	25-49
	20-24	25-29	30-34	35-39	40-49	20-49		
Residence								
Urban	NC	21.5	21.2	19.2	18.2	NC	20.3	
Rural	NC	18.7	17.4	16.4	16.0	18.2	17.0	
Education								
Illiterate	18.6	17.2	16.4	15.9	15.9	16.6	16.3	
Lit., < middle complete	19.5	18.8	17.9	16.9	16.2	18.3	17.8	
Middle school complete	NC	20.4	20.0	(17.6)	(18.0)	NC	19.3	
High school and above	NC	22.7	22.0	20.9	20.6	NC	21.8	
Religion								
Hindu	NC	19.6	18.5	16.7	16.4	18.7	17.9	
Muslim	18.7	17.4	16.2	16.1	15.7	16.9	16.2	
Sikh	NC	(20.7)	(20.8)	(18.8)	(18.2)	NC	19.4	
Caste/tribe								
Scheduled caste	NC	18.6	17.0	16.3	16.1	18.0	16.9	
Other (Non-SC/ST)	NC	19.5	18.8	16.9	16.6	18.8	18.2	
Total	NC	19.1	18.3	16.7	16.4	18.6	17.8	

Note: Total medians are based on all women including women belonging to other religions and scheduled tribe women, the medians for whom are not shown separately.

NC: Not calculated because less than 50 percent of the women have married for the first time by age 20

() Based on 25-49 unweighted cases

shown in Table 4.5.

4.3 Age at First Cohabitation

Table 4.6 shows median ages at first cohabitation with the husband. The presentation of this table is the same as Table 4.3, except that age at first cohabitation with the husband is examined instead of the age at first marriage. The two ages 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 Jammu, the age at first cohabitation and age at first marriage are almost identical if these events occur when the woman is age twenty or above. Whatever small differences there are occur primarily in rural areas. The results suggest that the practice of *gauna* is not common in the Jammu region.

4.4 Marriage Between Relatives

Table 4.7 provides information on marriage between relatives. Marriage between relatives is a form of inbreeding that seems to have 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

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, Jammu Region of J & K, 1993

Background characteristic	Percentage who correctly know legal minimum age at marriage:		Number of women
	For males	For females	
Age			
13-19	12.7	24.3	164
20-29	23.7	36.4	1122
30-39	22.1	36.2	929
40-49	16.4	27.9	551
Residence			
Urban	45.4	63.0	489
Rural	15.8	27.7	2277
Education			
Illiterate	6.2	13.7	1568
Lit., < middle complete	21.7	40.0	369
Middle school complete	37.6	56.0	310
High school and above	55.5	77.6	519
Religion			
Hindu	23.2	36.6	2127
Muslim	5.8	14.2	468
Sikh	35.1	54.1	164
Caste/tribe			
Scheduled caste	12.3	21.2	804
Other (Non-SC/ST)	24.8	39.1	1933
Total	21.1	33.9	2766

Note: Total includes 7 women belonging to other religions and 29 scheduled tribe women, who are not shown separately.

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 7 percent of ever-married women married a first cousin, about equally on each parent's side. About 3 percent married a second cousin, uncle or other blood relative, and 7 percent of women married a brother-in-law or other non-blood relative. About 84 percent of women married a person who was not related, reflecting the fact that marriages between relatives are not common in Jammu, but are not negligible. In urban areas, the practice of women marrying blood relations is less common (3 percent) than in rural areas (11 percent). Generally, the incidence of marriage between relatives declines as the level of education increases. In particular, a larger percentage of illiterate women marry their relatives (13 percent) than women who have some education (7 percent of literate but less than middle complete, 4 percent of middle complete, and 6 percent of high school and above). Muslim women are much more likely to have entered into consanguineous marriages than non-Muslim women; this may be related to the fact that the educational level of Muslim women is, on

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 and residence, Jammu Region of J & K, 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		
URBAN								
15-19	--	1.1	NA	NA	NA	NA	92.7	NC
20-24	--	1.0	7.3	20.3	NA	NA	53.1	NC
25-29	--	1.7	14.1	31.2	54.4	74.9	14.4	21.6
30-34	--	1.5	16.8	33.0	57.2	79.4	2.9	21.2
35-39	--	9.6	33.3	55.1	70.5	92.3	--	19.2
40-44	0.8	12.4	46.3	68.7	84.4	91.8	0.7	18.2
45-49	--	11.7	44.1	66.7	82.0	93.7	--	18.5
20-49	0.1	4.7	21.9	39.5	58.1	74.3	17.8	21.0
25-49	0.1	6.1	27.2	46.5	66.2	84.3	4.9	20.3
RURAL								
15-19	--	2.0	NA	NA	NA	NA	80.1	NC
20-24	0.2	4.9	23.4	44.7	NA	NA	32.4	NC
25-29	0.2	9.3	39.9	62.7	78.0	93.5	4.1	18.7
30-34	--	18.4	53.2	71.9	87.0	95.0	1.3	17.6
35-39	0.4	24.6	66.3	84.4	93.8	98.2	--	16.6
40-44	0.5	27.5	72.0	87.0	94.3	97.9	--	16.0
45-49	--	17.8	67.8	84.2	94.7	98.7	--	16.6
20-49	0.2	14.4	47.0	66.7	80.2	88.1	10.2	18.2
25-49	0.2	18.1	56.1	75.1	87.5	96.0	1.6	17.3
TOTAL								
15-19	--	1.8	NA	NA	NA	NA	82.0	NC
20-24	0.2	4.2	20.3	40.1	NA	NA	36.4	NC
25-29	0.2	7.9	35.1	56.8	73.6	90.1	6.0	19.1
30-34	--	14.9	45.7	63.9	80.8	91.7	1.8	18.4
35-39	0.3	21.8	60.1	78.9	89.4	97.1	--	16.9
40-44	0.6	24.3	66.7	83.2	92.1	96.6	0.3	16.5
45-49	--	16.4	62.3	80.1	91.8	97.5	--	16.8
20-49	0.2	12.5	42.0	61.3	75.8	85.4	11.7	18.6
25-49	0.2	15.7	50.3	69.4	83.2	93.6	2.3	18.0

NA: Not applicable

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

-- Less than 0.05 percent

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

average, considerably lower than that of their non-Muslim counterparts in Jammu (Table 3.11). Forty-five percent of Muslim women marry blood relatives, and 7 percent marry non-blood relatives. Finally, consanguineous marriages are more common among scheduled caste groups than nonscheduled caste/tribe groups.

Table 4.7 Marriage between relatives

Percent distribution of ever-married women by relationship to current (last) husband, according to selected background characteristics, Jammu Region of J & K, 1993

Background characteristic	First cousin		Second cousin	Uncle	Other blood relation	Brother-in-law	Other non-blood relation	Not related	Total per-cent	Number
	Father's side	Mother's side								
Age										
15-19	6.1	3.8	1.5	0.8	4.9	--	5.2	77.6	100.0	163
20-24	4.0	4.8	0.7	0.2	1.1	--	8.5	80.7	100.0	517
25-29	3.3	5.2	0.3	0.4	2.2	0.4	5.8	82.4	100.0	605
30-34	3.3	2.3	1.1	0.2	1.0	0.5	6.9	84.7	100.0	503
35-39	2.9	2.6	0.6	0.6	1.7	0.6	7.7	83.3	100.0	426
40-44	2.4	0.8	0.6	0.4	2.5	--	3.6	89.7	100.0	303
45-49	3.0	3.2	0.7	--	1.7	0.5	4.6	86.2	100.0	247
Residence										
Urban	0.4	0.6	0.4	--	1.2	--	7.5	89.8	100.0	489
Rural	4.1	4.1	0.8	0.4	2.0	0.4	6.2	82.1	100.0	2277
Education										
Illiterate	5.1	4.6	0.9	0.2	2.0	0.5	6.1	80.5	100.0	1568
Lit., < middle complete	1.7	2.4	0.3	0.7	1.6	0.3	7.0	85.9	100.0	369
Middle school complete	0.2	2.6	--	--	1.0	--	6.4	89.9	100.0	310
High school and above	1.4	1.2	0.8	0.7	1.9	--	7.0	87.0	100.0	519
Religion										
Hindu	0.2	0.6	0.3	0.1	1.1	0.2	6.2	91.2	100.0	2129
Muslim	19.2	16.9	2.6	1.6	4.9	0.5	6.5	47.8	100.0	468
Sikh	--	2.3	0.3	0.8	2.2	0.8	8.5	85.1	100.0	163
Caste/tribe										
Scheduled caste	5.0	5.1	0.8	0.8	2.0	0.6	6.7	79.0	100.0	804
Other (Non-SC/ST)	2.8	2.6	0.6	0.2	1.7	0.2	6.3	85.6	100.0	1933
Total	3.4	3.5	0.7	0.4	1.8	0.3	6.4	83.5	100.0	2766

Note: Total includes 1 woman age 13-14, 7 women belonging to other religions and 29 scheduled tribe women, who are not shown separately.

-- Less than 0.05 percent

CHAPTER 5

FERTILITY

A major objective of the NFHS is to estimate fertility levels, differentials and trends. The fertility estimates in this chapter are based on complete birth histories of ever-married women age 13-49. Several procedures were established to facilitate complete and accurate reporting of births. First, women were asked separately about their number of daughters and sons who were still living at home, those living elsewhere and those who had died. Then, more complete details about each birth were collected, including the year and month of birth, sex and survival status. The birth history information was used to calculate measures of current fertility and fertility trends over time, as well as cumulative measures of the number of children ever born. Estimates of birth intervals and the mother's age at the initiation of childbearing were calculated from data on the timing of births. Interviewers received extensive training in methods of probing to help respondents recall the details of each child's birth. In addition, interviewers were instructed to check any documents (such as immunization cards) that may provide information on the date of birth. Finally, for any interval of four or more years between births, interviewers were required to record the reason for the long interval to help in identifying any live births that might have been omitted during the interval.

Despite all the measures to ensure data reliability, the NFHS is subject, to some degree, to the same kinds of errors that are inherent in all retrospective sample surveys -- namely, the omission of some births (especially of those children who died at a very young age) and the difficulty of determining the exact date of birth. These problems may be particularly common in areas where the level of female literacy is very low.

5.1 Current Fertility Levels, Differentials and Trends

A number of measures of fertility such as the crude birth rate (CBR), the general fertility rate (GFR), age-specific fertility rates (ASFRs) and the total fertility rate (TFR) are calculated from the NFHS to provide a comprehensive picture of recent fertility in Jammu. These are shown by place of residence in Table 5.1 and discussed in the following sections. Except for the CBR based on the household birth record, all of the fertility statistics are derived from the birth history information and refer to the three years prior to the NFHS between 1 January 1990 and 1 January 1993. A three-year period is chosen for the NFHS rates as a compromise of three objectives: to obtain the most current information, to reduce the effects of sampling variation, and to minimize problems with the displacement of births from recent to earlier years. Fertility estimates from the Sample Registration System (SRS) maintained by the Office of the Registrar General, India are not available for Jammu region of Jammu and Kashmir. Hence the fertility estimates from the NFHS cannot be compared with the estimates from the SRS.

Crude Birth Rate

Table 5.1 shows two different sets of crude birth rates. The first set is based on births that occurred to usual residents of the household during the two years preceding the survey as obtained in the Household Questionnaire. This CBR is calculated as the annual number of births in the two-year period before the date of interview per 1,000 usual residents at the time of

Table 5.1 Current fertility			
Age-specific and cumulative fertility rates and crude birth rates, by residence, Jammu Region of J & K, 1990-92			
Age	Urban	Rural	Total
15-19	0.026	0.058	0.054
20-24	0.144	0.243	0.223
25-29	0.165	0.216	0.206
30-34	0.081	0.093	0.090
35-39	0.010	0.045	0.038
40-44	0.000	0.011	0.009
45-49	(0.000)	0.007	0.005
TFR 15-44	2.13	3.33	3.10
TFR 15-49	2.13	3.36	3.13
GFR	76	121	113
CBR based on			
Household birth record	21.7	28.6	27.5
Woman's birth history	21.2	29.3	27.9

Note: Rates 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.
() Based on 125-249 woman-years of exposure

the survey. The denominator of this measure is adjusted by projecting the population backwards to the mid-point of the time period on the basis of the intercensal population growth rate in the Jammu region as a whole, and separately for urban and rural areas. The second set of estimates is derived from the birth history information collected in the Woman's Questionnaire and covers a period of three years prior to the interview. 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 estimates are based on information from two different parts of the interview (often with different respondents), the difference in the two estimates is quite small. The CBR based on the household birth record (27.5) is very close to CBR based on birth history information (27.9). The two estimates also agree quite closely in both urban and rural areas. The CBRs by residence indicate that fertility is almost one-third higher in rural areas than in urban areas.

General Fertility Rate

The general fertility rate (GFR) 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 woman-years lived between the ages of 15 and 49 during the period and multiplying the result by 1,000. The NFHS estimated the GFR for 1990-92 in Jammu to be 113 births per 1,000 women. The estimated GFR is considerably higher in rural areas (121) than in urban areas (76).

Age-Specific and Total Fertility Rates

Both the GFR and CBR are crude summary measures of fertility. A clearer picture of fertility can be obtained by examining the age-specific fertility rates (ASFRs) and the total fertility rate (TFR). To compute the numerator of the NFHS age-specific rates, live births are classified by (1) segment of time preceding the survey (that is, 1-36 months), based on the date of interview and date of birth and (2) age of mother (in conventional five-year groupings) at the time of birth, based on the date of interview and the dates of birth of both the mother and child. The denominators of the age-specific rates are numbers of woman-years lived in the specified five-year age intervals during the time segment. The TFR is a summary measure that indicates the number of children a woman would bear during her reproductive years if she were to experience the age-specific fertility rates prevailing at the time of the survey. By definition, the TFR is five times the sum of the age-specific fertility rates over all five-year age groups.

The NFHS total fertility rate (TFR) for women in the age group 15-49 for Jammu as a whole for 1990-92 is 3.1 children per woman. Consistent with other fertility estimates, the TFR in the urban areas (2.1) is substantially lower than the TFR in the rural areas (3.4). Under the present schedule of fertility, a woman in the rural areas would have, on an average, 1.2 more children in her childbearing years (that is, 58 percent more children) than an urban woman.

The age-specific fertility rates follow the expected pattern. The age pattern of fertility reveals a peak in the 20-24 age group. The pattern is slightly different for rural areas than urban areas (Figure 5.1). Fertility rates decline after age 24 in rural areas and in the region as a whole, whereas the decline in fertility in urban areas does not begin until after age 29. Furthermore, in urban areas women cease to bear children after age 40 and fertility rates become extremely low after age 35, whereas in rural areas the rates become extremely low only after age 45. Fertility is highly concentrated in the 20-29 age group in both the urban and rural areas, but the rates are consistently higher in rural areas. The contribution towards fertility of women age 35 years and above is 9 percent in rural areas and only 2 percent in urban areas.

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.

Current fertility and cohort fertility would be nearly identical if there had been no change in fertility during the two decades prior to the survey, 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 3.13 and the mean number of children ever born of 5.05 suggests that a substantial fertility decline has taken place in Jammu.

Education differentials are considerable, with current fertility declining steadily from 3.7 children per woman for illiterate women to 2.3 for women with at least a high school education.

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, Jammu Region of J & K, 1993

Background characteristic	Total fertility rate ¹	Mean number of children ever born to women age 40-49 years
Residence		
Urban	2.13	3.89
Rural	3.36	5.37
Education		
Illiterate	3.69	5.60
Lit., < middle complete	3.45	4.39
Middle school complete	2.62	3.90
High school and above	2.29	2.92
Religion		
Hindu	3.01	4.94
Muslim	3.88	6.27
Sikh	2.64	4.30
Caste/tribe		
Scheduled caste	3.49	6.03
Other (Non-SC/ST)	2.95	4.65
Total	3.13	5.05

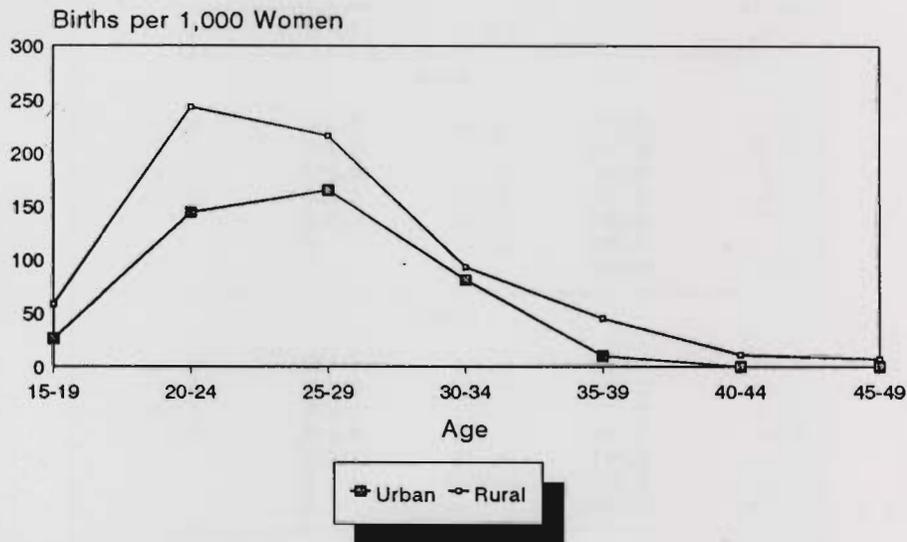
Note: Total rate and mean are based on all women including women belonging to other religions and scheduled tribes, for whom the rates and means are not shown separately.
¹Rate for women age 15-49 years

The cohort fertility differential by education is more substantial than the current fertility differential, primarily due to the large difference between cohort and current fertility for illiterate women (5.6 compared with 3.7 children per woman), indicating a dramatic decline in fertility for that group of women.

Differences in fertility by religion are less pronounced, but still substantial, whether we look at current or cohort fertility, with cohort differences being larger. Muslims have the highest fertility, followed by Hindus and then Sikhs. Women of scheduled castes have higher current and cohort fertility than others, but have experienced more rapid fertility decline compared with the non-SC/ST category.

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 rates are calculated only for women under age 50 at the time of the survey, no rate is available for women age 45 and above for the period 5-9 years to the survey, nor for women age 40 and above 10-14 years prior to the survey, nor for women age 35 and above 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

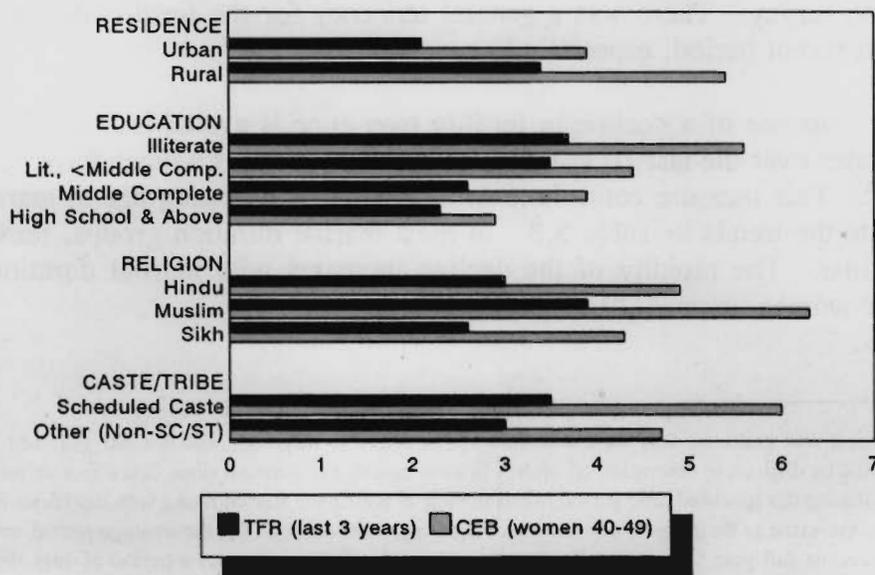
Figure 5.1
Age-Specific Fertility Rates
by Residence



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

NFHS, Jammu Region of J & K, 1993

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



NFHS, Jammu Region of J & K, 1993

Table 5.3 Fertility trends

Age-specific fertility rates for five-year periods preceding the survey by residence, Jammu Region of J & K, 1993

Maternal age at birth	Years preceding survey			
	0-4	5-9	10-14	15-19
URBAN				
15-19	0.030	0.043	0.060	0.080
20-24	0.160	0.214	0.214	0.282
25-29	0.168	0.179	0.217	0.197
30-34	0.085	0.073	0.080	[0.160]
35-39	0.021	0.024	[0.062]	U
40-44	0.000	[0.012]	U	U
45-49	[0.000]	U	U	U
RURAL				
15-19	0.060	0.106	0.137	0.169
20-24	0.252	0.297	0.314	0.321
25-29	0.205	0.253	0.293	0.305
30-34	0.088	0.125	0.203	[0.277]
35-39	0.041	0.075	[0.151]	U
40-44	0.015	[0.043]	U	U
45-49	[0.006]	U	U	U
TOTAL				
15-19	0.056	0.094	0.121	0.152
20-24	0.234	0.280	0.294	0.313
25-29	0.198	0.238	0.278	0.282
30-34	0.087	0.115	0.176	[0.250]
35-39	0.037	0.064	[0.130]	U
40-44	0.012	[0.036]	U	U
45-49	[0.005]	U	U	U

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

years before the survey. There was a general tendency for the fertility decline to accelerate during the most recent period, especially in rural areas.

Further evidence of a decline in fertility over time is available from Table 5.4, which gives fertility rates over the last 20 years by the number of years women have been living with their husbands¹. 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, fertility has fallen steadily over time. The rapidity of the decline increases with marital duration, being most pronounced for women married 20 or more years.

¹ Since information was collected only on a woman's age at effective marriage, and not her year and month of effective marriage (which would be difficult to determine accurately in most cases), the duration since first effective marriage is calculated as the woman's age during the specified time period minus the age at which she started living with her (first) husband. For those whose current age is the same as their age at effective marriage (marriage duration 0), the average period covered is only about six months rather than one full year. Hence the 0-4 duration category effectively covers a period of only about 4.5 years while all the other duration categories cover 5 years.

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, Jammu Region of J & K, 1993				
Duration of effective marriage	Years preceding survey			
	0-4	5-9	10-14	15-19
URBAN				
0 - 4	0.344	0.339	0.354	0.366
5 - 9	0.148	0.190	0.245	0.262
10-14	0.051	0.079	0.101	0.157
15-19	0.024	0.047	0.080	*
20-24	0.007	0.024	*	*
25-29	0.000	*	*	U
RURAL				
0 - 4	0.356	0.363	0.332	0.307
5 - 9	0.243	0.310	0.335	0.345
10-14	0.131	0.185	0.270	0.269
15-19	0.065	0.111	0.168	(0.272)
20-24	0.025	0.054	(0.150)	*
25-29	0.012	(0.058)	*	U
TOTAL				
0 - 4	0.353	0.358	0.336	0.316
5 - 9	0.225	0.289	0.321	0.329
10-14	0.117	0.169	0.239	0.252
15-19	0.059	0.099	0.154	0.248
20-24	0.022	0.049	0.128	*
25-29	0.010	0.051	*	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.
U: Not available
() Based on 125-249 woman-years of exposure
* Rate not shown; based on fewer than 125 woman-years of exposure

Marital fertility is generally lower in urban areas than in rural areas at all durations for all time periods. The only exception is the 0-4 duration category for time periods 10-14 and 15-19 years preceding the survey, in which urban women have considerably higher fertility than rural women. This pattern is not uncommon in populations in which the age at marriage is higher in urban areas than in rural areas, as is the situation in Jammu (see Chapter 4). Women who marry at later ages often have their first birth sooner after marriage and concentrate their births earlier in their marriages.

5.2 Outcome of Pregnancies

Table 5.5 shows the outcome of all pregnancies ever-married women have had in their lifetime by age of mother and place of residence at the time of the survey. Information on stillbirths, spontaneous abortions and induced abortions was obtained in the reproduction section of the Woman's Questionnaire.

Table 5.5 Outcome of pregnancy

Percent distribution of all pregnancies of ever-married women by their outcome, according to age of the woman and residence, Jammu Region of J & K, 1993

Current age	Outcome of pregnancy				Total percent	Number of pregnancies
	Spontaneous abortion	Induced abortion	Still-birth	Live birth		
URBAN						
20-24	10.1	0.6	2.5	86.7	100.0	82
25-29	5.6	7.8	2.2	84.4	100.0	240
30-34	7.6	6.0	1.2	85.2	100.0	308
35-39	5.7	4.0	1.0	89.3	100.0	301
40-44	4.6	2.2	1.3	92.0	100.0	238
45-49	5.6	3.5	1.7	89.2	100.0	277
Total	6.1	4.4	1.5	87.9	100.0	1454
RURAL						
15-19	13.6	1.5	1.5	83.3	100.0	83
20-24	6.3	1.8	3.7	88.2	100.0	709
25-29	7.0	2.7	2.9	87.3	100.0	1547
30-34	4.5	1.7	3.1	90.7	100.0	1661
35-39	5.3	1.5	2.6	90.6	100.0	1714
40-44	4.1	0.6	1.2	94.2	100.0	1327
45-49	4.4	1.0	1.6	93.0	100.0	1149
Total	5.3	1.6	2.5	90.6	100.0	8190
TOTAL						
15-19	13.0	1.4	1.4	84.3	100.0	91
20-24	6.7	1.6	3.6	88.0	100.0	791
25-29	6.8	3.4	2.8	86.9	100.0	1786
30-34	5.0	2.4	2.8	89.8	100.0	1969
35-39	5.3	1.9	2.4	90.4	100.0	2015
40-44	4.1	0.8	1.2	93.8	100.0	1565
45-49	4.6	1.5	1.6	92.3	100.0	1426
Total	5.4	2.0	2.3	90.2	100.0	9644

Note: There were no reported pregnancies for women age 13-14. Total includes 8 pregnancies to urban women age 15-19, which are not shown separately.

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, and 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, so that the actual incidence of induced abortions may be much higher.

There is relatively little variation in the outcome of pregnancies by age for the Jammu region as a whole, except for spontaneous abortions at age 15-19 and, to a lesser extent, induced abortions at age 25-29. Of the 9,644 pregnancies reported by sample women, 90 percent resulted in live births, 2 percent in stillbirths, 2 percent in induced abortions, and 5 percent in

spontaneous abortions. The pattern is somewhat similar in rural areas, which account for 85 percent of all pregnancies. Women in urban areas report a higher proportion of pregnancies ending in induced abortions, 4 percent compared with 2 percent in rural areas, and a correspondingly lower proportion of live births.

There are substantial differentials by age for urban women in the incidence of spontaneous abortions and induced abortions. It is not clear why pregnancies of urban women age 20-24 should result in so many more spontaneous abortions (10 percent) than of urban women age 25-29 (6 percent); nor is it clear why induced abortions in urban areas should be so much fewer for the 20-24 group (less than 1 percent) than the 25-29 group (8 percent). This may be the result of a tendency on the part of respondents age 20-24 in urban areas to report induced abortions as spontaneous abortions. Likewise, there is no easy explanation for the much higher percentage of spontaneous abortions for rural respondents age 15-19 than at other ages.

In view of the problems of underreporting early spontaneous abortions, it is useful to highlight induced abortions and stillbirths in relation to live births rather than to total pregnancies. By this measure, there were 2.5 stillbirths and 2.2 induced abortions for every 100 live births in the state as a whole.

5.3 Children Ever Born and Living

The distribution of women by number of children ever born is shown in Table 5.6 for all women and currently married women. The table also shows the mean number of children ever born and surviving. Women in the childbearing years in Jammu have had an average of 2.3 children and currently married women have had an average of 3.1 children. 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 five children per woman for the 45-49 age group. Early childbearing is rare in Jammu. Only 7 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 their reproductive age span. Although the steady increase with age in the NFHS mean number of children ever born 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. 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 depart somewhat from this pattern, with relatively constant proportions of women at parities four through seven. The parity distributions for women age 40-44 are more typical.

The figures on childlessness shown in Table 5.6 are relatively low, particularly for currently married women. The low level of childlessness is probably an indication of the

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, Jammu Region of J & K, 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	93.2	5.5	1.0	0.1	0.1	--	--	--	--	--	--	100.0	906	0.08	0.07
20-24	53.1	21.7	15.2	7.4	2.0	0.5	0.2	--	--	--	--	100.0	813	0.86	0.82
25-29	11.5	14.5	27.1	25.6	14.0	4.8	1.9	0.4	0.2	--	--	100.0	643	2.41	2.25
30-34	4.2	5.7	19.3	23.0	23.6	13.3	6.5	3.1	1.2	--	--	100.0	512	3.45	3.13
35-39	2.6	3.0	11.7	16.6	23.3	18.5	11.4	8.4	2.6	2.1	--	100.0	426	4.28	3.84
40-44	1.4	3.2	8.7	13.8	16.0	20.8	15.9	8.3	8.6	2.5	0.8	100.0	304	4.83	4.33
45-49	2.2	1.9	6.8	10.8	15.3	16.7	17.7	14.2	5.0	3.7	5.8	100.0	247	5.32	4.73
Total	36.2	9.8	12.9	12.5	10.8	7.4	4.9	3.0	1.5	0.7	0.4	100.0	3851	2.26	2.06
CURRENTLY MARRIED WOMEN															
15-19	62.4	30.5	5.6	0.8	0.8	--	--	--	--	--	--	100.0	163	0.47	0.42
20-24	26.3	34.1	23.6	11.8	3.2	0.7	0.2	--	--	--	--	100.0	511	1.35	1.29
25-29	5.3	15.7	29.4	27.1	14.8	5.0	2.1	0.4	0.2	--	--	100.0	592	2.57	2.41
30-34	2.2	5.8	19.5	24.3	23.6	13.5	6.4	3.3	1.3	--	--	100.0	484	3.52	3.21
35-39	2.0	2.1	11.0	17.0	24.0	18.3	11.8	8.9	2.8	2.2	--	100.0	401	4.37	3.93
40-44	1.3	2.5	8.2	14.0	14.8	21.2	16.0	9.2	9.3	2.7	0.9	100.0	276	4.94	4.43
45-49	2.5	1.0	6.5	10.7	15.3	16.6	17.5	14.9	5.6	3.6	5.7	100.0	219	5.37	4.84
Total	11.2	13.7	18.1	17.7	14.8	10.1	6.6	4.2	2.1	0.9	0.6	100.0	2646	3.13	2.86
-- Less than 0.05 percent															

relative absence of primary sterility in the population of Jammu.

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 in Jammu. To 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 everywhere in the world. For male and female children together, the differentials by background characteristics follow the same pattern observed earlier. Fertility is higher in rural areas, 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 smaller than the differentials in the mean number of children ever born. This convergence is due to the fact that the groups that exhibit high fertility are the same groups in which infant and child mortality are relatively high. However, in the case of Jammu, this convergence is relatively minor. For example, rural women have 0.6 more children ever born, on average, than urban women, but this differential only decreases to 0.5 living children because of only slightly higher loss due to mortality in rural areas. The survival of children is lowest among Muslims, illiterate women and scheduled castes.

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, Jammu Region of J & K, 1993

Background characteristic	Children ever born			Children living		
	Male	Female	Total	Male	Female	Total
Age						
15-19	0.2	0.2	0.5	0.2	0.2	0.4
20-24	0.7	0.6	1.3	0.7	0.6	1.3
25-29	1.4	1.2	2.6	1.3	1.1	2.4
30-34	1.8	1.7	3.5	1.7	1.5	3.2
35-39	2.3	2.0	4.4	2.1	1.8	3.9
40-44	2.5	2.5	4.9	2.2	2.2	4.4
45-49	2.9	2.5	5.4	2.6	2.3	4.8
Residence						
Urban	1.3	1.2	2.6	1.3	1.2	2.4
Rural	1.7	1.5	3.2	1.6	1.4	2.9
Education						
Illiterate	2.0	1.8	3.8	1.8	1.6	3.4
Literate, < middle complete	1.5	1.3	2.7	1.3	1.1	2.5
Middle school complete	1.2	1.1	2.3	1.2	1.0	2.2
High school and above	1.1	0.9	2.0	1.0	0.9	1.9
Religion						
Hindu	1.6	1.4	3.1	1.5	1.3	2.8
Muslim	1.8	1.7	3.5	1.6	1.5	3.1
Sikh	1.4	1.3	2.8	1.4	1.2	2.6
Caste/tribe						
Scheduled caste	1.8	1.7	3.5	1.6	1.5	3.1
Other (Non-SC/ST)	1.6	1.4	3.0	1.5	1.3	2.7
Total	1.6	1.5	3.1	1.5	1.3	2.9

Note: The means by residence, education, religion and caste/tribe are standardized on the age distribution of all currently married women. There were no reported births to women age 13-14. Means for the total are based on all women age 13-49 including women belonging to other religions and scheduled tribes, the mean for whom are not shown separately.

5.4 Birth Order

Births during the three years before the survey by birth order are shown in Table 5.8. Overall, 32 percent of all births were first births, and 24 percent were second births. High order births are less numerous, but not negligible. Nearly 15 percent of all births were of order five and above and nearly 9 percent were of order six and above. As expected, the birth order distribution is more skewed towards lower order births in urban areas where only 5 percent of all births were of order five and above compared with 16 percent in rural areas.

5.5 Birth Intervals

There is considerable evidence from research studies 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

Table 5.8 Birth order by age of woman

Percent distribution of births during the three years preceding the survey by order of birth and age of the woman at birth, according to residence, Jammu Region of J & K, 1993

Maternal age at birth	Order of birth						Total percent	Number of births
	1	2	3	4	5	6+		
URBAN								
15-19	(70.4)	(25.9)	(3.7)	(--)	(--)	(--)	100.0	14
20-24	52.1	32.5	11.1	4.3	--	--	100.0	61
25-29	37.1	32.8	20.7	6.9	2.6	--	100.0	60
30-34	(8.5)	(46.8)	(14.9)	(10.6)	(10.6)	(8.5)	100.0	24
Total	41.2	33.9	14.4	5.8	2.6	2.2	100.0	162
RURAL								
15-19	77.1	17.1	5.7	--	--	--	100.0	131
20-24	38.1	32.8	19.8	6.1	2.0	1.2	100.0	430
25-29	12.4	22.0	27.6	22.4	10.8	4.8	100.0	313
30-34	2.3	4.7	17.4	16.3	16.3	43.0	100.0	108
35-39	(2.9)	(--)	(5.9)	(17.6)	(11.8)	(61.8)	100.0	43
Total	30.1	22.9	19.3	11.7	6.5	9.6	100.0	1039
TOTAL								
15-19	76.5	18.0	5.5	--	--	--	100.0	145
20-24	39.8	32.8	18.7	5.9	1.8	1.0	100.0	491
25-29	16.4	23.7	26.5	19.9	9.5	4.0	100.0	373
30-34	3.5	12.4	17.0	15.2	15.2	36.7	100.0	132
35-39	(2.8)	(1.2)	(5.6)	(16.8)	(11.2)	(62.4)	100.0	45
Total	31.6	24.3	18.6	10.9	6.0	8.6	100.0	1201

Note: Total includes 6 births to women age 13-14, 8 and 3 births to rural women age 40-44 and 45-49 respectively, and 2 births to urban women age 35-39, which are not shown separately.

() Based on 25-49 unweighted cases

-- Less than 0.05 percent

distribution of second and higher order births in the five-year period preceding the survey by the interval since previous birth. Overall, one in every seven births occurred within 18 months of the previous birth, two in every seven births occurred within 24 months, and five in every eight births occurred within 36 months. The median birth intervals shown in the next to last column of the table indicate that the overall median interval between births in Jammu is almost 31 months or about 2.6 years. There is a very clear increase in the median birth interval by age and by birth order, ranging from 28 months for women age 20-29 to 50 months for women age 40-49, and from 27 months when the prior birth was of order one to 38 months when the prior birth was of order six or above.

The median birth interval is longer if the previous child is still living. Hindus and Muslims have longer birth intervals than Sikhs. Birth interval differences by place of residence are negligible. The median birth interval is longer if the previous child is female than if the previous child is male. Interestingly, illiterate women have longer birth intervals than literate women, consistent with longer breastfeeding by illiterate women (see Table 10.4), but the

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, Jammu Region of J & K, 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	2.1	15.9	17.2	36.7	19.3	8.9	100.0	27.6	853
30-39	1.0	6.8	9.9	30.2	25.6	26.5	100.0	36.6	434
40-49	(2.8)	(--)	(2.8)	(19.4)	(22.2)	(52.9)	100.0	(49.5)	45
Order of prior birth									
1	2.0	16.6	20.5	33.0	15.7	12.3	100.0	27.3	474
2-3	1.5	11.3	12.5	34.9	24.6	15.2	100.0	31.7	593
4-5	2.3	9.1	8.0	34.4	22.1	24.1	100.0	34.7	185
6+	1.9	6.6	7.2	32.0	27.9	24.5	100.0	37.8	94
Sex of prior birth									
Male	2.1	11.5	13.6	36.8	21.4	14.7	100.0	30.3	698
Female	1.5	13.6	15.1	31.0	21.2	17.5	100.0	31.4	647
Survival of prior birth									
Still living	1.5	11.5	14.6	34.8	21.7	15.9	100.0	31.1	1250
Deceased	5.8	26.0	10.8	23.6	15.7	18.3	100.0	25.9	96
Residence									
Urban	1.9	11.9	17.6	32.3	16.9	19.4	100.0	30.8	165
Rural	1.8	12.6	13.9	34.2	21.9	15.6	100.0	30.9	1180
Education of the mother									
Illiterate	2.0	11.1	13.2	32.6	24.7	16.5	100.0	32.0	816
Lit., < middle complete	2.4	18.7	14.2	38.4	13.4	12.9	100.0	27.5	180
Middle school complete	2.4	15.2	18.7	32.0	20.5	11.3	100.0	28.2	149
High school and above	0.3	10.9	15.7	37.1	15.3	20.7	100.0	30.4	200
Religion									
Hindu	1.4	12.2	15.3	33.9	20.5	16.7	100.0	31.0	972
Muslim	2.9	11.9	11.9	34.2	24.0	15.0	100.0	31.2	306
Sikh	2.7	20.0	11.1	34.1	20.6	11.6	100.0	27.3	66
Caste/tribe									
Scheduled caste	1.7	11.0	15.8	34.6	20.5	16.4	100.0	31.3	439
Other (Non-SC/ST)	1.9	13.4	13.5	33.5	21.6	16.2	100.0	30.7	889
Total	1.8	12.5	14.3	34.0	21.3	16.0	100.0	30.9	1345

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 or higher order births to women age 13-14. Total includes 14 second or higher order births to mothers age 15-19, 1 to a mother belonging to other religion, 18 to mothers belonging to scheduled tribes, which are not shown separately.

() Based on 25-49 unweighted cases

-- Less than 0.05 percent

differences narrow as the level of education increases. There is only marginal difference in birth interval between scheduled caste and the non-SC/ST category.

By far the largest differential is by age of mother. The median birth intervals for mothers age 20-29, 30-39 and 40-49 are 27.6, 36.6, and 49.5, respectively. The relatively high proportion of short intervals at age 20-29 and, to a lesser extent, age 30-39 at the time of survey, may be at least partly due to selection effects. Only women who have two or more births are included in the table and women at these ages with more than one birth have higher fecundability than women at large. The proportion of births with intervals of less than 12 months is nearly four times as high when the last birth is deceased than when it is still living. In large part, this reflects the shortening of postpartum amenorrhoea that occurs when the previous child dies in infancy and breastfeeding stops prematurely.

5.6 Age at First and Last Birth

The onset of childbearing is an important demographic indicator. Postponement of first birth, 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. The median age at first birth is the age by which half the women have had their first birth. The median is undefined for women age 15-19 and 20-24 because in each of these age groups less than 50 percent of women had a first birth before the age that start the interval.

Median age at first birth is two to three years higher in urban areas than in rural areas, except for women age 40-49. It has been increasing over time for both urban and rural women; that is, median age at first birth is, in general, higher for younger women. Very early childbearing (below age 15) is not common in any of the age groups in either urban or rural areas, and its incidence has been dropping fairly steadily over time. Only 7 percent of women age 15-19 and 47 percent of women age 20-24 have borne children.

The median age at first birth by selected background characteristics of women is given in Table 5.11. The tendency of median age at first birth to decrease as current age increases is indicative of an increasing trend in median age at first birth over time that is present in all socioeconomic categories. The difference in median age at first birth between urban and rural women age 25-49 is 2 years. Median age at first birth for women age 25-49 steadily increases with increase in level of education, from 19.3 years for illiterate women to 21.2 years for women who have completed middle school, and to 23.7 years for women with at least a high school education. Median age at first birth for Sikhs is one year higher than for Hindus and nearly two years higher than for Muslims. Scheduled castes tend to begin childbearing about one year 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 suggest that childbearing is virtually complete for this cohort. Forty percent of women age 40-49 had their last birth before age 30, 72 percent had their last birth before age 35, and 92 percent complete their family building before age 40. The median age at last birth for the 40-49 age-group is about 33 years.

Table 5.10 Age at first birth

Percent distribution of women by age at first birth, according to current age and residence, Jammu Region of J & K, 1993

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+		
URBAN									
15-19	95.6	0.7	1.8	1.8	NA	NA	NA	100.0	NC
20-24	71.1	0.7	3.3	8.0	10.3	6.7	NA	100.0	NC
25-29	20.0	--	7.3	13.3	16.7	27.0	15.8	100.0	23.5
30-34	5.4	1.0	8.4	14.3	18.7	25.6	26.6	100.0	22.9
35-39	1.3	2.6	13.5	21.8	16.7	23.7	20.5	100.0	21.5
40-44	2.4	4.1	21.5	21.5	21.5	18.2	10.8	100.0	20.2
45-49	0.9	0.9	23.4	22.5	24.3	16.2	11.7	100.0	20.4
RURAL									
15-19	92.8	1.0	3.3	2.9	NA	NA	NA	100.0	NC
20-24	48.8	1.9	11.0	15.0	16.0	7.2	NA	100.0	NC
25-29	9.6	2.6	17.2	21.0	20.8	21.3	7.4	100.0	20.7
30-34	3.8	2.8	27.4	21.2	20.3	16.0	8.6	100.0	19.9
35-39	2.9	3.6	26.1	29.3	18.8	13.0	6.2	100.0	19.4
40-44	1.0	3.6	36.3	24.4	16.6	11.9	6.2	100.0	18.8
45-49	2.6	2.0	23.7	23.7	24.3	16.4	7.2	100.0	20.1
TOTAL									
15-19	93.2	0.9	3.0	2.8	NA	NA	NA	100.0	NC
20-24	53.1	1.7	9.6	13.7	14.9	7.1	NA	100.0	NC
25-29	11.5	2.1	15.4	19.6	20.0	22.4	9.0	100.0	21.1
30-34	4.2	2.4	23.4	19.8	19.9	17.9	12.3	100.0	20.4
35-39	2.6	3.4	23.7	27.9	18.4	15.1	8.9	100.0	19.6
40-44	1.4	3.7	33.2	23.7	17.6	13.2	7.1	100.0	19.1
45-49	2.2	1.7	23.6	23.4	24.3	16.4	8.3	100.0	20.1

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.

-- Less than 0.05 percent

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

²Never-married women are included in this category.

5.7 Childbearing at Young Ages

Fertility among teenagers (those under age 20) is drawing increasing attention from policymakers. Table 5.13 presents the proportions of ever-married women age 13-19 who are either mothers or are pregnant with their first child. The sum of these two proportions represents the proportion of teenage ever-married women who have begun childbearing. Among women age 13-16, 10 percent are pregnant with first child, and 24 percent have begun childbearing; whereas among women age 17-19, 13 percent are pregnant with first child and 55 percent have begun childbearing. At the time of the survey, about 37 percent of ever-married women age 13-19 had already become mothers, and another 13 percent were having their first pregnancy. Thus, half of ever-married teenage women have begun childbearing. However, since a large majority of women in this age group have never been married, it appears that childbearing among teenage women is likely to continue to become less common. Not surprisingly, teenage childbearing is more common among illiterate women than literate women.

Table 5.11 Age at first birth by background characteristics

Median age at first birth among women age 25-49 years, by current age and selected background characteristics, Jammu Region of J & K, 1993

Background characteristic	Current age					25-49
	25-29	30-34	35-39	40-44	45-49	
Residence						
Urban	23.5	22.9	21.5	20.2	20.4	21.9
Rural	20.7	19.9	19.4	18.8	20.1	19.9
Education						
Illiterate	19.6	19.1	19.1	18.6	19.8	19.3
Lit., < middle complete	20.8	19.8	19.6	(18.3)	(19.6)	20.0
Middle school complete	22.1	21.5	19.4	*	*	21.2
High school and above	24.2	24.1	22.6	22.9	(22.2)	23.7
Religion						
Hindu	21.4	20.5	19.6	19.0	20.1	20.3
Muslim	19.5	19.0	19.6	(19.2)	(20.1)	19.4
Sikh	(22.8)	(23.1)	(20.0)	*	*	21.3
Caste/tribe						
Scheduled caste	20.6	19.5	19.0	18.7	19.6	19.6
Other (Non-SC/ST)	21.4	20.8	19.9	19.3	20.4	20.5
Total	21.1	20.4	19.6	19.1	20.1	20.2

Note: Total medians are based on all women including women belonging to other religions and scheduled tribe women, the medians for whom are not shown separately.

() Based on 25-49 unweighted cases.

* Median not shown; based on fewer than 25 unweighted 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, Jammu Region of J & K, 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	45-49		
40-44	1.2	3.0	12.9	33.9	29.2	17.8	2.1	NA	100.0	303
45-49	2.2	1.2	7.4	19.4	36.3	23.8	8.7	1.0	100.0	247
40-49	1.6	2.2	10.4	27.4	32.4	20.5	5.0	0.5	100.0	551

NA: Not applicable

Table 5.13 Childbearing among ever-married women 13-19
 Percentage of ever-married women age 13-19 who are mothers or pregnant with their first child, by age and literacy, Jammu Region of J & K, 1993

Background characteristic	Percentage who are:		Percent who have begun childbearing	Number of women
	Mothers	Pregnant with first child		
Age				
13-16	(14.3)	(9.5)	(23.8)	26
17-19	41.7	13.4	55.1	138
Literacy				
Illiterate	42.8	9.1	51.9	102
Literate	28.1	19.1	47.2	62
Total	37.3	12.8	50.1	164

5.8 Postpartum Amenorrhoea, Abstinence and Nonsusceptibility

Postpartum protection from conception can be prolonged by breastfeeding, which can lengthen the duration of amenorrhoea (the period prior to menses following a birth). Protection can also be prolonged by delaying the resumption of sexual relations (prolonged abstinence) after a birth. Table 5.14 presents information on postpartum amenorrhoea, abstinence, and consequent nonsusceptibility following births in the three years prior to the NFHS. Seventy-eight percent of all women who had a birth during the 2-3 months prior to the survey were still amenorrhoeic. The proportion amenorrhoeic dramatically decreases as the number of months since birth increases. Except for the first group (women who gave birth in the two months before the survey), the proportions of mothers abstaining from sexual intercourse are much lower than the proportions amenorrhoeic. By 4-5 months since the birth, one-fifth of women were still abstaining. Overall, about two-thirds of women become susceptible to pregnancy within 10-11 months of giving birth and more than three-fourths become susceptible within 12-13 months. The median and mean values for each measure are shown at the bottom of Table 5.14. Estimates 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 clear that, on average, women remain nonsusceptible to conception for just under nine 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 nonsusceptibility are slightly longer for women age 30 and over than for women below age 30. They are also longer for women in rural areas than for women in urban areas, possibly due to longer period of breastfeeding in rural areas. Periods of amenorrhoea and nonsusceptibility are also relatively long for illiterate women in comparison to literate women, again as a possible consequence of differences in duration of breastfeeding. The greatest differentials in the duration of postpartum amenorrhoea are by religion. Muslim women have much longer durations of postpartum amenorrhoea and nonsusceptibility than Hindu

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, Jammu Region of J & K, 1993

Months since birth	Percent of births whose mothers are:			Number of births
	Postpartum amenorrhoeic	Postpartum abstaining	Postpartum nonsusceptible	
< 2	(89.0)	(90.5)	(96.5)	50
2 - 3	77.7	52.7	86.3	70
4 - 5	52.9	19.9	57.4	78
6 - 7	45.2	12.6	48.8	98
8 - 9	36.6	1.5	38.1	68
10-11	34.9	3.1	34.9	57
12-13	20.6	2.0	22.6	63
14-15	14.4	3.6	16.2	69
16-17	3.3	--	3.3	54
18-19	5.8	1.7	5.8	74
20-21	0.6	--	0.6	80
22-23	2.0	2.0	3.9	64
24-25	2.0	--	2.0	64
26-27	2.3	4.6	4.6	55
28-29	--	--	--	60
30-31	2.3	4.6	4.6	55
32-33	0.8	1.9	2.6	68
34-35	--	--	--	57
Median	5.7	2.5	6.3	NA
Mean	8.1	4.3	8.8	NA
Prevalence/incidence mean	7.9	3.8	8.7	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 unweighted cases

-- Less than 0.05 percent

women who, in turn, have much longer durations than Sikh women.

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 Jammu, menopause is relatively rare for women in their thirties and very early forties, but its incidence increases rapidly after age 42, rising to 67 percent by age 48-49 (Table 5.16). The onset of menopause appears to be somewhat later in rural areas, but this conclusion is based on a rather small number of women in some age groups.

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, Jammu Region of J & K, 1993

Background characteristic	Postpartum amenorrhoea	Postpartum abstinence	Postpartum nonsusceptibility	Number of births
Age				
13-29	5.4	2.5	6.2	922
30-49	6.2	2.5	6.5	259
Residence				
Urban	3.9	2.7	5.1	161
Rural	6.0	2.5	6.5	1020
Education				
Illiterate	8.1	2.6	8.5	612
Lit., < middle complete	3.7	2.3	4.1	183
Middle school complete	6.3	3.1	6.9	161
High school and above	2.9	2.2	4.8	226
Religion				
Hindu	5.4	2.5	6.3	868
Muslim	8.6	2.9	8.7	245
Sikh	2.1	1.9	2.4	66
Caste/tribe				
Scheduled caste	5.0	2.4	6.1	365
Other (Non-SC/ST)	5.8	2.5	6.3	801
Total	5.7	2.5	6.3	1182

Note: Medians are based on current status. Total medians are based on all births including 2 births to mothers belonging to other religions and 16 births to scheduled tribe women, the medians for whom are not shown separately.

Table 5.16 Menopause

Percentage of currently married women age 30-49 years who are in menopause, by age and residence, Jammu Region of J & K, 1993

Age	Urban		Rural		Total	
	Percent	Number	Percent	Number	Percent	Number
30-34	--	95	0.7	334	0.6	429
35-39	4.8	75	4.8	313	4.8	388
40-41	(8.3)	25	9.0	98	8.8	122
42-43	(24.3)	19	19.4	84	20.3	103
44-45	(36.4)	23	36.8	85	36.7	108
46-47	(60.0)	21	55.8	65	56.8	86
48-49	(66.7)	17	(66.7)	53	66.7	70
Total	15.5	274	14.1	1030	14.4	1305

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

() Based on 25-49 unweighted cases.

-- Less than 0.05 percent

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 specifically 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 universal in Jammu, with 100 percent of ever-married respondents in urban and rural areas reporting knowledge of at least one modern method of family planning (Figure 6.1). Eighty-nine percent of total knowledge of modern methods was spontaneous in urban areas compared with 70 percent in rural areas. Ever-married women and currently married women do not differ in knowledge of family planning methods.

Knowledge about sterilization is most widespread, with at least 98 percent of ever-married women both in urban and rural areas knowing male as well as female sterilization. In comparison, the three officially sponsored spacing methods, namely the IUD, pill and condom, are much less familiar to respondents. The most well known among the spacing methods is the pill (76 percent), followed by the condom and/or IUD (74 percent). One-half of women who know about the condom and IUD, and 58 percent of women who know about the pill, mentioned

their knowledge spontaneously. Injection is the least known method with only 50 percent reporting knowledge of the method. Actual knowledge of injection may be even lower because the Hindi term *sui* (used in the questionnaire to mean injection) is often interpreted by respondents to mean IUD insertion. Traditional methods of contraception are generally less well known than modern methods in Jammu; however, a substantial proportion (72 percent) of ever-married women reported knowledge of these methods, periodic abstinence being better known (59 percent) than the withdrawal method (53 percent). The table reveals that probing was often needed to elicit complete knowledge about contraceptive methods, particularly traditional methods.

Urban-rural differentials in the level of knowledge are mainly confined to spacing methods and traditional methods. As previously noted, male and female sterilization are known about equally, and almost universally, in urban and rural areas. However, rural women are

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 and residence, Jammu Region of J & K, 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	
URBAN								
Any method	88.8	11.0	99.8	99.0	89.2	10.6	99.8	99.2
Any modern method	88.3	11.5	99.8	99.0	88.6	11.2	99.8	99.2
Pill	69.9	22.1	92.1	89.0	70.6	21.9	92.5	89.5
Copper T/IUD	60.0	31.3	91.3	88.9	60.7	30.7	91.4	89.3
Injection	10.5	39.3	49.7	47.8	10.8	39.4	50.2	48.3
Condom	67.8	23.9	91.7	89.8	68.5	23.9	92.4	90.4
Female sterilization	58.6	40.8	99.5	98.8	58.6	41.0	99.6	99.0
Male sterilization	44.9	53.7	98.5	97.5	44.9	53.8	98.7	97.5
Any traditional method	19.6	60.6	80.2	NA	20.1	60.9	81.0	NA
Rhythm/periodic abstinence	11.9	58.5	70.4	59.0	12.3	59.3	71.5	60.4
Withdrawal	11.2	51.4	62.6	NA	11.6	51.9	63.5	NA
Other methods	4.0	NA	4.0	NA	4.1	NA	4.1	NA
Number of women	489	489	489	489	464	464	464	464
RURAL								
Any method	70.0	29.6	99.6	97.3	70.8	28.9	99.7	97.3
Any modern method	69.3	30.2	99.5	97.2	70.2	29.4	99.6	97.2
Pill	38.9	33.7	72.5	69.1	39.5	33.7	73.3	69.8
Copper T/IUD	31.0	39.0	70.0	67.0	31.4	39.2	70.7	67.6
Injection	9.8	40.8	50.6	45.2	9.9	41.4	51.3	45.7
Condom	30.7	39.3	70.0	65.8	31.4	39.7	71.1	67.0
Female sterilization	53.4	45.9	99.3	96.6	54.2	45.2	99.4	96.6
Male sterilization	35.3	62.5	97.8	95.3	36.0	61.9	97.9	95.4
Any traditional method	8.8	60.9	69.7	NA	8.9	61.2	70.1	NA
Rhythm/periodic abstinence	4.4	52.0	56.5	43.2	4.5	52.4	56.9	43.6
Withdrawal	4.3	46.8	51.1	NA	4.5	47.0	51.4	NA
Other methods	2.1	NA	2.1	NA	2.1	NA	2.1	NA
Number of women	2277	2277	2277	2277	2183	2183	2183	2183

Table 6.1 Knowledge of contraceptive methods and source of methods (Contd.)

Percentage of ever-married and currently married women knowing any contraceptive method and knowing a source, by specific method and residence, Jammu Region of J & K, 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	
TOTAL								
Any method	73.3	26.3	99.6	97.6	74.0	25.7	99.7	97.6
Any modern method	72.7	26.9	99.6	97.5	73.4	26.2	99.6	97.5
Pill	44.4	31.6	76.0	72.6	45.0	31.7	76.6	73.2
Copper T/IUD	36.1	37.7	73.8	70.9	36.6	37.7	74.3	71.4
Injection	9.9	40.5	50.4	45.7	10.0	41.1	51.1	46.2
Condom	37.3	36.6	73.8	70.0	37.9	37.0	74.9	71.1
Female sterilization	54.3	45.0	99.3	97.0	55.0	44.4	99.4	97.0
Male sterilization	37.0	60.9	97.9	95.7	37.5	60.5	98.0	95.7
Any traditional method	10.7	60.9	71.5	NA	10.8	61.2	72.0	NA
Rhythm/periodic abstinence	5.8	53.2	58.9	46.0	5.9	53.6	59.5	46.6
Withdrawal	5.5	47.6	53.1	NA	5.7	47.8	53.5	NA
Other methods	2.5	NA	2.5	NA	2.4	NA	2.4	NA
Number of women	2766	2766	2766	2766	2647	2647	2647	2647

NA: Not applicable

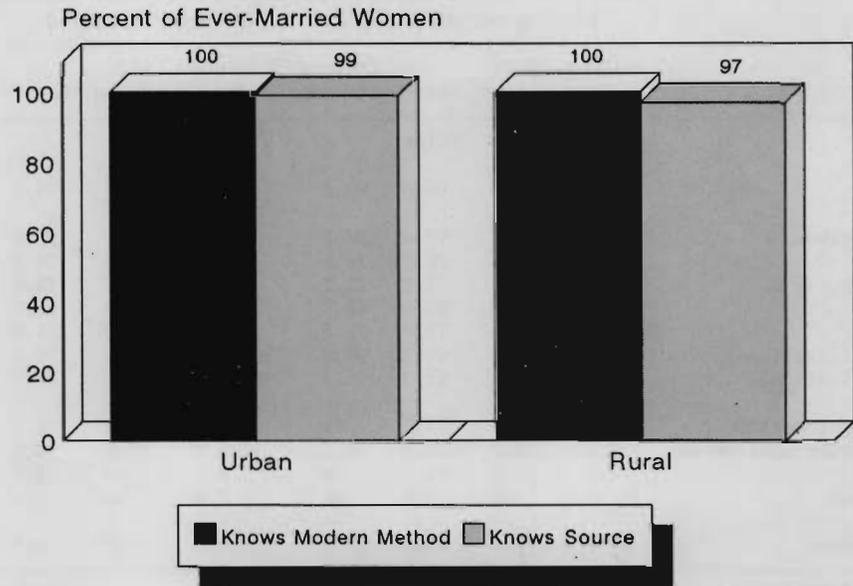
¹For modern methods, the source refers to a place that a person could go to get the method. For rhythm/periodic abstinence, the source refers to a source of advice on how to use periodic abstinence.

much less likely to know about the pill, IUD and condom (70-73 percent) than urban women (91-92 percent). The two areas also differ in the knowledge of traditional methods. Seventy percent of ever-married women in rural areas reported knowledge of any traditional method, compared with 80 percent of women in urban areas.

Table 6.1 also provides information on the extent of knowledge about sources from which contraceptive methods can be obtained. The question about the source of a method was asked only of those women who knew about the method. Knowledge about the sources of any contraceptive method is almost universal in Jammu, with 98 percent of ever-married women knowing where to obtain at least one modern method of family planning. Women are highly, and almost equally, knowledgeable about the sources of both male and female sterilization (96 to 97 percent). However, knowledge about sources of spacing methods is lower. Around 71 percent of women know a source for obtaining IUDs, pills and condoms. Knowledge of sources is more widespread in urban than rural areas, especially in the case of spacing methods.

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 and education of the woman, religion and caste/tribe. There are virtually no differences in the knowledge of modern methods of contraception by these background characteristics, because contraceptive knowledge is almost universal in Jammu. One slight exception is that knowledge about the source of any modern method is lower among Muslim

Figure 6.1
 Knowledge of Modern Contraceptive
 Methods and Sources by Residence



NFHS, Jammu Region of J & K, 1993

women (94 percent) than Hindus (98 percent) and Sikhs (100 percent).

6.2 Contraceptive Use

Ever Use of Family Planning Methods

All respondents who knew at least one method of family planning 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 and residence separately for ever-married and currently married women.

Although knowledge of at least one method of family planning is almost universal in Jammu, the actual practice of contraception is lower, with only 56 percent of the ever-married women and 57 percent of currently married women having ever used a method. Modern methods are used by 46 percent of ever-married women (47 percent of currently married women) and traditional methods by 23 percent of these women. The most commonly accepted method is female sterilization, used by 25 percent of ever-married women and currently married women. Condoms are used by 16 percent, and 7 percent each have used pills and IUDs. As expected, ever use of modern methods is higher in urban areas (63 percent) than in rural areas (44 percent) among currently married women (see Figure 6.2). Among the modern methods, female sterilization is more popular in rural areas (26 percent) than in urban areas (23 percent),

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 characteristics, Jammu Region of J & K, 1993

Background characteristic	Knows any method	Knows any modern method ¹	Knows source for any modern method	Number of women
Age				
15-19	99.2	99.2	90.8	163
20-24	99.7	99.7	97.5	511
25-29	99.8	99.8	98.5	592
30-34	99.7	99.7	98.0	484
35-39	99.6	99.2	97.7	401
40-44	100.0	100.0	98.5	276
45-49	99.4	99.4	97.8	219
Residence				
Urban	99.8	99.8	99.2	464
Rural	99.7	99.6	97.2	2183
Education				
Illiterate	99.5	99.4	96.0	1490
Lit., < middle complete	99.9	99.9	98.8	348
Middle school complete	100.0	100.0	99.6	299
High school and above	100.0	100.0	99.9	510
Religion				
Hindu	99.7	99.7	98.2	2032
Muslim	99.5	99.2	93.8	455
Sikh	100.0	100.0	100.0	156
Caste/tribe				
Scheduled caste	99.3	99.1	96.2	772
Other (Non-SC/ST)	99.8	99.8	98.1	1846
Total	99.7	99.6	97.5	2647

Note: Total includes 1 woman age 13-14, 5 women belonging to other religions and 29 scheduled tribe women, who are not shown separately.
¹Includes pill, copper T/IUD, injections, condoms, female sterilization and male sterilization.

whereas all the modern spacing methods, especially condoms and IUDs, have been used more in urban than rural areas. In fact, a larger proportion of women in urban areas have ever used condoms than have been sterilized. Traditional methods had ever been used by 23 percent of women overall, with relatively higher use in urban areas.

In terms of differences by age, ever use of any method and any modern method does not differ much between different age groups for women age 30 and above. However, contraceptive use rates are highest in the age groups 35-39 and 40-44. A low use rate has been observed among the youngest women: only 6 percent of those age 15-19 have ever used a modern method. Among modern methods, the condom is the most used method until age 30, after which female sterilization is the most popular method. The use of traditional methods varies little between different age groups for women age 25 and above.

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, according to residence, Jammu Region of J & K, 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
URBAN													
Ever-married women													
20-24	42.6	35.5	5.7	6.4	--	24.1	2.8	--	14.2	7.1	11.3	1.4	73
25-29	72.5	62.0	13.5	27.5	--	33.5	13.0	0.5	33.0	19.0	23.5	3.5	103
30-34	80.7	73.1	10.2	23.4	--	36.0	28.9	2.0	33.5	17.8	23.9	0.5	102
35-39	89.1	76.3	10.3	16.0	--	31.4	36.5	9.0	38.5	19.9	26.9	1.9	81
40-44	76.7	60.0	2.5	7.5	--	25.8	32.5	11.7	36.7	21.7	18.3	0.8	62
45-49	74.8	61.3	6.3	10.8	1.8	23.4	22.5	18.0	27.0	16.2	16.2	1.8	57
Total	72.7	61.8	8.7	16.7	0.2	29.9	22.0	5.6	30.7	17.1	20.5	1.7	489
Currently married women													
20-24	42.4	35.3	5.8	5.8	--	24.5	2.9	--	14.4	7.2	11.5	1.4	72
25-29	73.0	62.2	13.8	27.6	--	34.2	13.3	--	33.2	19.4	23.5	3.6	101
30-34	81.2	74.0	10.4	24.0	--	36.5	29.2	2.1	33.3	17.7	24.0	0.5	99
35-39	89.8	78.2	10.9	17.0	--	33.3	38.1	7.5	38.1	19.0	27.9	2.0	76
40-44	82.5	66.0	2.9	7.8	--	30.1	35.9	12.6	39.8	23.3	20.4	1.0	53
45-49	76.8	63.6	7.1	10.1	2.0	26.3	23.2	18.2	28.3	17.2	16.2	2.0	51
Total	73.7	63.2	9.2	17.1	0.2	31.5	22.5	5.1	31.0	17.3	21.0	1.8	464
RURAL													
Ever-married women													
15-19	11.5	4.1	1.6	--	--	2.5	--	--	9.0	6.6	4.9	--	153
20-24	30.1	20.0	5.9	5.6	0.3	9.6	4.5	0.6	18.0	9.9	11.5	--	444
25-29	46.1	36.7	8.2	7.2	--	15.7	17.5	0.7	20.2	13.5	12.2	--	501
30-34	67.9	57.9	8.7	6.2	--	15.0	38.6	4.4	26.2	13.7	18.1	0.3	401
35-39	71.0	61.2	6.9	3.3	--	14.5	43.5	6.2	23.6	12.7	13.8	0.7	345
40-44	74.6	63.7	6.7	3.6	--	10.4	42.5	13.0	21.8	15.0	11.9	1.0	241
45-49	63.8	51.3	3.9	2.0	--	11.8	33.6	10.5	25.7	10.5	20.4	0.7	190
Total	52.8	42.8	6.7	4.8	0.1	12.4	25.4	4.2	21.2	12.1	13.5	0.3	2277
Currently married women													
15-19	11.5	4.1	1.6	--	--	2.5	--	--	9.0	6.6	4.9	--	153
20-24	29.9	19.9	6.0	5.4	0.3	9.7	4.6	0.6	17.9	9.7	11.7	--	439
25-29	47.2	37.5	8.4	7.4	--	16.1	17.9	0.8	20.7	13.8	12.5	--	490
30-34	69.8	59.4	9.1	6.5	--	15.3	39.6	4.5	26.9	14.3	18.5	0.3	385
35-39	73.8	64.2	7.3	3.5	--	15.0	45.4	6.5	24.2	13.5	13.8	0.8	325
40-44	75.8	64.6	7.3	2.8	--	10.7	43.3	12.9	22.5	16.3	11.8	1.1	223
45-49	69.4	56.0	4.5	1.5	--	13.4	36.6	11.2	28.4	11.9	22.4	0.7	168
Total	53.8	43.6	7.0	4.8	0.1	12.8	25.9	4.2	21.7	12.6	13.7	0.3	2183

Table 6.3 Ever use of contraception (Contd.)

Percentage of ever-married and currently married women who have ever used any contraceptive method, by specific method and age, according to residence, Jammu Region of J & K, 1993

Age	Any method	Any modern method	Pill	IUD	Injection	Condom	Female sterilization	Male sterilization	Any traditional method	Periodic abstinence	Withdrawal	Other methods	Number of women
TOTAL													
Ever-married women													
15-19	13.6	6.1	1.9	0.6	--	3.9	--	--	9.7	7.4	5.2	--	163
20-24	31.9	22.2	5.9	5.7	0.2	11.6	4.3	0.5	17.5	9.5	11.5	0.2	517
25-29	50.6	41.0	9.1	10.7	--	18.8	16.7	0.7	22.4	14.4	14.1	0.6	605
30-34	70.5	61.0	9.0	9.7	--	19.2	36.7	3.9	27.7	14.5	19.2	0.4	503
35-39	74.4	64.1	7.5	5.7	--	17.7	42.2	6.7	26.4	14.0	16.3	1.0	426
40-44	75.0	63.0	5.9	4.4	--	13.5	40.4	12.7	24.8	16.4	13.2	1.0	303
45-49	66.4	53.6	4.5	4.0	0.4	14.5	31.0	12.3	26.0	11.8	19.4	0.9	247
Total	56.3	46.1	7.0	6.9	0.1	15.5	24.8	4.5	22.9	13.0	14.7	0.6	2766
Currently married women													
15-19	13.6	6.1	1.9	0.6	--	3.9	--	--	9.7	7.4	5.2	--	163
20-24	31.7	22.1	6.0	5.5	0.2	11.8	4.3	0.5	17.4	9.3	11.7	0.2	511
25-29	51.6	41.7	9.3	10.9	--	19.2	17.1	0.6	22.8	14.7	14.4	0.6	592
30-34	72.2	62.4	9.4	10.1	--	19.6	37.5	4.0	28.3	15.0	19.6	0.4	484
35-39	76.9	66.9	8.0	6.0	--	18.5	44.0	6.7	26.9	14.5	16.5	1.0	401
40-44	77.1	64.9	6.5	3.8	--	14.4	41.8	12.9	25.8	17.6	13.5	1.1	276
45-49	71.1	57.8	5.1	3.5	0.5	16.4	33.4	12.8	28.3	13.2	20.9	1.0	219
Total	57.3	47.1	7.4	7.0	0.1	16.0	25.3	4.4	23.3	13.4	15.0	0.6	2647

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

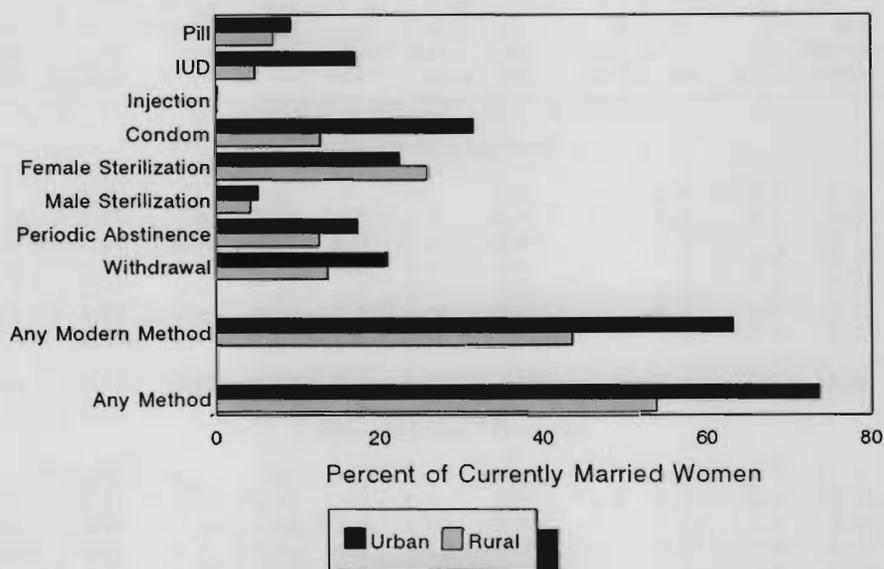
The age pattern of ever use of family planning is different in the urban and rural areas of Jammu. Ever use of contraception peaks in the 35-39 age group in urban areas, with 78 percent of currently married women having ever used any of the modern methods. In rural areas, modern contraceptive use rates are highest (64 to 65 percent) in the age groups of 35-39 and 40-44. In urban areas, the condom is the most popular method until age 35 and female sterilization and traditional methods above age 35. In rural areas, however, the most used method is female sterilization above age 30 and traditional methods below age 30.

Current Use of Family Planning Methods

Current use¹ of contraception in Jammu is only moderate, with less than one-half (49 percent) of currently married women age 15-49 practising family planning; 40 percent use modern methods and another 10 percent use traditional methods (Table 6.4). The figures are the same for currently married women age 15-44. Most of the currently married women who had ever used a modern contraceptive method (84 percent) are currently using a modern method, but among those who have ever used a traditional method only 42 percent are currently using

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.

Figure 6.2
Ever Use of Contraception by
Residence



NFHS, Jammu Region of J & K, 1993

a traditional method.

Table 6.4 shows that female sterilization is the most popular contraceptive method in Jammu, as in almost all Indian states. Twenty-five percent of currently married women age 15-49, use female sterilization and another 4 percent report that their husbands are sterilized. Thus sterilization accounts for 60 percent of total contraceptive prevalence. The preponderance of terminal methods is commensurate with the emphasis on sterilization in the Indian family planning programme. The current use of modern spacing methods is much lower: 6 percent use condoms, 3 percent IUDs, and 1 percent pills. Withdrawal is used by 6 percent of couples and periodic abstinence by 3 percent.

The current use of contraception is higher in urban areas (64 percent) than in rural areas (46 percent). Except for female sterilization, the current use of every single method of family planning is higher in urban areas than in rural areas. The percentage sterilized (male or female) is 30 percent in rural areas and 28 percent in urban areas, and the contribution of male and female sterilization to total contraceptive use among women age 15-49 is much larger in rural areas (65 percent) than in urban areas (43 percent).

The level of contraceptive use varies with the age of women, increasing from a low of 6 percent of currently married women age 15-19 to a high of 72 percent of women age 35-39, and decreasing thereafter. In the two highest fertility age groups (20-24 and 25-29), the contraceptive prevalence rates are only 23 and 43 percent, respectively. Among modern

Table 6.4 Current use of contraception

Percent distribution of currently married women by contraceptive method currently used, according to age and residence, Jammu Region of J & K, 1993

Age	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 per cent	Number of women
URBAN															
20-24	32.4	25.9	2.2	2.9	--	18.0	2.9	--	6.5	1.4	4.3	0.7	67.6	100.0	72
25-29	63.3	45.9	4.6	13.3	--	14.8	13.3	--	17.3	5.6	11.2	0.5	36.7	100.0	101
30-34	73.4	61.5	3.1	9.9	--	17.2	29.2	2.1	12.0	3.1	8.9	--	26.6	100.0	99
35-39	87.8	63.9	2.0	6.1	--	10.9	38.1	6.8	23.8	4.8	18.4	0.7	12.2	100.0	76
40-44	74.8	59.2	1.0	1.0	--	8.7	35.9	12.6	15.5	4.9	9.7	1.0	25.2	100.0	53
45-49	56.6	47.5	--	3.0	--	3.0	23.2	18.2	9.1	3.0	6.1	--	43.4	100.0	51
15-44	65.4	50.4	2.8	7.5	--	14.3	22.5	3.4	14.9	4.0	10.4	0.5	34.6	100.0	412
15-49	64.4	50.1	2.5	7.0	--	13.1	22.5	5.0	14.3	3.9	9.9	0.4	35.6	100.0	464
13-49	64.4	50.1	2.5	7.0	--	13.1	22.5	5.0	14.3	3.9	9.9	0.4	35.6	100.0	464
RURAL															
15-19	4.9	0.8	--	--	--	0.8	--	--	4.1	0.8	3.3	--	95.1	100.0	153
20-24	21.4	12.0	0.6	2.0	--	4.3	4.6	0.6	9.4	3.7	5.7	--	78.6	100.0	439
25-29	38.5	30.1	2.0	2.8	--	6.6	17.9	0.8	8.4	3.1	5.4	--	61.5	100.0	490
30-34	63.3	54.2	1.3	2.9	--	5.8	39.6	4.5	9.1	3.2	5.8	--	36.7	100.0	385
35-39	68.8	58.5	1.2	1.5	--	3.8	45.4	6.5	10.4	3.8	6.5	--	31.2	100.0	325
40-44	67.4	59.6	0.6	1.1	--	1.7	43.3	12.9	7.9	4.5	3.4	--	32.6	100.0	223
45-49	60.4	50.7	0.7	--	--	2.2	36.6	11.2	9.7	3.0	6.7	--	39.6	100.0	168
15-44	45.1	36.4	1.1	2.0	--	4.5	25.0	3.7	8.7	3.4	5.3	--	54.9	100.0	2014
15-49	46.2	37.5	1.1	1.9	--	4.4	25.9	4.2	8.8	3.3	5.4	--	53.8	100.0	2182
13-49	46.2	37.5	1.1	1.9	--	4.4	25.9	4.2	8.8	3.3	5.4	--	53.8	100.0	2183
TOTAL															
15-19	6.2	1.7	--	0.3	--	1.4	--	--	4.5	1.1	3.4	--	93.8	100.0	163
20-24	22.9	13.9	0.8	2.1	--	6.2	4.3	0.5	9.0	3.4	5.5	0.1	77.1	100.0	511
25-29	42.8	32.8	2.5	4.6	--	8.0	17.1	0.6	9.9	3.5	6.4	0.1	57.2	100.0	592
30-34	65.4	55.7	1.7	4.4	--	8.2	37.5	4.0	9.7	3.2	6.5	--	34.6	100.0	484
35-39	72.4	59.5	1.3	2.4	--	5.2	44.0	6.6	12.9	4.0	8.8	0.1	27.6	100.0	401
40-44	68.8	59.5	0.6	1.1	--	3.0	41.8	12.9	9.3	4.6	4.6	0.2	31.2	100.0	276
45-49	59.5	50.0	0.6	0.7	--	2.4	33.4	12.8	9.6	3.0	6.6	--	40.5	100.0	219
15-44	48.5	38.8	1.4	3.0	--	6.2	24.6	3.6	9.8	3.5	6.2	0.1	51.5	100.0	2427
15-49	49.4	39.7	1.3	2.8	--	5.9	25.3	4.4	9.7	3.4	6.2	0.1	50.6	100.0	2646
13-49	49.4	39.7	1.3	2.8	--	5.9	25.3	4.4	9.7	3.4	6.2	0.1	50.6	100.0	2647

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

methods, female sterilization is the most used method above age 25 and its use peaks in the age group 35-39 (44 percent). The use rate of most of the modern methods, especially female sterilization, shows an expected curvilinear relationship with age. Regarding urban-rural differences in the age pattern of current contraceptive use, below age 40 the use rate for modern methods is higher in urban areas, but above age 40 the rate is higher in rural areas.

Socioeconomic Differentials in Current Use of Family Planning

Table 6.5 shows socioeconomic differentials in current contraceptive use. A positive relationship exists between education and the level of current use. Differentials in current use by education are most evident between illiterate women (46 percent) and women who have completed high school (61 percent). The corresponding percentages for use of a modern method are 39 and 44, respectively; however, all other educational categories of women exhibit essentially the same use rate as illiterate women (Figure 6.3). Interestingly, the current use of traditional methods is higher among women with a high school education (17 percent) than illiterate women (7 percent). Although acceptance of sterilization decreases with the increase in level of education, current use of every other method, including traditional methods, increases with the increase in level of education.

Religious differentials in the prevalence of contraception are also quite substantial. Current use is much lower among Muslims (34 percent) than either Hindus (52 percent) or Sikhs (62 percent); thus the prevalence rate for Sikhs is almost twice as high as for Muslims. The practice of family planning is low among women from scheduled castes (43 percent) compared with non-SC/ST women (52 percent). Thirty-six percent of scheduled caste women are using a modern method of family planning, and female sterilization accounts for 60 percent of their contraceptive use. Except for female sterilization, the use of all modern or traditional methods is lower among scheduled caste than non-SC/ST women.

Table 6.5 also shows the differentials in current use by the number and sex of living children. A positive association exists between the number of living children a woman has and current use of contraception. Contraceptive use increases from only 4 percent for women who have no living children to 65 percent for women with four or more living children; the corresponding percentages for use of a modern method are 2 percent and 56 percent, respectively. A similar pattern is observed for female sterilization. The data on contraceptive use by the sex composition of living children indicates the existence of son preference; at each parity, the current use of family planning is lowest for women with no sons and highest for women with all sons. As expected, sterilization is a particularly unpopular method for women who do not have any sons. However, among women with no sons, the percentage sterilized increases steadily with number of living children, suggesting that, for the most part, preference for sons does not deter women at higher numbers of living children from using contraception.

Number of Children at First Use of Contraception

In order to examine the timing of initial contraceptive use, the NFHS included a question, addressed to all women who had ever used a method, on how many living children they had when they first used a method. The distribution of ever-married women according to the number of living children they had when they used contraception for the first time is shown in

Table 6.5 Current use by background characteristics

Percent distribution of currently married women by contraceptive method currently used, according to selected background characteristics, Jammu Region of J & K, 1993

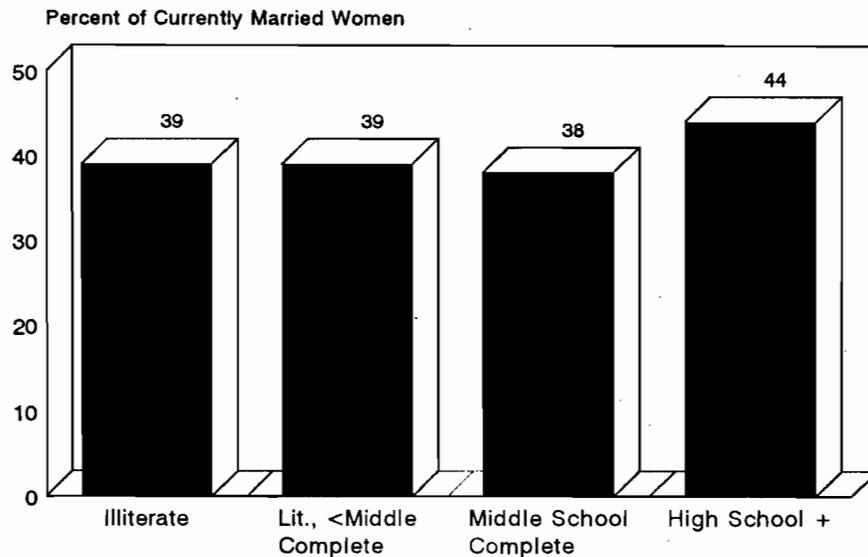
Background characteristic	Any method	Any modern method	Pill		IUD	Con- dom	Fe- male ster- iliza- tion	Male ster- iliza- tion	Any trad- meth- od	Peri- odic absti- nence	With- draw- al	Other meth- ods	Not using any method	Total per- cent	Number of women
Residence															
Urban	64.4	50.1	2.5	7.0	13.1	22.5	5.0	14.3	3.9	9.9	0.4	35.6	100.0	464	
Rural	46.2	37.5	1.1	1.9	4.4	25.9	4.2	8.8	3.3	5.4	--	53.8	100.0	2183	
Education															
Illiterate	45.7	38.6	0.9	0.9	2.7	29.8	4.3	7.2	3.0	4.1	--	54.3	100.0	1490	
Literate, < middle	47.8	38.6	0.5	1.8	3.5	26.6	6.2	9.2	3.0	6.1	0.1	52.2	100.0	348	
Middle complete	49.7	38.4	2.0	2.9	7.4	20.7	5.4	11.2	5.1	6.2	--	50.3	100.0	299	
High school and above	61.1	44.4	2.6	9.0	16.0	14.0	2.7	16.7	3.9	12.5	0.3	38.9	100.0	510	
Religion															
Hindu	51.8	42.2	1.4	3.0	6.3	26.6	4.9	9.6	3.2	6.3	0.1	48.2	100.0	2032	
Muslim	34.3	26.0	0.8	1.8	2.2	19.9	1.3	8.3	3.8	4.5	--	65.7	100.0	455	
Sikh	61.8	46.7	1.3	3.7	10.9	24.1	6.6	15.1	5.5	9.6	--	38.2	100.0	156	
Caste/tribe															
Scheduled caste	43.4	35.5	1.1	1.7	3.8	26.0	3.0	7.9	3.6	4.3	--	56.6	100.0	772	
Other (Non-SC/ST)	51.9	41.6	1.5	3.3	6.7	25.2	4.9	10.3	3.3	6.9	0.1	48.1	100.0	1846	
Number and sex of living children															
None	3.9	1.6	--	--	1.2	--	0.4	2.3	0.6	1.7	--	96.1	100.0	317	
1 child															
1 son	23.3	14.4	2.0	3.1	8.1	1.3	--	8.9	2.4	6.4	0.1	76.7	100.0	374	
No son	24.3	15.1	2.6	3.7	7.5	1.3	--	9.3	3.0	6.0	0.3	75.7	100.0	199	
	22.1	13.6	1.3	2.3	8.7	1.3	--	8.5	1.6	6.9	--	77.9	100.0	176	
2 children															
2 sons	49.9	34.9	1.3	5.9	9.6	13.4	4.6	15.1	5.1	9.8	0.2	50.1	100.0	520	
1 son	55.3	46.6	0.3	6.5	9.3	23.2	7.2	8.7	2.3	6.4	--	44.7	100.0	163	
No sons	53.2	34.2	2.3	7.2	9.9	11.1	3.7	19.0	6.4	12.2	0.4	46.8	100.0	266	
	30.8	15.7	--	1.1	9.5	2.5	2.5	15.1	6.5	8.6	--	69.2	100.0	90	
3 children															
3 sons	67.9	56.6	1.9	4.2	7.8	36.5	6.2	11.3	4.0	7.3	--	32.1	100.0	542	
2 sons	76.8	65.4	0.7	3.3	5.5	51.3	4.6	11.5	5.9	5.5	--	23.2	100.0	77	
1 son	75.3	65.4	2.4	3.8	7.6	44.3	7.4	9.9	4.4	5.5	--	24.7	100.0	263	
No sons	57.1	45.9	1.0	5.8	9.4	23.4	6.3	11.2	2.4	8.8	--	42.9	100.0	169	
	(43.4)	(20.6)	(4.7)	(1.6)	(6.9)	(7.5)	(--)	(22.8)	(5.3)	(17.5)	(--)	(56.6)	100.0	33	
4+ children															
2+ sons	65.0	56.4	1.2	1.0	3.3	44.5	6.4	8.6	3.5	5.1	0.1	35.0	100.0	893	
1 son	69.3	61.6	1.1	0.9	3.2	49.5	6.9	7.6	3.1	4.5	0.1	30.7	100.0	743	
	44.4	31.5	1.9	1.7	2.6	20.9	4.5	12.9	3.9	8.9	--	55.6	100.0	135	
Total	49.4	39.7	1.3	2.8	5.9	25.3	4.4	9.7	3.4	6.2	0.1	50.6	100.0	2647	

Note: Total includes 5 women belonging to other religions, 29 scheduled tribe women, and 15 women with 4+ children but no sons, who are not shown separately.

() Based on 25-49 unweighted cases

-- Less than 0.05 percent

Figure 6.3
Current Use of Modern Contraceptive
Methods by Education



NFHS, Jammu Region of J & K, 1993

Table 6.6. Overall, only 4 percent of women who had ever used contraceptives (2 percent of all ever-married women) initiated the use of contraception before having any children and another 25 percent (14 percent of ever-married women) started after the first child. Slightly over one-half of ever users (52 percent, or 29 percent of all ever-married women) initiated use when they had fewer than three living children. Less than one-third of ever users (30 percent, or 17 percent of all ever-married women) started using a method only after four or more children.

As noted earlier, the mainstay of the family planning programme is sterilization and women tend to accept that method only after having a completed family size which is large and preferably consists of two or more sons. The pattern of first acceptance at relatively high parities indicates that family planning has a smaller demographic impact than it would if contraceptive use were initiated earlier. Table 6.6, however, does show a gradual shift towards initiating use at lower parities. There is a tendency for younger women to have initiated family planning use at lower parities. As one moves towards the older cohorts, the percentage of women accepting family planning when they do not have any children or after one child generally decreases. For example, only 15 percent of ever users in the age groups 35-39 and 40-44 accepted a method for the first time in the early stage of reproductive life (when they had fewer than two children). This group was more than two and half times as large (40 percent) among women in the 25-29 age group.

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 and residence, Jammu Region of J & K, 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+			
URBAN									
20-24	57.4	11.3	19.9	8.5	2.8	--	--	100.0	73
25-29	27.5	3.5	40.0	20.0	6.0	2.5	0.5	100.0	103
30-34	19.3	4.6	34.0	19.3	13.7	9.1	--	100.0	102
35-39	10.9	1.9	21.8	28.8	15.4	21.2	--	100.0	81
40-44	23.3	2.5	22.5	22.5	10.8	18.3	--	100.0	62
45-49	25.2	0.9	22.5	8.1	15.3	27.9	--	100.0	57
Total	27.3	4.7	27.9	18.2	10.3	11.5	0.1	100.0	489
RURAL									
15-19	88.5	5.7	5.7	--	--	--	--	100.0	153
20-24	69.9	4.8	16.3	5.9	2.5	0.6	--	100.0	444
25-29	53.9	1.0	14.2	13.5	11.5	6.0	--	100.0	501
30-34	32.1	0.9	12.1	17.1	16.8	20.9	--	100.0	401
35-39	29.0	0.4	8.3	16.3	13.8	32.2	--	100.0	345
40-44	25.4	0.5	7.3	8.8	14.0	44.0	--	100.0	241
45-49	36.2	--	4.6	9.2	9.9	40.1	--	100.0	190
Total	47.2	1.8	11.3	11.3	10.4	18.0	--	100.0	2277
TOTAL									
15-19	86.4	7.0	6.3	0.3	--	--	--	100.0	163
20-24	68.1	5.7	16.8	6.3	2.6	0.5	--	100.0	517
25-29	49.4	1.4	18.6	14.6	10.5	5.4	0.1	100.0	605
30-34	29.5	1.7	16.6	17.6	16.2	18.5	--	100.0	503
35-39	25.6	0.7	10.9	18.7	14.1	30.1	--	100.0	426
40-44	25.0	0.9	10.4	11.6	13.3	38.8	--	100.0	303
45-49	33.6	0.2	8.8	9.0	11.1	37.3	--	100.0	247
Total	43.7	2.3	14.2	12.5	10.4	16.9	--	100.0	2766

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

Table 6.6 also shows that contraceptive use tends to be initiated earlier in urban areas than rural areas; 70 percent of ever users in urban areas initiated use when they had fewer than three living children compared with 46 percent in rural areas.

Problems in the Current Use of Family Planning

Table 6.7 deals with the problems faced by women while using the pill, IUD and sterilization. Nearly three-fourths of the women using the pill and five-sixths of the acceptors of IUDs did not report any problems associated with their use. Among the specific problems listed in the case of pill users, dizziness is the most common (14 percent). In the case of the IUD, excessive bleeding (10 percent) and backache (7 percent) are mentioned most. The proportion of women complaining of a problem is relatively higher in the case of female sterilization, the most commonly used method. The major problems reported with this method

Table 6.7 Problems with current method

Percentage of current users of the pill, copper T/IUD, and female/male sterilization who have had problems in using the method, Jammu Region of J & K, 1993

Problem	Method	
	Pill	
No problems	(73.4)	
Cramps	(3.6)	
Dizziness	(14.2)	
Body ache	(1.5)	
Spotting/bleeding	(5.0)	
Headache	(5.0)	
Weight gain	(2.9)	
Nausea/vomiting	(5.0)	
Other	(5.0)	
Number of pill users	35	
	Copper T/IUD	
No problems	83.0	
Cramps	0.7	
Backache	6.5	
Irregular periods	1.7	
Excessive bleeding	9.9	
Weakness inability to work	0.7	
Number of IUD users	74	
	Female sterilization	Male sterilization
No problems	63.9	85.7
Fever	1.8	1.1
Pain/backache	26.4	7.4
Sepsis	2.5	4.3
Weakness/inability to work	9.3	0.4
Failure/woman got pregnant	0.4	--
Other	4.9	1.1
Number sterilized	670	116
Note: All problems were recorded if there was more than one problem. Cases with missing information on problems are not included. () Based on 25-49 unweighted cases -- Less than 0.05 percent		

are pain/backache (26 percent) and weakness/inability to work (9 percent). Only 14 percent of women whose husbands were sterilized report problems associated with sterilization. The most common complaint (pain/backache) is the same as for female sterilization, but male sterilization generated the least problems overall, at least according to the reports of female respondents.

Age at Sterilization

Table 6.8 shows the age and time at which couples obtained a sterilization. Of the 786 sterilization operations reported, 43 percent were conducted during the period 0-5 years before the survey, another 31 percent were conducted 6-9 years before the survey and the remaining 26 percent were conducted 10 or more years before the survey. The majority of the couples (60 percent) have undergone sterilization when the wife was below age 30. There are very few cases of sterilization being performed on women in their forties. The median age of the woman

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, Jammu Region of J & K, 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	45-49			
STERILIZED WOMEN									
< 2	22.4	38.4	30.2	7.2	0.5	1.2	100.0	101	28.5
2-3	16.8	50.2	24.5	5.2	3.3	--	100.0	92	27.9
4-5	21.1	39.7	30.8	6.4	2.0	--	100.0	125	28.4
6-7	11.2	35.7	31.1	15.0	7.0	U	100.0	114	30.0
8-9	11.4	43.0	26.7	16.1	2.8	U	100.0	106	29.5
10+	17.9	43.9	32.5	5.7	U	U	100.0	133	NC
Total	16.9	41.6	29.6	9.2	2.5	0.2	100.0	670	28.8
WIVES OF STERILIZED MEN									
< 10	(8.7)	(63.5)	(14.7)	(11.8)	(1.2)	U	100.0	43	28.3
10+	41.9	27.7	24.9	5.6	U	U	100.0	73	NC
Total	29.6	41.0	21.1	7.9	0.4	U	100.0	116	27.8
STERILIZED COUPLES									
< 2	22.9	38.3	29.6	7.0	1.0	1.2	100.0	104	28.4
2-3	16.9	51.8	23.3	4.9	3.1	--	100.0	98	27.8
4-5	19.6	41.8	29.4	7.3	1.9	--	100.0	134	28.2
6-7	10.4	38.5	30.0	14.7	6.5	U	100.0	123	29.8
8-9	11.1	44.4	25.8	16.2	2.5	U	100.0	120	29.4
10+	26.4	38.2	29.8	5.6	U	U	100.0	205	NC
Total	18.7	41.5	28.3	9.0	2.2	0.2	100.0	786	28.6

NC: Not calculated due to censoring

U: Not available

() Based on 25-49 unweighted 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.

at the time of sterilization is 28.6 years. The median age of wives at the time of their husbands' sterilization is slightly lower (27.8 years).

6.3 Source of Supply of Contraception

Family planning methods and services in Jammu and Kashmir are provided through a network of government hospitals and 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. Family planning camps, organized from time to time, also provide sterilization and IUD 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 methods. Overall, the public sector, consisting of government/municipal hospitals, Primary Health Centres and other governmental health infrastructure, supply four-fifths (81 percent) of the current users of all modern methods, while the private medical sector, including private hospitals or clinics, private doctors and pharmacies/drugstores, supply 9 percent of current users (Table 6.9 and Figure 6.4). Ten percent of users obtain their methods from other sources, such as shops, friends and relatives.

The mix of public and private sector sources varies according to the method used. For clinical methods (sterilization and IUD), the government is by far the major source of supply; almost all sterilization operations and 80 percent of IUD insertions are performed at a government source. Supply methods (pills and condoms) are provided primarily by the private sector and other sources. Less than half 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 and Primary Health Centres provide approximately four-fifths of all sterilization operations and three-fourths of all IUD acceptors. Family planning camps, which are generally organised by the Primary Health Centres, provide services to 18 percent of (male or female) sterilization acceptors. Eleven percent of IUD insertions are done by private doctors. Pharmacies/drugstores are the major source of supply for pill users. More than two-thirds (67 percent) of condom

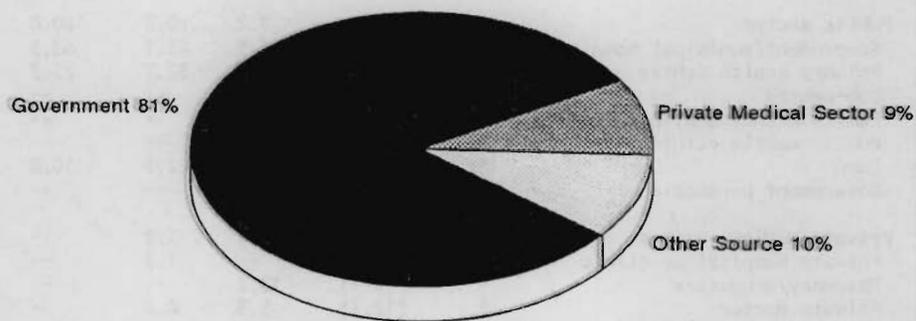
Table 6.9 Source of supply of modern contraceptive methods						
Percent distribution of current users of modern contraceptive methods by most recent source of supply, according to specific method and residence, Jammu Region of J & K, 1993						
Source of supply	Pill	Copper T/ IUD	Con- dom	Female steril- ization	Male steril- ization	All modern methods
URBAN						
Public sector	*	69.8	6.8	91.1	(95.6)	62.8
Government/municipal hospital	*	52.4	2.6	72.3	(77.8)	48.8
Primary Health Centre	*	15.9	3.4	11.9	(13.3)	9.8
Sub-centre	*	--	0.9	--	(--)	0.2
Family planning clinic	*	1.6	--	--	(--)	0.2
Public mobile clinic	*	--	--	--	(--)	--
Camp	*	--	--	6.9	(4.4)	3.6
Government paramedic	*	--	--	--	(--)	0.2
Private medical sector	*	30.2	35.0	8.9	(2.2)	20.7
Private hospital or clinic	*	20.6	--	7.9	(--)	6.5
Pharmacy/drugstore	*	--	25.6	--	(--)	9.4
Private mobile clinic	*	9.5	9.4	1.0	(2.2)	4.9
Private doctor	*	--	--	--	(--)	--
Other source	*	--	58.1	--	(2.2)	16.5
Shop	*	--	9.4	--	(--)	3.6
Husband	*	--	47.0	--	(--)	12.2
Friend/relative	*	--	1.7	--	(--)	0.4
Other	*	--	--	--	(2.2)	0.2
Total percent	100.0	100.0	100.0	100.0	100.0	100.0
Number	11	33	61	105	23	232

Table 6.9 Source of supply of modern contraceptive methods (Contd.)

Percent distribution of current users of modern contraceptive methods by most recent source of supply, according to specific method and residence, Jammu Region of J & K, 1993

Source of supply	Pill	Copper T/ IUD	Con- dom	Female steril- ization	Male steril- ization	All modern methods
RURAL						
Public sector	*	(87.9)	9.2	98.2	100.0	86.2
Government/municipal hospital	*	(36.4)	1.3	43.1	63.5	39.3
Primary Health Centre	*	(45.5)	5.3	32.7	25.7	29.2
Sub-centre	*	(6.1)	2.6	--	--	1.1
Family planning clinic	*	(--)	--	--	--	--
Public mobile clinic	*	(--)	--	--	--	--
Camp	*	(--)	--	22.3	10.8	16.7
Government paramedic	*	(--)	--	--	--	--
Private medical sector	*	(12.1)	18.4	1.8	--	5.2
Private hospital or clinic	*	(--)	--	1.3	--	1.1
Pharmacy/drugstore	*	(--)	13.2	--	--	2.1
Private doctor	*	(12.1)	5.3	0.4	--	2.0
Private mobile clinic	*	(--)	--	--	--	--
Other source	*	(--)	72.4	--	--	8.6
Shop	*	(--)	10.5	--	--	1.2
Husband	*	(--)	60.5	--	--	7.0
Friend/relative	*	(--)	--	--	--	0.2
Other	*	(--)	1.3	--	--	0.2
Total percent	100.0	100.0	100.0	100.0	100.0	100.0
Number	24	41	95	565	93	818
TOTAL						
Public sector	(40.0)	79.9	8.3	97.1	99.1	81.1
Government/municipal hospital	(10.1)	43.4	1.8	47.7	66.4	41.4
Primary Health Centre	(17.8)	32.4	4.5	29.5	23.2	24.9
Sub-centre	(10.7)	3.4	1.9	--	--	0.9
Family planning clinic	(--)	0.7	--	--	--	--
Public mobile clinic	(--)	--	--	--	--	--
Camp	(--)	--	--	19.9	9.5	13.8
Government paramedic	(1.5)	--	--	--	--	--
Private medical sector	(49.1)	20.1	24.9	2.9	0.4	8.6
Private hospital or clinic	(3.6)	9.1	--	2.4	--	2.3
Pharmacy/drugstore	(31.9)	--	18.0	--	--	3.7
Private doctor	(13.6)	11.0	6.9	0.5	0.4	2.6
Private mobile clinic	(--)	--	--	--	--	--
Other source	(10.9)	--	66.8	--	0.4	10.3
Shop	(7.4)	--	10.1	--	--	1.7
Husband	(--)	--	55.3	--	--	8.2
Friend/relative	(3.6)	--	0.7	--	--	0.2
Other	(--)	--	0.8	--	0.4	0.2
Total percent	100.0	100.0	100.0	100.0	100.0	100.0
Number	35	74	156	670	116	1050
() Based on 25-49 unweighted cases * Percentage not shown; based on fewer than 25 unweighted cases -- Less than 0.05 percent						

Figure 6.4
Sources of Family Planning Among Current
Users of Modern Contraceptive Methods



NFHS, Jammu Region of J & K, 1993

users obtain their supplies from other private non medical sources.

Differentials in the source of methods are found between urban and rural areas of the state. In rural areas, the public sector is the source of supply for the overwhelming majority of users (86 percent), while in urban areas, the public sector is the source of supply for 63 percent of users. As expected, other (nonmedical) sources provide contraception for a sizeable percentage of users (17 percent) in urban areas. The predominance of the public sector is particularly evident in the case of male and female sterilizations and IUDs in both rural and urban areas. In urban areas, the private medical sector is the source of supply for 9 percent of female sterilizations in contrast to rural areas where only 2 percent of the women are sterilized through the private medical sector. As far as the IUD is concerned, the public sector is the main source of supply both in urban areas (70 percent) and rural areas (88 percent). Nonmedical sources are the prime suppliers of condoms users in both urban areas (58 percent) and rural areas (72 percent). In rural areas, Primary Health Centres provide services to 26 percent of acceptors of male sterilization, 33 percent of female sterilization acceptors, 46 percent of IUD acceptors and 5 percent of condom users. Sub-centres, which provide IUD and condoms, are used by only 1 percent of rural women for their contraceptive needs.

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. Among the reasons other than wanting to have a child (mentioned by 29 percent of the women), 9 percent reported that contraceptive use created health problems and 52 percent discontinued use because of "other" problems. It may be noted that a sizeable proportion of women (15 percent) discontinued use either because the method failed/got pregnant or created menstrual and/or health problems. With a little motivation and improvement in services these women may be successfully brought under the programme. The reasons for discontinuation are similar in urban and rural areas.

Reason for stopping use	Urban	Rural	Total
Method failed/got pregnant	--	3.0	2.3
Created menstrual problem	4.2	4.0	4.1
Created health problem	11.3	8.0	8.7
Put on weight	1.4	2.0	1.9
Did not like the method	--	3.0	2.3
Wanted to have a child	26.8	29.0	28.5
Other	54.9	51.0	51.9
Don't know/missing	1.4	--	0.3
Total percent	100.0	100.0	100.0
Number	37	125	162

-- Less than 0.05 percent

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 further advances in contraceptive prevalence.

Overall, 34 percent of currently married nonusers reported that they do not intend to use contraception in the future (Table 6.11), 54 percent have an intention to use it in the future, and the remaining 12 percent of women were not sure about their intentions. Among the intended users, 43 percent reported that they would use a method of family planning within the next 12 months, a little less than half (47 percent) said they would use it at a later stage, and 10 percent were not sure when they would start using contraception.

Table 6.11 Future use

Percent distribution of currently married women who are not currently using any contraceptive method by intention to use in the future, according to number of living children, residence and whether ever used contraception, Jammu Region of J & K, 1993

Past use/ intention to use in future	Number of living children ¹					Total
	0	1	2	3	4+	
URBAN						
Never used contraception						
Intends to use in next 12 months	3.2	18.9	17.8	(11.1)	15.1	14.1
Intends to use later	30.6	27.4	11.0	(16.7)	3.8	19.1
Intends to use, unsure when	1.6	2.1	2.7	(2.8)	1.9	2.2
Unsure as to intention	17.7	13.7	2.7	(8.3)	5.7	10.0
Does not intend to use	43.5	21.1	20.5	(19.4)	41.5	28.5
Missing	--	--	--	(--)	--	--
Previously used contraception						
Intends to use in next 12 months	1.6	6.3	19.2	(13.9)	3.8	8.8
Intends to use later	--	7.4	6.8	(11.1)	--	5.0
Intends to use, unsure when	--	1.1	2.7	(--)	--	0.9
Unsure as to intention	--	1.1	--	(--)	1.9	0.6
Does not intend to use	1.6	1.1	16.4	(16.7)	26.4	10.7
Missing	--	--	--	(--)	--	--
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	4.8	25.3	37.0	(25.0)	18.9	22.9
Intends to use later	30.6	34.7	17.8	(27.8)	3.8	24.1
Intends to use, unsure when	1.6	3.2	5.5	(2.8)	1.9	3.1
Unsure as to intention	17.7	14.7	2.7	(8.3)	7.5	10.7
Does not intend to use	45.2	22.1	37.0	(36.1)	67.9	39.2
Missing	--	--	--	(--)	--	--
Total percent	100.0	100.0	100.0	100.0	100.0	100.0
Number	32	49	38	19	27	165
RURAL						
Never used contraception						
Intends to use in next 12 months	1.2	14.7	14.2	30.3	27.3	17.9
Intends to use later	21.8	32.5	33.7	17.6	8.6	22.4
Intends to use, unsure when	5.5	2.5	5.8	3.5	6.5	4.9
Unsure as to intention	15.2	12.2	13.2	7.7	9.0	11.4
Does not intend to use	53.3	25.4	20.0	16.9	31.0	29.4
Missing	--	--	--	--	--	--
Previously used contraception						
Intends to use in next 12 months	--	4.1	4.2	10.6	9.0	5.6
Intends to use later	3.0	5.1	3.2	3.5	0.8	3.0
Intends to use, unsure when	--	1.0	0.5	2.1	0.4	0.7
Unsure as to intention	--	0.5	1.1	1.4	0.4	0.6
Does not intend to use	--	2.0	3.7	6.3	6.9	3.9
Missing	--	--	0.5	--	--	0.1
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	1.2	18.8	18.4	40.8	36.3	23.5
Intends to use later	24.8	37.6	36.8	21.1	9.4	25.3
Intends to use, unsure when	5.5	3.6	6.3	5.6	6.9	5.6
Unsure as to intention	15.2	12.7	14.2	9.2	9.4	12.0
Does not intend to use	53.3	27.4	23.7	23.2	38.0	33.3
Missing	--	--	0.5	--	--	0.1
Total percent	100.0	100.0	100.0	100.0	100.0	100.0
Number	206	246	238	178	306	1174

Table 6.11 Future use (Contd.)

Percent distribution of currently married women who are not currently using any contraceptive method by intention to use in the future, according to number of living children, residence and whether ever used contraception, Jammu Region of J & K, 1993

Past use/ intention to use in future	Number of living children ¹					Total
	0	1	2	3	4+	
TOTAL						
Never used contraception						
Intends to use in next 12 months	1.5	15.4	14.7	28.5	26.3	17.4
Intends to use later	23.0	31.6	30.6	17.5	8.2	22.0
Intends to use, unsure when	4.9	2.5	5.4	3.5	6.1	4.6
Unsure as to intention	15.5	12.4	11.7	7.8	8.7	11.2
Does not intend to use	52.0	24.7	20.1	17.1	31.9	29.3
Missing	--	--	--	--	--	--
Previously used contraception						
Intends to use in next 12 months	0.2	4.4	6.3	10.9	8.6	6.0
Intends to use later	2.6	5.5	3.7	4.2	0.7	3.2
Intends to use, unsure when	--	1.0	0.8	1.9	0.4	0.8
Unsure as to intention	--	0.6	0.9	1.3	0.5	0.6
Does not intend to use	0.2	1.9	5.4	7.3	8.5	4.8
Missing	--	--	0.5	--	--	0.1
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	1.7	19.9	21.0	39.3	34.9	23.5
Intends to use later	25.6	37.1	34.2	21.8	8.9	25.2
Intends to use, unsure when	4.9	3.5	6.2	5.4	6.5	5.3
Unsure as to intention	15.5	13.0	12.6	9.1	9.2	11.9
Does not intend to use	52.2	26.5	25.5	24.5	40.4	34.1
Missing	--	--	0.5	--	--	0.1
Total percent	100.0	100.0	100.0	100.0	100.0	100.0
Number	238	295	275	196	334	1339
-- Less than 0.05 percent						
() Based on 25-49 unweighted cases						
¹ Includes current pregnancy, if any.						

Among women who have never used contraceptive methods before (these women constitute 85 percent of current nonusers), 35 percent reported that they did not intend to use them in the future, 52 percent intend to use them in the future, and 13 percent were not sure of their intentions. In contrast, almost two-thirds of those who have used contraception in the past (but are not currently using) intend to use contraception again in the future, slightly less than one-third did not intend to use in the future, and only 4 percent were unsure of their intentions.

Urban and rural women differ slightly in their intentions regarding contraceptive use in the future. For example, while the proportion of currently married nonusers who do not intend to use family planning in the future is 39 percent in urban areas, the corresponding proportion in rural areas is 33 percent.

The proportion of women who intend to use family planning in the future increases gradually with an increase in the number of living children, at least up to three living children. Although only one-third of women with no living children expressed an intention to use

contraceptives in the future, this proportion increased to two-thirds for those with three living children. Urban and rural areas are similar in this regard.

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 to provide the main reason for their intention. Reasons for not intending to use any method are indicated in Table 6.12. Desire for additional children is the main reason for not intending to use contraception, with 54 percent of women giving this reason². Ninety-five percent of women under age 30 and 23 percent of women age 30 and over gave this reason.

Another 5 percent of married women reported either their inability to work after sterilization or their fear of sterilization as reasons for not intending to use family planning. A higher proportion of older women (7 percent) than younger women (2 percent) reported these reasons. Fifty-one percent of women age 30 or over reported actual or perceived sterility as the

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 and residence, Jammu Region of J & K, 1993

Reason	Urban			Rural			Total		
	Age < 30	Age 30+	Total	Age < 30	Age 30+	Total	Age < 30	Age 30+	Total
Wants children	(83.3)	11.2	32.0	73.2	17.5	42.8	74.2	16.4	41.3
Wants a son	(11.1)	3.4	5.6	19.7	5.8	12.1	18.9	5.4	11.2
Wants a daughter	(2.8)	3.4	3.2	1.4	0.6	1.0	1.5	1.1	1.3
Worry about side effects	(--)	--	--	--	1.2	0.6	--	1.0	0.5
Can't work after sterilization	(--)	--	--	0.7	3.5	2.2	0.6	2.9	1.9
Lack of knowledge	(--)	--	--	--	1.2	0.6	--	1.0	0.5
Afraid of sterilization	(--)	--	--	1.4	5.3	3.5	1.3	4.3	3.0
Hard to get methods	(--)	--	--	--	0.6	0.3	--	0.5	0.3
Against religion	(--)	2.2	1.6	0.7	2.3	1.6	0.6	2.3	1.6
Opposed to family planning	(--)	--	--	--	0.6	0.3	--	0.5	0.3
Husband opposed	(--)	2.2	1.6	--	0.6	0.3	--	0.9	0.5
Difficult to get pregnant	(2.8)	7.9	6.4	0.7	11.7	6.7	0.9	11.0	6.7
Menopausal/had hysterectomy	(--)	53.9	38.4	0.7	37.4	20.8	0.6	40.4	23.3
Health does not permit	(--)	4.5	3.2	1.4	5.3	3.5	1.3	5.1	3.5
Doesn't like existing methods	(--)	2.2	1.6	--	2.3	1.3	--	2.3	1.3
Other	(--)	9.0	6.4	--	4.1	2.2	--	5.0	2.8
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	19	46	65	178	214	391	196	260	456

-- Less than 0.05 percent

() Based on 25-49 unweighted cases

² This includes women desiring children irrespective of sex, and those desiring specifically a son or a daughter.

main reason for not intending to use contraception in the future.

The major reasons for nonuse differ slightly by residence. A somewhat higher proportion of women in rural areas (56 percent) want additional children than in urban areas (41 percent). Lack of knowledge of family planning was cited as a reason only in rural areas. Among women age 30 and over, urban women are more likely than rural women to perceive themselves as unable to have children in the future.

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. Table 6.13 shows that of the women who reported their intention to use contraception in the future, 62 percent said they prefer to use female sterilization, 20 percent prefer to use modern spacing methods, 3 percent prefer traditional methods, and 15 percent are not sure which method they would prefer. Among the modern spacing methods, the pill is the most popular method (9 percent), followed by the IUD (6 percent).

The choice of preferred methods is different for those who intend to use them within 12 months than for those who intend to use them later. Female sterilization is the most preferred method for both of these groups; however, the preference for modern spacing methods is almost three times as high among women who intend to use a method within 12 months (32 percent) as among those who plan to use one later (11 percent). Likewise, traditional methods are preferred more by those who plan to use a method within 12 months (5 percent) than those who intend to use one later (1 percent).

Method preferences differ in urban and rural areas. Although female sterilization is the most preferred method in both areas, the percentage of current nonusers who intend to use it in the future is lower in urban areas (46 percent) than in rural areas (64 percent). In contrast, the intention to use modern spacing methods is higher in urban areas (31 percent) than in rural areas (19 percent).

The contraceptive method mix that intended future users say they would prefer is different from the methods selected by current users. Modern spacing methods are being used by only 10 percent of current users (Table 6.4), but 20 percent of intended future users say they would like to use modern spacing methods. These results suggest that the potential demand for modern spacing methods is increasing and that the family welfare programme should pay increasing attention to effective spacing methods as part of a balanced programme to satisfy the contraceptive needs of women in Jammu.

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 by selected background characteristics. The effort

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, by residence, Jammu Region of J & K, 1993

Preferred method	Timing of intended use			All women
	Next 12 months	Later	Unsure when	
URBAN				
Pill	16.4	7.8	*	11.9
Copper T/IUD	9.6	9.1	*	9.4
Injection	1.4	--	*	0.6
Condom	13.7	3.9	*	8.7
Female sterilization	41.1	49.4	*	46.2
Male sterilization	1.4	--	*	0.6
Periodic abstinence	1.4	2.6	*	1.9
Withdrawal	1.4	--	*	0.6
Unsure	13.7	27.3	*	20.0
Total percent	100.0	100.0	100.0	100.0
Number	38	40	5	83
RURAL				
Pill	15.4	2.9	1.9	8.2
Copper T/IUD	8.1	3.8	3.8	5.7
Injection	3.2	1.3	--	1.9
Condom	4.1	1.3	5.7	2.9
Female sterilization	54.3	76.1	50.9	64.1
Male sterilization	0.5	--	--	0.2
Periodic abstinence	3.2	0.8	--	1.8
Withdrawal	1.8	--	--	0.8
Other	0.9	--	--	0.4
Unsure	8.6	13.9	37.7	14.0
Total percent	100.0	100.0	100.0	100.0
Number	276	298	66	641
TOTAL				
Pill	15.5	3.5	2.5	8.6
Copper T/IUD	8.3	4.4	4.2	6.1
Injection	3.0	1.1	--	1.8
Condom	5.2	1.6	6.0	3.6
Female sterilization	52.7	72.9	51.6	62.1
Male sterilization	0.6	--	--	0.2
Periodic abstinence	3.0	1.0	--	1.8
Withdrawal	1.8	--	--	0.8
Other	0.8	--	--	0.3
Unsure	9.2	15.4	35.7	14.7
Total percent	100.0	100.0	100.0	100.0
Number	314	337	71	724

Note: The "all women" column includes 1 woman with missing information on timing of intended use, who is not shown separately.

* Percentage not shown; based on fewer than 25 unweighted cases

-- Less than 0.05 percent

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, Jammu Region of J & K, 1993

Background characteristic	Heard family planning message on radio or television				Total percent	Number
	Neither	Radio only	Television only	Both		
Age						
13-19	51.4	20.6	4.9	23.1	100.0	164
20-29	37.3	15.1	8.6	39.0	100.0	1122
30-39	39.0	13.9	11.4	35.8	100.0	929
40-49	41.6	11.4	10.4	36.6	100.0	551
Residence						
Urban	14.4	3.3	15.8	66.6	100.0	489
Rural	45.0	16.6	8.3	30.0	100.0	2277
Education						
Illiterate	58.1	17.2	6.8	18.0	100.0	1568
Lit., < middle complete	30.7	14.2	12.8	42.3	100.0	369
Middle school complete	13.8	13.1	17.0	56.1	100.0	310
High school and above	5.2	6.4	11.8	76.6	100.0	519
Religion						
Hindu	36.7	13.1	10.7	39.5	100.0	2129
Muslim	58.4	21.1	3.0	17.5	100.0	468
Sikh	23.4	10.8	15.4	50.5	100.0	163
Caste/tribe						
Scheduled caste	52.3	17.9	8.0	21.8	100.0	804
Other (Non-SC/ST)	34.0	12.6	10.4	42.9	100.0	1933
Use of contraception						
Ever used	30.4	13.5	11.4	44.7	100.0	1557
Never used	51.4	15.3	7.4	25.9	100.0	1209
Total	39.6	14.3	9.7	36.5	100.0	2766

Note: Total includes 6 women belonging to other religions, and 29 scheduled tribe women, who are not shown separately.

to disseminate family planning information through the electronic mass media has succeeded in reaching 60 percent of ever-married women in Jammu. Slightly more than one-third of women (37 percent) have heard a message on both radio and television in the month preceding the survey. Another 14 percent heard a family planning message only on radio and 10 percent heard a family planning message only on television. Given that 63 percent of households in Jammu own radios and 38 percent own television (Table 3.9), it is evident that the electronic media has played a fairly effective role in disseminating knowledge about family planning.

There is not much difference between age groups in the extent of exposure to family planning messages, except that women age 13-19 have had less exposure than other women. Urban-rural differentials in media coverage are substantial. The percentage of women exposed to family planning messages on radio and/or television is 86 and 55 in urban and rural areas, respectively. Television is relatively more prominent in disseminating family planning messages in urban areas, whereas radio is more prominent in rural areas.

Women's exposure to family planning messages on radio and television is positively related with educational attainment. Forty-two percent of illiterate respondents have heard a family planning message on the radio and/or television, whereas 95 percent of women with a high school education have heard such a message. The proportion hearing a message on both radio and television increases sharply with increasing education.

The extent of exposure to family planning messages is higher among Sikhs (77 percent) than among Hindus (63 percent), and is lowest among Muslims (42 percent). The percentage who have heard a family planning message on radio and/or television is lower among scheduled caste women (48 percent) than non-SC/ST women (66 percent). The extent of exposure to family planning messages on the electronic media is higher among ever users (70 percent) than among never users (49 percent).

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. A large majority (80 percent) of the women say it is acceptable to have family planning messages on radio and television, and only 6 percent say it is not acceptable and the rest (14 percent) are not sure (Table 6.15). Younger women (under age 20) and older women (over age 34), rural residents, illiterate women, Muslim women and women belonging to scheduled castes are less likely than other women to consider it acceptable to broadcast family planning messages on radio or television.

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. Overall, 38 percent said they had not discussed this topic with their husbands at all in the previous year (Table 6.16). An identical percentage discussed family planning once or twice while 24 percent discussed it more often. A relatively high percentage of women age 25-29 (74 percent) report that they have discussed family planning with their husbands. Women in the early (below age 20) and late (over age 39) reproductive years are least likely to have communicated with their husbands about family planning. This age pattern of communication may result from the fact that the middle reproductive years are when most couples complete their families and must decide what method of contraception to use in order to stop childbearing.

Substantial differences are also observed according to the place of residence, respondent's level of education, her husband's level of education, religion and the ever use of family planning. Women in urban areas are more likely to have discussed family planning with their husbands than those in rural areas (69 percent compared with 60 percent). As expected, the extent of husband-wife communication about family planning is positively related to the educational attainment of women, as well as the education of their husbands. For example, 76 percent of women who completed high school discussed family planning with their husbands compared with only 52 percent of illiterate women. Similarly, interspousal communication is more common among women whose husbands have studied beyond high school (80 percent) than among those whose husbands are illiterate (49 percent). Interspousal communication about

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, Jammu Region of J & K, 1993

Background characteristic	Acceptability of media messages			Total percent	Number of women
	Acceptable	Not acceptable	Unsure		
Age					
15-19	68.2	1.9	29.9	100.0	163
20-24	82.5	4.4	13.1	100.0	517
25-29	81.6	4.4	13.9	100.0	605
30-34	82.1	4.9	12.9	100.0	503
35-39	78.3	6.0	15.7	100.0	426
40-44	79.0	9.8	11.2	100.0	303
45-49	77.8	8.4	13.8	100.0	247
Residence					
Urban	86.5	10.4	3.2	100.0	489
Rural	78.5	4.5	17.0	100.0	2277
Education					
Illiterate	72.3	4.8	22.9	100.0	1568
Lit., < middle complete	86.2	5.3	8.4	100.0	369
Middle school complete	91.3	6.0	2.7	100.0	310
High school and above	91.9	7.6	0.5	100.0	519
Religion					
Hindu	81.8	5.4	12.8	100.0	2129
Muslim	68.2	5.1	26.7	100.0	468
Sikh	88.3	8.7	3.1	100.0	163
Caste/tribe					
Scheduled caste	77.1	4.1	18.9	100.0	804
Other (Non-SC/ST)	81.3	6.1	12.6	100.0	1933
Total	79.9	5.5	14.5	100.0	2766

Note: Total includes 1 woman age 13-14, 6 women belonging to other religions and 29 scheduled tribe women, who are not shown separately.

family planning is the highest among Sikhs (66 percent), followed by Hindus (64 percent) and Muslims (55 percent).

A large majority (80 percent) of the women who had ever used a family planning method had discussed the topic with their husbands; 43 percent discussed it once or twice and 36 percent discussed it more often. Among those who had never used family planning, however, only 51 percent 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

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, Jammu Region of J & K, 1993

Background characteristic	Number of times family planning discussed			Total percent	Number of women
	Never	Once or twice	More often		
Age					
15-19	53.9	34.3	11.8	100.0	162
20-24	33.0	42.5	24.5	100.0	484
25-29	26.0	44.0	30.1	100.0	486
30-34	32.0	34.8	33.2	100.0	282
35-39	42.3	32.6	25.1	100.0	196
40-44	54.0	33.6	12.4	100.0	125
45-49	74.6	19.9	5.5	100.0	116
Residence					
Urban	30.7	35.8	33.6	100.0	334
Rural	39.5	38.4	22.2	100.0	1518
Respondent's education					
Illiterate	48.0	37.0	15.0	100.0	974
Lit., < middle complete	30.9	38.3	30.8	100.0	234
Middle school complete	27.1	43.7	29.2	100.0	220
High school and above	23.9	36.8	39.2	100.0	425
Religion					
Hindu	36.4	38.9	24.7	100.0	1386
Muslim	44.8	36.3	18.9	100.0	355
Sikh	33.7	31.0	35.3	100.0	108
Caste/tribe					
Scheduled caste	42.7	36.3	21.0	100.0	542
Other (Non-SC/ST)	35.8	38.5	25.7	100.0	1287
Use of contraception					
Ever used	20.4	43.3	36.3	100.0	730
Never used	49.2	34.4	16.4	100.0	1122
Husband's education					
Illiterate	51.4	37.8	10.8	100.0	490
Lit., < primary complete	(47.5)	(43.5)	(9.0)	100.0	45
Primary school complete	44.9	32.0	23.2	100.0	192
Middle school complete	38.0	37.2	24.8	100.0	378
High school complete	28.7	40.3	31.0	100.0	554
Above high school	20.3	37.5	42.2	100.0	193
Total	37.9	37.9	24.2	100.0	1852

Note: Table excludes women who are sterilized or whose husbands are sterilized. Total includes 1 woman age 13-14, 3 women belonging to other religions and 23 scheduled tribe women, who are not shown separately.

() Based on 25-49 unweighted cases

it may affect her own decisions.

Table 6.17 shows that 96 percent of currently married, nonsterilized women who know of a contraceptive method approve of family planning use and 4 percent disapprove. Women perceive their husbands to be about equally favourable toward family planning as they are themselves. Although 15 percent of women (of whom 90 percent approve of family planning) say they do not know their husband's attitude, almost all (94 percent) of the rest report that both they and their husbands approve of family planning and only 2 percent report that both of them disapprove. Thus, there is overwhelming agreement between individual husbands and wives in favour of family planning. The fact that a large majority of the couples in Jammu approve of family planning suggests that factors other than negative attitudes about family planning are obstacles to higher contraceptive prevalence in the region.

There are only marginal differences in the approval of family planning according to background characteristics. Consensus between wife and husband on this issue is higher during the middle years of the reproductive span (age 25-34) than at either younger or older ages. The approval of family planning by both husband and wife is 88 percent in urban areas and 79 percent in rural areas. Rural women are less likely to know their husband's attitude than urban women, a fact which is consistent with the lower level of interspousal communication about family planning in rural areas.

Education of women as well as their husbands is an important determinant of the approval of family planning by both husband and wife. Overall, 94 percent of illiterate women approve of family planning compared with 98 percent of women who have completed high school. Approval by both husband and wife is lowest (72 percent) among illiterate women and highest (92 percent) among those educated beyond high school. 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 66 percent in the case of illiteracy to 96 percent for education above the high school level.

The approval of family planning and consensus on the issue between couples is lower among Muslims than either Sikhs or Hindus. Moreover, Muslim women are least likely to know their husbands' attitudes regarding approval or disapproval of family planning. Approval of family planning by both husband and wife is lower among those belonging to scheduled castes (76 percent) than among non-SC/ST women (82 percent). Among ever users of family planning, 97 percent of women report that both they and their husbands approve of family planning, and the comparable figure for never users is 70 percent.

Table 6.17 also reveals that 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 59 for those who had never discussed family planning, 92 for those who had discussed the topic once or twice and 95 for those who had more frequent discussions of family planning with their husbands. The percentage of women who are not aware of their husband's attitude is highest (31 percent) among those who never discussed family planning with their husbands in the past year.

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, Jammu Region of J & K, 1993

Background characteristic	Respondent approves			Respondent disapproves			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	66.4	2.3	29.7	--	0.8	0.8	100.0	162
20-24	79.1	1.1	17.7	0.7	0.8	0.5	100.0	484
25-29	87.8	3.3	7.0	0.5	0.6	0.7	100.0	486
30-34	84.2	1.3	8.9	0.4	2.5	2.7	100.0	282
35-39	79.4	3.8	8.4	0.6	4.0	3.7	100.0	196
40-44	74.0	1.0	12.5	1.8	7.7	3.0	100.0	125
45-49	71.6	4.1	17.7	1.1	3.9	1.5	100.0	116
Residence								
Urban	87.8	1.4	6.5	0.6	2.9	0.8	100.0	334
Rural	78.6	2.5	14.8	0.7	1.8	1.6	100.0	1518
Respondent's education								
Illiterate	72.0	2.8	19.6	0.7	2.2	2.7	100.0	974
Lit., < middle complete	86.3	1.6	8.4	1.1	2.1	0.5	100.0	234
Middle school complete	87.7	1.4	9.2	0.5	1.3	--	100.0	220
High school and above	91.9	2.0	3.9	0.3	1.8	0.1	100.0	425
Religion								
Hindu	82.1	1.7	12.6	0.4	1.7	1.4	100.0	1386
Muslim	68.5	4.5	19.5	1.4	3.8	2.3	100.0	355
Sikh	94.2	2.3	2.3	1.2	--	--	100.0	108
Caste/tribe								
Scheduled caste	76.3	3.8	15.2	0.7	1.6	2.4	100.0	542
Other (Non-SC/ST)	81.9	1.7	12.5	0.7	2.1	1.1	100.0	1287
Use of contraception								
Ever used	96.8	1.1	0.7	0.6	0.7	0.1	100.0	730
Never used	69.5	3.0	21.5	0.7	2.9	2.4	100.0	1122
Family planning discussed with husband in last year								
Never	59.2	3.5	27.4	1.2	4.9	3.8	100.0	701
Once or twice	91.6	1.8	5.7	0.5	0.3	--	100.0	702
More often	95.3	1.1	3.1	--	0.2	0.3	100.0	449
Husband's education								
Illiterate	66.2	2.5	23.1	1.1	3.1	4.0	100.0	490
Lit., <primary complete	(75.5)	(3.9)	(13.9)	(1.2)	(--)	(5.6)	100.0	45
Primary school complete	72.5	5.2	18.3	0.7	1.8	1.6	100.0	192
Middle school complete	85.0	1.3	12.2	0.5	0.9	--	100.0	378
High school complete	87.1	2.0	7.8	0.5	2.1	0.4	100.0	554
Above high school	95.9	0.9	1.5	--	1.7	--	100.0	193
Total	80.2	2.3	13.3	0.7	2.0	1.5	100.0	1852

Note: Table excludes women who are sterilized or whose husbands are sterilized. Total includes 1 woman age 13-14, 3 women belonging to other religions and 23 scheduled tribe women, who are not shown separately.

(.) Based on 25-49 unweighted cases

-- Less than 0.05 percent

¹ Respondent does not know her husband's attitude

CHAPTER 7

FERTILITY PREFERENCES

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 the preferred sex of that 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. All of 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.

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 32 percent of women say they want another child at some time in the future and over half of these women say they would like to wait at least two years before having their next birth. Only 15 percent of women say they would like another child soon (that is, within two years). Just 0.1 percent, or 3 out of 2,647 women, express the attitude that this matter is "up to God". More than one-third (36 percent) of women say they do not want any more children and 30 percent of women (or their husbands) are sterilized, so that they cannot have any more children. These two groups together constitute 65 percent of all currently married women in the Jammu region. 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 5 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, 47 percent or 16 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.

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 and residence, Jammu Region of J & K, 1993

Desire for children	Number of living children ¹							Total
	0	1	2	3	4	5	6+	
URBAN								
Desire for additional child								
Have another soon ²	66.7	28.4	3.7	1.4	1.0	(--)	(--)	11.8
Have another later ³	27.5	48.1	6.7	3.3	2.1	(--)	(--)	13.8
Have another, undecided when	1.4	1.9	--	--	--	(--)	(--)	0.4
Undecided	--	3.1	1.5	--	1.0	(--)	(2.4)	1.2
Up to God	--	--	--	0.5	--	(--)	(--)	0.1
Want no more	2.9	16.0	67.2	51.2	37.1	(48.9)	(47.6)	44.1
Sterilized	--	1.2	20.1	43.2	57.7	(51.1)	(50.0)	27.7
Declared infecund	1.4	1.2	0.7	0.5	1.0	(--)	(--)	0.8
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	36	84	139	110	50	23	22	464
Preferred sex of additional child								
Boy	24.2	39.4	(78.6)	*	*	NC	NC	43.2
Girl	--	14.2	(7.1)	*	*	NC	NC	8.5
Doesn't matter	62.1	38.6	(10.7)	*	*	NC	NC	39.7
Up to God	13.6	7.9	(3.6)	*	*	NC	NC	8.5
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number wanting more	34	66	14	5	2	0	0	121
RURAL								
Desire for additional child								
Have another soon ²	83.1	24.3	14.8	3.9	1.9	0.5	0.5	15.4
Have another later ³	14.0	69.5	29.0	6.6	3.7	1.6	0.5	18.3
Have another, undecided when	0.6	--	--	--	--	--	--	0.1
Undecided	--	1.3	4.1	1.4	0.7	--	--	1.3
Up to God	--	--	--	0.3	--	--	--	0.1
Want no more	0.6	2.9	33.8	47.4	45.2	45.8	48.2	33.8
Sterilized	0.6	1.3	16.7	40.5	48.1	50.5	49.2	30.1
Declared infecund	1.2	0.8	1.6	--	0.4	1.6	1.6	0.9
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	215	299	396	454	338	240	241	2183
Preferred sex of additional child								
Boy	39.3	47.8	64.7	(84.2)	*	*	*	53.1
Girl	1.2	8.0	9.4	(7.9)	*	*	*	6.3
Doesn't matter	45.2	29.5	14.4	(5.3)	*	*	*	28.0
Up to God	14.3	14.7	11.5	(2.6)	*	*	*	12.7
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number wanting more	210	280	174	48	19	5	3	738

Table 7.1 Fertility preferences (Contd.)

Percent distribution of currently married women by desire for children and preferred sex of additional child, according to number of living children and residence, Jammu Region of J & K, 1993

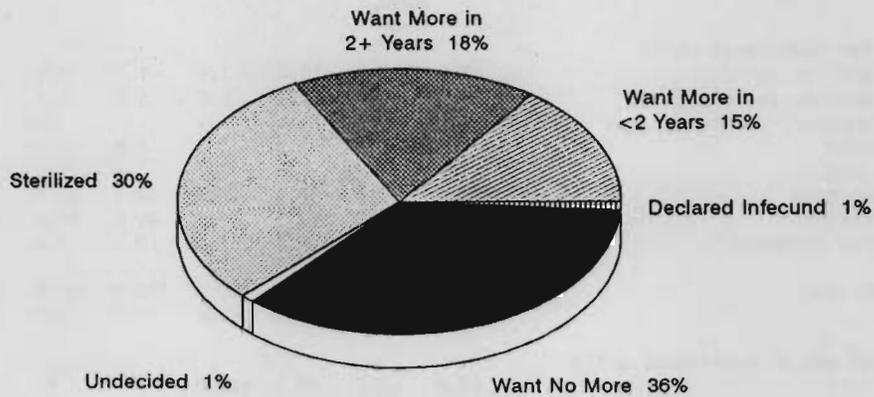
Desire for children	Number of living children ¹							Total
	0	1	2	3	4	5	6+	
TOTAL								
Desire for additional child								
Have another soon ²	80.8	25.2	12.0	3.4	1.7	0.5	0.5	14.8
Have another later ³	15.9	64.8	23.2	6.0	3.5	1.4	0.5	17.5
Have another, undecided when	0.7	0.4	--	--	--	--	--	0.1
Undecided	--	1.7	3.4	1.1	0.8	--	0.2	1.3
Up to God	--	--	--	0.3	--	--	--	0.1
Want no more	0.9	5.8	42.4	48.1	44.1	46.1	48.1	35.6
Sterilized	0.5	1.3	17.6	41.0	49.4	50.6	49.3	29.7
Declared infecund	1.2	0.9	1.4	0.1	0.5	1.4	1.4	0.9
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	251	383	535	564	388	263	263	2647
Preferred sex of additional child								
Boy	37.2	46.2	65.8	(85.8)	*	*	*	51.7
Girl	1.0	9.2	9.2	(7.1)	*	*	*	6.6
Doesn't matter	47.6	31.2	14.1	(4.7)	*	*	*	29.6
Up to God	14.2	13.4	10.9	(2.4)	*	*	*	12.1
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number wanting more	244	346	188	53	20	5	3	859

NC: Not calculated because there are no cases on which to base a percentage.
 () Based on 25-49 unweighted cases
 * Percentage not shown; based on fewer than 25 unweighted cases
 -- Less than 0.05 percent
¹Includes current pregnancy, if any
²Wants next birth within 2 years
³Wants to delay next birth for 2 or more years

Overall, 83 percent of women want to either space their next birth (that is, they want to delay their next birth for two or more years or they want another child but are undecided when) or stop having children altogether (that is, they want no more children or they are sterilized). This percentage is almost the same for rural areas (82 percent) as for urban areas (86 percent). Among women who want another child, there is a strong preference for having a son as the next child. More than half (52 percent) say they want a son, only 7 percent express a desire for a daughter, and the rest say that the sex of the child does not matter (30 percent) or that it is up to God (12 percent). The desire for a son is particularly strong in rural areas and among high parity women. Women who do not have any children are extremely unlikely to want a daughter for their first child; only 1 percent express a desire for a daughter, whereas 37 percent say they want a son.

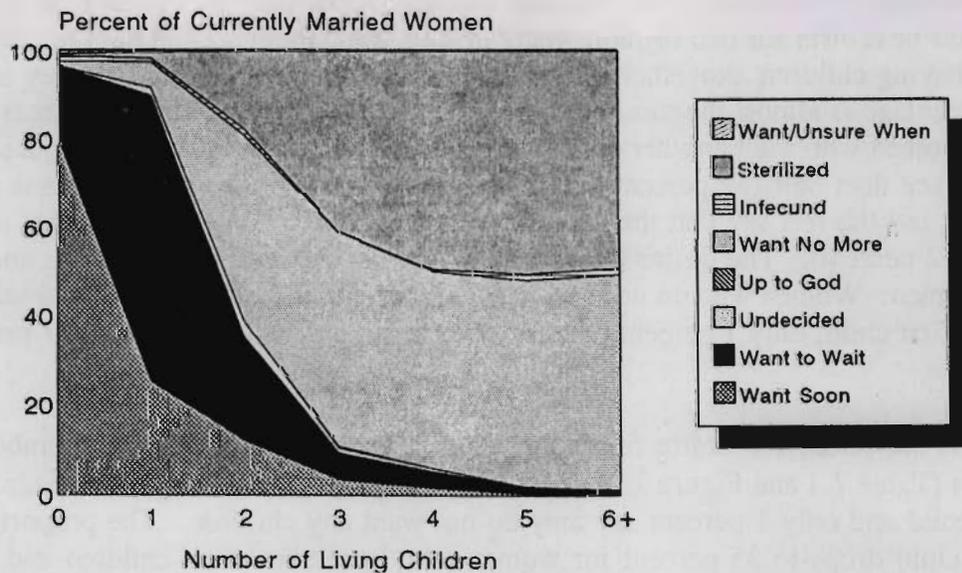
As expected, the desire for more children declines rapidly as the number of children increases (Table 7.1 and Figure 7.2). More than 97 percent of women with no children say they want a child and only 1 percent say they do not want any children. The proportion who want another child drops to 35 percent for women who have two living children and 9 percent for those with three living children. The desire to have a child within two years drops even more rapidly, from 81 percent for women without any living children to 12 percent or less for women

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



NFHS, Jammu Region of J & K, 1993

Figure 7.2
Fertility Preferences by Number of
Living Children



NFHS, Jammu Region of J & K, 1993

with two or more living children. Interestingly, the desire for spacing children is strong for women who have fewer than three children. Sixteen percent of women with no children say that they would like to wait at least two years before having their first child. Similarly, 65 percent of women with one child and 23 percent of women with two children would like to wait at least two years before having their next child. Because 44 percent of all women have fewer than three living children, the strong expressed desire for spacing children among these women cannot be ignored. The strong focus of the family planning programme on permanent methods of contraception is evidently not satisfying the needs of a large segment of women in Jammu who wish to space. The encouragement of spacing methods for women who want more children would be likely to lower overall fertility and population growth, as well as to provide health benefits to both mothers and their children.

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, more than four-fifths of women want to stop childbearing altogether.

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 and residential differences have already been discussed above. Educational attainment is not strongly related to fertility desires for women who have fewer than two children. At higher parities, however, education is strongly related to the desire to have no more children. The differentials are

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 and residence, Jammu Region of J & K, 1993									
Desire for children	Current age							Total	
	15-19	20-24	25-29	30-34	35-39	40-44	45-49		
URBAN									
Desire for additional child									
Have another soon ¹	*	28.1	15.8	13.5	2.7	--	1.0	11.8	
Have another later ²	*	45.3	20.4	5.2	1.4	--	--	13.8	
Have another, undecided when	*	1.4	0.5	--	--	--	--	0.4	
Undecided	*	2.2	2.0	2.1	--	--	--	1.2	
Up to God	*	--	--	0.5	--	--	--	0.1	
Want no more	*	19.4	48.0	46.4	49.7	49.5	56.6	44.1	
Sterilized	*	3.6	13.3	31.2	44.9	48.5	41.4	27.7	
Declared infecund	*	--	--	1.0	1.4	1.9	1.0	0.8	
Total percent		100.0	100.0	100.0	100.0	100.0	100.0	100.0	
Number		10	72	101	99	76	53	51	464
Preferred sex of additional child									
Boy	*	33.7	51.4	(55.6)	*	NC	*	43.2	
Girl	*	8.7	6.9	(5.6)	*	NC	*	8.5	
Doesn't matter	*	48.1	31.9	(33.3)	*	NC	*	39.7	
Up to God	*	9.6	9.7	(5.6)	*	NC	*	8.5	
Total percent		100.0	100.0	100.0	100.0	NC	100.0	100.0	
Number wanting more		8	54	37	19	3	0	1	121

Table 7.2 Fertility preferences by age (Contd.)

Percent distribution of currently married women by desire for children and preferred sex of additional child, according to age and residence, Jammu Region of J & K, 1993

Desire for children	Current age							Total
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	
RURAL								
Desire for additional child								
Have another soon ¹	45.1	27.1	16.8	9.1	6.2	3.9	1.5	15.4
Have another later ²	50.0	44.7	20.7	5.2	1.5	0.6	--	18.3
Have another, undecided when	--	--	--	--	--	--	--	0.1
Undecided	1.6	3.7	1.3	0.6	0.4	--	--	1.3
Up to God	--	0.3	--	--	--	--	--	0.1
Want no more	3.3	18.8	42.3	40.3	38.1	38.8	46.3	33.8
Sterilized	--	5.1	18.6	44.2	51.9	56.2	47.8	30.1
Declared infecund	--	0.3	0.3	0.6	1.9	0.6	4.5	0.9
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	153	439	490	385	325	223	168	2183
Preferred sex of additional child								
Boy	49.1	49.6	59.9	(61.4)	*	*	*	53.1
Girl	2.6	6.3	6.8	(18.2)	*	*	*	6.3
Doesn't matter	26.7	29.8	25.9	(15.9)	*	*	*	28.0
Up to God	21.6	14.3	7.5	(4.5)	*	*	*	12.7
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number wanting more	145	315	184	55	25	10	3	738
TOTAL								
Desire for additional child								
Have another soon ¹	43.8	27.2	16.7	10.0	5.5	3.2	1.4	14.8
Have another later ²	49.7	44.8	20.6	5.2	1.5	0.5	--	17.5
Have another, undecided when	0.3	0.2	0.1	--	--	--	--	0.1
Undecided	1.5	3.5	1.4	0.9	0.3	--	--	1.3
Up to God	--	0.2	--	0.1	--	--	--	0.1
Want no more	4.7	18.9	43.3	41.5	40.3	40.8	48.7	35.6
Sterilized	--	4.9	17.7	41.5	50.6	54.7	46.3	29.7
Declared infecund	--	0.2	0.2	0.7	1.8	0.8	3.7	0.9
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	163	511	592	484	401	276	219	2647
Preferred sex of additional child								
Boy	48.7	47.3	58.4	59.9	(45.6)	*	*	51.7
Girl	3.1	6.7	6.8	15.0	(1.8)	*	*	6.6
Doesn't matter	27.4	32.4	26.9	20.3	(52.6)	*	*	29.6
Up to God	20.8	13.6	7.9	4.8	(--)	*	*	12.1
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number wanting more	153	369	221	74	28	10	3	859

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

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

() Based on 25-49 unweighted cases

* Percentage not shown; based on fewer than 25 unweighted cases

-- Less than 0.05 percent

¹Wants next birth within 2 years

²Wants to delay next birth for 2 or more years

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, Jammu Region of J & K, 1993

Background characteristic	Number of living children ¹							Total
	0	1	2	3	4	5	6+	
Age								
13-19	--	4.8	*	NC	*	NC	NC	4.6
20-29	--	3.6	46.4	81.2	87.6	(96.3)	*	43.7
30-39	*	26.2	78.9	94.4	95.2	96.2	95.5	86.6
40-49	*	*	97.3	97.9	97.9	97.5	98.4	95.3
Residence								
Urban	2.9	17.3	86.9	94.4	94.8	(100.0)	(97.6)	71.7
Rural	1.2	4.2	50.5	87.9	93.3	96.4	97.4	63.9
Education								
Illiterate	--	4.7	42.5	84.7	91.6	96.0	97.7	68.9
Lit., < middle complete	(--)	7.4	45.6	90.2	95.0	(100.0)	*	58.8
Middle school complete	(4.3)	4.2	68.2	92.0	(100.0)	*	*	58.0
High school and above	3.9	11.4	81.2	97.4	100.0	*	*	63.3
Religion								
Hindu	2.0	6.5	62.3	90.4	93.7	98.6	98.7	66.1
Muslim	--	(6.5)	37.8	78.7	90.8	92.4	95.2	60.2
Sikh	*	(14.5)	(75.5)	(95.0)	*	*	*	69.7
Caste/tribe								
Scheduled caste	1.4	2.6	39.5	79.9	93.9	98.7	98.4	62.0
Other (Non-SC/ST)	1.4	8.6	66.3	92.4	93.2	95.4	96.6	66.7
Number of living sons²								
None	1.4	7.2	14.7	(35.8)	*	*	*	8.8
1	NA	9.4	69.3	85.4	84.2	(89.4)	(95.1)	61.9
2	NA	NA	77.7	97.6	98.8	98.8	(95.0)	93.5
3+	NA	NA	NA	92.7	95.9	97.9	99.3	97.1
Number of living daughters²								
None	1.4	9.4	77.7	92.7	*	*	*	34.9
1	NA	7.2	69.3	97.6	96.3	*	*	72.7
2	NA	NA	14.7	85.4	98.8	96.7	(97.5)	81.0
3+	NA	NA	NA	(35.8)	81.3	96.4	97.3	90.0
Total	1.4	7.1	59.9	89.1	93.5	96.7	97.4	65.3

Note: Women who have been sterilized, or whose husbands have been sterilized, are considered to want no more children. Total includes 5 women belonging to other religions and 29 scheduled tribe women, who are not shown separately.

NA: Not applicable

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

() Based on 25-49 unweighted cases

* Percentage not shown; based on fewer than 25 unweighted cases

-- Less than 0.05 percent

¹Includes current pregnancy, if any

²Excludes pregnant women

particularly large for women who have exactly two children, suggesting that the two-child family norm is much more acceptable to educated women. Muslims are least likely to want to stop childbearing and Sikhs are most likely to want to stop. Religious differences shown in the total column may understate the differences for women with specified numbers of children because Muslims have more children than Hindus. For example, among women who currently have three living children, 79 percent of Muslim women say that they want to stop childbearing, compared with 90 percent of Hindu women and 95 percent of Sikh women. Differentials by the number of living sons and daughters provide further evidence of son preference in Jammu.

7.2 Need for Family Planning Services

Currently married women who say that they either do not want any more children or that they 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, met need and total demand for family planning, according to whether there is a need for spacing or limiting births. The table also contains detailed definitions of these concepts.

Overall, 18 percent of women in Jammu have an unmet need for family planning, according to these definitions. The unmet need is the same for spacing births as for limiting births. Together with the 49 percent of currently married women who are using contraception, a total of 67 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 could increase from 49 percent to 67 percent of married women. This means that 74 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 25-29 and decreases thereafter. The unmet need for spacing, on the other hand, is very 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, primarily because the needs for spacing are not being satisfied. Only 20 percent of the total demand for family planning services is being met for married women age 15-19, but this figure rises to 45 percent for women age 20-24 and 65 percent for women age 25-29.

The unmet need for family planning is higher in rural areas than in urban areas, by 6 percentage points, and the total demand for family planning is less likely to be satisfied in rural areas. In urban areas, 84 percent of the total demand is satisfied, compared with 71 percent in rural areas. There is some variation in the unmet need for family planning across the different education groups. The unmet need for family planning is lowest among women with at least a high school education and shows little variation across all other educational groups. Correspondingly, satisfaction of total demand is highest among women with at least a high school education and is almost constant across all other educational categories. The unmet need for family planning is higher among Muslims than Hindus or Sikhs although the differences are not great; but clearly the total needs of Muslim women are least likely to be satisfied by current

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, Jammu Region of J & K, 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	24.5	1.1	25.6	5.6	0.6	6.2	30.0	1.7	31.8	19.5
20-24	24.3	3.8	28.1	12.8	10.1	22.9	37.1	13.9	51.0	44.9
25-29	9.6	13.2	22.8	8.6	34.1	42.8	18.3	47.3	65.6	65.2
30-34	2.4	11.3	13.7	3.2	62.1	65.4	5.6	73.5	79.1	82.7
35-39	0.6	10.7	11.3	0.6	71.9	72.4	1.1	82.6	83.7	86.5
40-44	--	9.2	9.2	--	68.8	68.8	--	78.0	78.0	88.2
45-49	--	2.5	2.5	--	59.5	59.5	--	62.1	62.1	95.9
Residence										
Urban	6.7	5.7	12.4	8.6	55.8	64.4	15.3	61.5	76.8	83.9
Rural	9.3	9.2	18.6	4.8	41.5	46.2	14.1	50.7	64.8	71.4
Education										
Illiterate	6.7	10.6	17.3	2.5	43.2	45.7	9.2	53.8	63.0	72.6
Lit., < middle complete	14.8	6.0	20.8	7.0	40.8	47.8	21.8	46.8	68.6	69.7
Middle school complete	12.7	6.8	19.5	6.2	43.5	49.7	19.0	50.2	69.2	71.8
High school and above	8.9	5.7	14.6	12.4	48.6	61.1	21.3	54.4	75.7	80.7
Religion										
Hindu	9.1	8.1	17.2	5.7	46.1	51.8	14.8	54.2	69.0	75.1
Muslim	8.2	11.1	19.3	3.7	30.6	34.3	11.9	41.7	53.6	64.1
Sikh	8.2	7.8	16.0	6.5	55.3	61.8	14.7	63.1	77.8	79.4
Caste/tribe										
Scheduled caste	9.0	11.6	20.6	4.6	38.8	43.4	13.6	50.4	64.0	67.8
Other (Non-SC/ST)	8.8	7.3	16.1	5.7	46.2	51.9	14.5	53.5	68.0	76.3
Number of living children										
None	13.3	0.2	13.5	3.5	0.4	3.9	16.9	0.6	17.4	22.4
1	30.1	1.0	31.1	19.1	4.2	23.3	49.2	5.2	54.4	42.8
2	9.9	8.9	18.8	9.3	40.6	49.9	19.2	49.5	68.7	72.7
3	2.9	9.5	12.4	2.1	65.8	67.9	4.9	75.3	80.2	84.6
4	2.8	11.1	13.9	0.3	67.6	67.9	3.1	78.7	81.9	83.0
5	0.5	16.2	16.7	--	63.5	63.5	0.5	79.7	80.2	79.2
6+	0.5	16.2	16.7	--	62.2	62.2	0.5	78.4	78.9	78.8
Total	8.9	8.6	17.5	5.4	44.0	49.4	14.3	52.6	66.9	73.9

Note: Total includes 1 woman age 13-14, 5 women belonging to other religions and 29 scheduled tribe women, who are not shown separately.

-- 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.

family planning programmes. Similarly, the unmet need for family planning is higher among women of scheduled castes than non-SC/ST women and the total needs of scheduled caste women are less likely to be satisfied by current family planning programmes. The final panel in Table 7.4 indicates that current family planning services are particularly inadequate for satisfying the child spacing needs of women with less than two children.

7.3 Ideal Number of Children

The analysis above 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 a more difficult abstract task of stating the number of children she would like to have had 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 these hypothetical questions and the questions often had to be repeated to ensure that they were understood by the respondent. Nevertheless, 97 percent of respondents were able to give a numerical response when asked for their ideal number of children.

Table 7.5 shows that the ideal number of children falls within the fairly narrow range of 2 to 3 children for a large majority of women (80 percent). Thirteen percent of all women expressed that four children would be ideal and only 3 percent of all women thought that more than four children would be ideal. Moreover, only 2 percent said that less than two children would be ideal. For those who gave numeric responses, the average number of children considered ideal is 2.8. The mean ideal number of children ranges from around 2.4 for women with two or fewer children to 3.5 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 that a large proportion of women say that their ideal number of children is less than the number they already have. For example, among women who have five living children, 88 percent state that their ideal family would consist of fewer than five children. Similarly, 71 percent of women with four living children think that two or three children would be ideal. Thus, family size norms are quite moderate and it is evident that a large proportion of women already have more children than they would consider ideal. This may be taken as 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 mean for women age 15-19 is 2.7 children, and increases steadily from 2.5 children for women age 20-24 to 3.1 children for women age 40 and over. The stated ideal family size is slightly more than half a child higher, on the average, in rural areas than in urban areas. Similarly, it is half a child higher for Muslims than Hindus. For scheduled caste women the stated ideal family size is higher by 0.3 child than for women who belong to neither scheduled castes nor scheduled tribes. The most pronounced differentials are by educational attainment, particularly the wife's education. The average ideal family size

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 and residence, Jammu Region of J & K, 1993

Ideal number of children	Number of living children ¹							Total
	0	1	2	3	4	5	6+	
URBAN								
None	--	--	--	--	--	(--)	(--)	--
1	11.1	11.3	4.3	2.2	0.9	(--)	(--)	4.8
2	70.8	75.6	83.6	54.7	36.8	(20.4)	(13.3)	62.4
3	13.9	11.3	10.0	38.2	39.6	(53.1)	(51.1)	24.8
4	2.8	--	0.4	2.7	15.1	(18.4)	(17.8)	4.4
5	--	--	--	--	--	(--)	(2.2)	0.1
6+	--	--	--	0.4	0.9	(--)	(4.4)	0.4
Non-numeric responses	1.4	1.8	1.8	1.8	6.6	(8.2)	(11.1)	3.1
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	37	87	145	116	55	25	23	489
Mean ideal number ²								
Ever-married women	2.1	2.0	2.1	2.5	2.8	(3.0)	(3.2)	2.3
Currently married women	2.1	2.0	2.1	2.5	2.7	(3.0)	(3.2)	2.3
RURAL								
None	--	--	--	--	--	--	--	--
1	3.9	3.2	1.5	0.5	--	--	--	1.2
2	43.3	60.0	49.1	28.9	20.7	11.6	9.1	32.9
3	38.9	33.6	40.9	59.4	49.0	48.7	40.4	45.6
4	10.6	2.0	7.0	9.1	22.8	27.1	31.3	14.4
5	1.7	1.2	--	0.3	2.8	7.0	4.0	2.0
6+	--	--	0.3	0.3	1.0	1.5	5.6	1.0
Non-numeric responses	1.7	--	1.2	1.6	3.8	4.0	9.6	2.8
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	225	313	413	468	363	249	248	2277
Mean ideal number ²								
Ever-married women	2.6	2.4	2.6	2.8	3.1	3.4	3.6	2.9
Currently married women	2.6	2.4	2.5	2.8	3.1	3.4	3.6	2.9
TOTAL								
None	--	--	--	--	--	--	--	--
1	4.9	5.0	2.2	0.9	0.1	--	--	1.8
2	47.2	63.4	58.1	34.0	22.8	12.4	9.5	38.1
3	35.3	28.8	32.9	55.1	47.7	49.1	41.3	41.9
4	9.5	1.6	5.3	7.8	21.8	26.3	30.1	12.7
5	1.4	0.9	--	0.2	2.4	6.4	3.9	1.7
6+	--	--	0.2	0.3	1.0	1.4	5.5	0.9
Non-numeric responses	1.6	0.4	1.4	1.6	4.2	4.4	9.7	2.8
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	262	400	558	584	417	274	271	2766
Mean ideal number ²								
Ever-married women	2.5	2.3	2.4	2.7	3.1	3.3	3.5	2.8
Currently married women	2.5	2.3	2.4	2.7	3.1	3.4	3.5	2.8

() Based on 25-49 unweighted cases

-- Less than 0.05 percent

¹Includes current pregnancy, if any

²Means are calculated excluding the women giving non-numeric responses.

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, Jammu Region of J & K, 1993

Background characteristic	Current age							Total
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	
Residence								
Urban	2.2	*	2.1	2.2	2.5	2.5	2.7	2.3
Rural	2.8	2.6	2.8	2.9	3.0	3.3	3.2	2.9
Education								
Illiterate	2.9	2.8	3.0	3.1	3.1	3.3	3.3	3.1
Lit., < middle complete	2.6	(2.5)	2.7	2.6	2.8	(3.0)	(2.7)	2.7
Middle school complete	2.2	*	2.4	2.5	(2.7)	*	*	2.4
High school and above	2.1	*	2.1	2.2	2.2	2.3	(2.4)	2.2
Religion								
Hindu	2.6	2.5	2.6	2.7	2.8	3.1	3.1	2.7
Muslim	(3.1)	2.8	3.2	3.3	(3.6)	*	(3.6)	3.2
Sikh	*	(2.1)	(2.4)	(2.4)	(2.5)	*	*	2.4
Caste/tribe								
Scheduled caste	3.0	2.7	2.9	3.0	3.2	3.6	3.3	3.0
Other (Non-SC/ST)	2.6	2.5	2.6	2.7	2.7	2.9	3.0	2.7
Work status								
Not working	2.7	2.4	2.6	2.6	2.8	3.0	2.9	2.7
Working in family farm/business	2.8	2.7	2.9	3.2	3.1	3.3	3.5	3.0
Employed by someone else	*	*	(2.3)	2.3	(2.6)	(2.8)	*	2.5
Self employed	*	*	*	*	*	*	*	2.6
Husband's education								
Illiterate	(2.7)	2.7	3.1	3.1	3.3	3.4	3.4	3.1
Lit., < primary complete	*	*	*	*	*	*	*	3.0
Primary school complete	*	2.7	2.7	3.1	(2.9)	(3.3)	(3.1)	2.9
Middle school complete	(3.0)	2.5	2.8	2.8	2.8	(2.9)	(3.2)	2.8
High school complete	(2.5)	2.3	2.5	2.4	2.6	2.8	(2.5)	2.5
Above high school	*	(2.2)	2.1	2.2	2.2	(2.4)	(2.6)	2.2
Total	2.7	2.5	2.7	2.7	2.9	3.1	3.1	2.8

Note: Total includes 1 woman age 13-14, 6 women belonging to other religions and 28 scheduled tribe women, who are not shown separately.

() Based on 25-49 unweighted cases

* Mean not shown; based on fewer than 25 unweighted cases

is approximately one child higher for illiterate women than for women who have completed high school and above. Women who work in a family farm or business state an ideal family size that is higher by approximately half a child, on the average, than women of other work categories.

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 persistence of a strong preference for sons over daughters can be seen in this table. Overall, the ideal family consists of 1.6 sons and 1.0 daughters, with a very small percentage of women stating that the sex of the child does not matter. Son preference is stronger in rural areas, but it is still substantial in urban areas. There is a general tendency for women who have more daughters to exhibit a weaker preference for sons, but no matter what the current composition of the family

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, according to residence, Jammu Region of J & K, 1993

Sex composition of living children	Urban			Rural			Total		
	Sons	Daughters	Gender doesn't matter	Sons	Daughters	Gender doesn't matter	Sons	Daughters	Gender doesn't matter
None	0.8	0.6	0.7	1.4	0.9	0.4	1.3	0.8	0.4
1 child	0.8	0.6	0.6	1.3	0.8	0.3	1.2	0.8	0.4
1 son	0.8	0.5	0.8	1.4	0.7	0.3	1.2	0.7	0.4
No sons	0.8	0.7	0.5	1.2	0.9	0.3	1.1	0.8	0.3
2 children	0.9	0.7	0.4	1.4	0.9	0.3	1.3	0.8	0.3
2 sons	0.9	0.6	0.6	1.3	0.6	0.6	1.2	0.6	0.6
1 son	0.9	0.8	0.4	1.4	0.9	0.2	1.2	0.9	0.3
No sons	(1.0)	(0.8)	(0.4)	1.6	1.1	0.1	1.5	1.1	0.1
3 children	1.3	0.9	0.3	1.7	1.0	0.1	1.6	1.0	0.2
3 sons	1.5	0.7	0.4	1.8	0.8	0.3	1.8	0.7	0.3
2 sons	(1.4)	(0.9)	(0.3)	1.7	1.0	0.2	1.6	0.9	0.2
1 son	1.3	0.9	0.3	1.7	1.1	0.1	1.6	1.0	0.1
No sons	*	*	*	*	*	*	(1.3)	(1.1)	(0.1)
4+ children	1.7	1.1	0.2	2.0	1.2	0.1	2.0	1.2	0.1
2 or more sons	1.7	1.1	0.2	2.0	1.2	0.1	2.0	1.2	0.1
1 son	(1.5)	(1.1)	(--)	1.9	1.4	--	1.9	1.3	--
Total	1.1	0.8	0.4	1.6	1.0	0.2	1.6	1.0	0.2

Note: Table excludes women who gave non-numeric responses to the questions on the ideal number of sons and daughters. Total includes 15 women with 4+ children but no sons, who are not shown separately.

() Based on 25-49 unweighted cases

* Mean not shown; based on fewer than 25 unweighted cases

-- Less than 0.05 children

is, son preference persists. For example, the preferred family composition among ever-married women with 3 or more children, is two sons and one daughter.

7.4 Fertility Planning

Another way to gauge the extent of unwanted fertility is to focus on recent births. For each child born in the four years before the survey, 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 form a potentially powerful indicator of the degree to which couples successfully control childbearing.

Table 7.8 shows that 23 percent of all births (including current pregnancies) in the four years before the survey were not wanted at the time the woman became pregnant. Eleven percent of the births were unwanted and 12 percent were mistimed. Differentials in fertility planning by residence, religion, caste and tribe are not very substantial. More educated women

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, Jammu Region of J & K, 1993

Background characteristic	Planning status of pregnancy				Total percent	Number of births
	Wanted then	Wanted later	Wanted no more	Missing		
Residence						
Urban	74.6	16.6	8.8	--	100.0	234
Rural	78.0	10.9	11.1	0.1	100.0	1514
Education						
Illiterate	78.4	7.6	13.8	0.1	100.0	923
Lit., < middle complete	75.8	15.0	9.1	--	100.0	261
Middle school complete	74.4	16.3	9.3	--	100.0	233
High school and above	78.5	17.0	4.5	--	100.0	332
Religion						
Hindu	77.9	11.6	10.4	0.1	100.0	1281
Muslim	76.8	10.1	13.1	--	100.0	364
Sikh	75.4	17.9	6.7	--	100.0	101
Caste/tribe						
Scheduled caste	76.5	10.3	13.0	0.2	100.0	531
Other (Non-SC/ST)	78.9	11.8	9.4	--	100.0	1192
Birth order¹						
1	92.3	7.4	--	0.2	100.0	543
2	76.2	23.7	0.1	--	100.0	431
3	75.1	13.5	11.3	--	100.0	340
4+	62.1	3.6	34.3	--	100.0	435
Mother's age at birth²						
15-19	88.7	10.7	--	0.6	100.0	215
20-24	81.6	15.6	2.7	--	100.0	733
25-29	74.6	11.1	14.3	--	100.0	534
30-34	70.1	3.7	26.2	--	100.0	186
35-39	44.1	--	55.9	--	100.0	60
Total	77.5	11.7	10.8	0.1	100.0	1749

Note: Total includes 2 births to women belonging to other religions, 25 births to scheduled tribe women and 6 and 16 births to women age below 15 and above 40 respectively, at birth, who are not shown separately.

-- Less than 0.05 percent

¹Includes current pregnancy, if any.

²For current pregnancy, estimated maternal age at birth

are less likely to have unwanted births, but mistimed births 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. First births are relatively well planned, second and third births are the most likely to be mistimed, and fourth and higher order births are particularly likely to be unwanted (34 percent). The percentage of pregnancies that were planned decreases steadily with increasing age to a level of 44 percent for women age 35-39. More than one-fourth of all births to women age 30-34 and more than one-half of all births to women age 35-39 were reported to be 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.

The wanted TFR of 2.21 is lower by almost one child (or 29 percent) than the TFR of 3.13 shown in Table 7.9. Large differences between these two measures are evident for all population subgroups, but the differential declines steadily as the level of education increases.

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, Jammu Region of J & K, 1993		
Background characteristic	Total wanted fertility rate	Total fertility rate
Residence		
Urban	1.71	2.13
Rural	2.32	3.36
Education		
Illiterate	2.51	3.69
Literate, < middle complete	2.61	3.45
Middle school complete	1.92	2.62
High school and above	1.89	2.29
Religion		
Hindu	2.15	3.01
Muslim	2.48	3.88
Sikh	2.22	2.64
Caste/tribe		
Scheduled caste	2.28	3.49
Other (Non-SC/ST)	2.17	2.95
Total	2.21	3.13

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 are based on all women including women belonging to other religions and scheduled tribe, 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. This type of information is relevant both to the demographic assessment of the population and to health policies and programmes. The mortality estimates are also useful for projecting the future size of the population. More detailed information on the mortality of children can 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 the Household and Woman's Questionnaires. 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 under four 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 prevalence of diseases, there is little experience with the results of such questions. The patterns shown by the morbidity data analyzed in this section are generally plausible, suggesting that the questions have provided useful information. At the same time, there is little to indicate whether the overall prevalence 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 considerations that might be made in assessing the validity of these prevalence figures. Conditions carrying a stigma, such as leprosy, may be underreported due to intentional concealment by respondents or embarrassment on the part of interviewers about asking these questions. Respondents will be aware of certain conditions, such as blindness and physical impairment, but may be unaware of others unless they have been diagnosed by medical personnel. Moreover, given the linguistic diversity in India, local as well as national, respondents may know that a household member suffers from a given condition but fail to report it because they do not recognize the words used by the enumerator in asking the question.

Table 8.1 shows the prevalence of the five health conditions among the household population living in each place of residence by age and by sex. All five health conditions show an overall incidence of less than 10 persons per 1,000 population. Tuberculosis is not common and leprosy is almost nonexistent in the Jammu region.

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, sex and residence, Jammu Region of J & K, 1993

Demographic characteristic	Number of persons per 1,000 suffering from:						Number of usual residents
	Blindness		Tuberculosis	Leprosy	Physical impairment of limbs	Malaria during the last three months	
	Partial	Complete					
URBAN							
Age							
0 -14	1.2	3.1	0.6	--	3.1	4.4	837
15-59	1.8	0.6	0.9	0.3	3.9	4.3	1714
60+	51.0	2.2	--	--	11.1	6.7	235
Sex							
Male	3.7	1.8	0.7	0.4	4.4	3.7	1418
Female	8.0	1.1	0.8	--	4.2	5.3	1369
Total	5.8	1.5	0.7	0.2	4.3	4.5	2786
RURAL							
Age							
0 -14	0.9	3.5	--	--	5.6	9.8	5367
15-59	3.4	1.2	4.2	0.3	7.8	9.5	7418
60+	48.0	8.3	6.3	--	9.4	6.3	1204
Sex							
Male	4.6	3.4	2.7	0.2	8.7	9.4	7056
Female	8.0	2.0	2.9	0.2	5.4	9.2	6933
Total	6.3	2.7	2.8	0.2	7.1	9.3	13989
TOTAL							
Age							
0 -14	1.0	3.5	0.1	--	5.3	9.1	6204
15-59	3.1	1.1	3.6	0.3	7.1	8.5	9132
60+	48.5	7.3	5.2	--	9.7	6.3	1439
Sex							
Male	4.5	3.1	2.3	0.2	8.0	8.5	8474
Female	8.0	1.9	2.5	0.2	5.2	8.6	8302
Total	6.2	2.5	2.4	0.2	6.6	8.5	16776

-- Less than 0.05 per 1,000

Malaria

The overall level of malaria in the three months prior to the survey was 9 per 1,000. The incidence was substantially lower in urban areas (5 per 1,000) than in rural areas (9 per 1,000). The prevalence was higher for females than for males in urban areas, but the differences of gender are small in rural areas and overall.

There are small differences in prevalence among age groups. The prevalence of malaria is highest for those age 0-59 (9 per 1,000) and lowest for those age 60 and over (6 per 1,000). Since 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 fieldwork was conducted during the dry season when malaria rates are expected to be relatively low.

Physical Impairment of the Limbs

The overall prevalence of persons with physically impaired limbs is 7 per 1,000. Female prevalence is 5 per 1,000, both overall and in rural areas, and 4 per 1,000 in urban areas. Males have practically the same prevalence as females in urban areas (just over 4 per 1,000), but higher prevalence both overall and in rural areas (8 to 9 per 1,000 compared with 5 per 1,000). Although prevalence generally increases the older the age group, age differentials are not large except in urban areas where persons age 60 and over have approximately three times the prevalence of those below age 60.

Partial and Complete Blindness

The overall prevalence of partial blindness is 6 per 1,000 population, with essentially no variation by place of residence. Partial blindness increases sharply with age. Prevalence rates are 1 per 1,000 for persons age 0-14, 3 per 1,000 for persons age 15-59 and 49 per 1,000 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. Overall, females are more prone to partial blindness than males. The typical prevalence for females is 8 per 1,000, compared to about 5 per 1,000 for males.

The overall level of complete blindness is 3 per 1,000. Although the incidence of complete blindness is low everywhere in Jammu, rural residents are almost twice as likely to be completely blind (2.7 per 1,000) as urban residents (1.5 per 1,000). Males are more prone to complete blindness than females in both rural and urban areas, but the differences are small. Complete blindness is six to seven times as prevalent among persons age 60 and over than among persons age 15-59, both overall and in rural areas. In urban areas, complete blindness among persons over age 60 is three to four times that of persons age 15-59. Complete blindness is higher among persons age 0-14 than among persons age 15-59 and the differences are similar for urban and rural areas; in fact, in urban areas complete blindness is even higher among persons age 0-14 than among persons age 60 and over .

Tuberculosis

The overall prevalence of tuberculosis is 2 per 1,000, with little variation by sex. Prevalence of tuberculosis is higher in rural areas (3 per 1,000 persons) than in urban areas (1 per 1,000 persons). There are some age differences, with essentially no incidence for persons age 0-14, 4 per 1,000 for those age 15-59, and 5 per 1,000 for those age 60 and over.

Leprosy

Leprosy is very rare (0.2 per 1,000). Little sex differential is observed and the rates are essentially negligible for all age groups.

8.2 Crude Death Rates and Age-Specific Death Rates

Crude death rates (CDR) and age-specific death rates by sex for the usual resident population in the Jammu region from the NFHS are shown in Table 8.2. The CDR is calculated as the annualized number of deaths (among those occurring during the two-year period preceding the date of the survey as recorded in the Household Questionnaire) 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 Jammu and Kashmir as a whole. The intercensal growth rate is assumed to be the same for all age and sex groups. Questions on the number of deaths occurring to 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 understatement of deaths.

Table 8.2 shows an average annual crude death rate for the usually resident population of Jammu region of 8.7 per 1,000 for the two years before the NFHS (roughly 1991-92). The estimate of the crude death rate may be subtracted from the earlier estimate of the crude birth rate (see Table 5.1) to calculate the rate of natural increase of the population of the Jammu region. The rate of natural increase is estimated to be 18.8 per 1,000 population per year for the two-year period before the survey. This translates into an annual growth rate of 1.9 percent, which would imply a doubling of the population of Jammu region in 37 years if there were no net migration.

In most countries, male death rates are higher than female death rates at nearly all ages. The Jammu region follows the same pattern with the exception of age 5-14 where the female death rate is higher than that of males. Surprisingly, Jammu region does not follow the South Asian countries' pattern of 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 the NFHS, these ratios are 0.80, 1.50, 0.80 and 0.82 for the 0-4, 5-14, 15-49 and 50+ age groups, respectively.

Age	Death rate			Number of usual residents		
	Male	Female	Total	Male	Female	Total
0 - 4	17.2	13.7	15.6	1034	912	1946
5 - 14	1.8	2.7	2.3	2223	2035	4258
15-49	5.4	4.3	4.8	3945	4214	8159
50+	29.8	24.4	27.2	1272	1141	2412
CDR	9.5	7.8	8.7	8474	8302	16776

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

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 mortality:¹

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 (${}_4q_1$):	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 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 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 has 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

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 one:

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

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 longer before the survey. The distributions of neonatal deaths by age shown in Appendix Table B.5 indicate that for deaths occurring 0-4 years prior to the survey, deaths occurring under age seven days constitute 69 percent of all neonatal deaths. The corresponding figures for deaths occurring 5-9 and 10-14 years prior to the survey are 76 and 65 percent, respectively. Because a ratio of less than 25 percent is often used as a guideline to indicate underreporting of early neonatal deaths, these results suggest that early neonatal deaths have *not* been severely underreported in the NFHS in Jammu region.

The distributions of infant deaths by age shown in Table B.6 of Appendix B show that, for deaths occurring 0-4 years prior to the survey, neonatal deaths represent 73 percent of all infant deaths, with corresponding figures of 58 and 60 percent for deaths occurring 5-9 and 10-14 years prior to the survey, respectively. This again indicates that there is no serious underreporting of neonatal deaths, although the slightly lower ratios for the periods 5-9 and 10-14 years prior to the survey may indicate that some neonatal deaths may not have been reported by older women.

One problem that is inherent in most retrospective surveys is heaping of reported ages at death on certain digits -- in the present instance 6, 12 and 18 months. This type of misreporting of age at death will bias estimates of the age pattern of mortality if the net result of misreporting is the transfer of deaths between age intervals 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 (i.e., at ages 12-23 months), 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.

The distributions of deaths occurring under age two years by age at death shown in Table B.6 in Appendix B provide evidence on the extent of age "heaping". While there is evidence of heaping for all three periods, 0-4, 5-9, and 10-14 years prior to the survey, severe heaping is observed only for deaths occurring 10-14 years prior to the survey. For deaths occurring 0-4 years prior to the survey, there were 80 deaths under age 12 months and 4 deaths at age 12 months. Because only one death was reported at ages 10 and 11 months each and no deaths were reported at ages 13 and 14 months, the four deaths reported at age 12 months may have actually occurred at a lower age and been "heaped" to 12 months. If that were the case, the number of infant deaths would have been reduced by around 5 percent. "Heaping" on particular months of death was presumably minimized by the strong emphasis on accurate reporting during interviewer training².

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

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".

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, as discussed earlier. Second, the accuracy of reports of age at death and of date of birth may deteriorate systematically with time. Third, mortality rates are increasingly biased as we move further back in time from the survey because of the out-selection of births to older women, who generally experience higher mortality risks. This 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. Because 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. The extent of this bias depends on the proportion of births omitted, however, and Table 8.6 in this chapter shows that among children born in the five years prior to the survey, only four percent were born to women over age 34. Given this small proportion of births excluded, selection bias for infant and child mortality statistics as far back as 15 years before the survey is unlikely to be substantial.

A fourth reason for caution in interpreting trends is the high sampling variability for mortality rates (see Appendix A). This is particularly true of the Jammu region where the NFHS estimates of infant and child mortality are based upon a relatively small sample of 2,766 ever-married women. As shown in Table A.2 of Appendix A, for example, the infant mortality estimate for Jammu region, 45 per 1,000, has a standard error of 5.0 and the 95 percent confidence interval is from 35.4 to 55.5. The sampling error is even larger for infant mortality estimates for population subgroups.

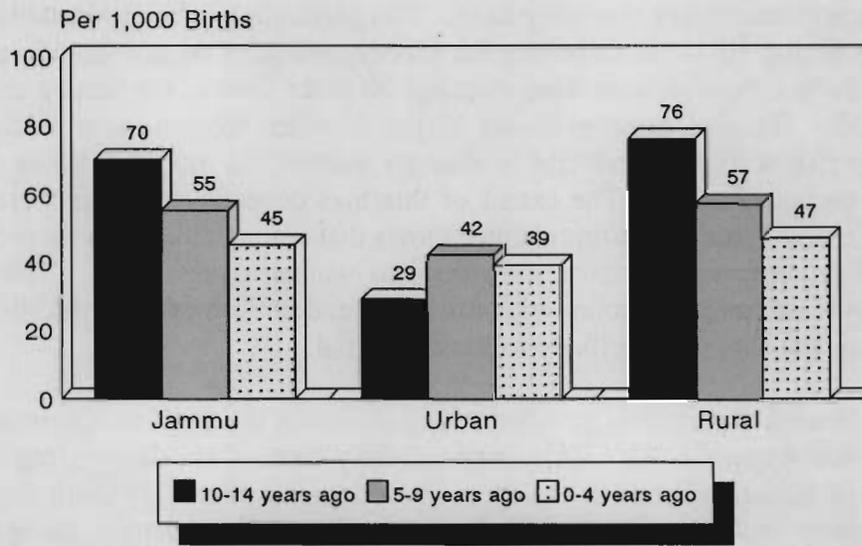
Levels and Trends in Infant and Child Mortality

Table 8.3 and Figure 8.1 show various measures of infant and child mortality for the three quinquennial periods preceding the survey, by place of residence. Infant mortality rates

Table 8.3 Infant and child mortality					
Neonatal, postneonatal, infant, child and under-five mortality for five-year periods preceding the survey, by residence, Jammu Region of J & K, 1993					
Years prior to survey	Neonatal mortality (NN)	Postneonatal mortality ¹ (PNN)	Infant mortality (${}_1q_0$)	Child mortality (${}_4q_1$)	Under-five mortality (${}_5q_0$)
URBAN					
0-4 years	29.8	9.4	39.2	7.7	46.5
5-9 years	28.6	13.4	42.0	17.6	58.9
10-14 years	22.4	6.5	28.8	11.3	39.8
RURAL					
0-4 years	32.3	14.2	46.5	15.4	61.2
5-9 years	32.5	24.1	56.6	25.3	80.4
10-14 years	45.8	30.6	76.4	31.7	105.6
TOTAL					
0-4 years	31.9	13.5	45.4	14.3	59.1
5-9 years	31.9	22.7	54.6	24.2	77.5
10-14 years	42.7	27.4	70.1	28.8	96.9

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

Figure 8.1
 Infant Mortality Rates for Five-Year
 Periods by Residence



Note: Rates are for 5-year periods preceding the survey

NFHS, Jammu Region of J & K, 1993

declined substantially in the Jammu region during the fifteen years prior to the survey. The infant mortality rate for the total population declined from 70 per 1,000 live births during 1978-82 (10-14 years before the survey) to 45 per 1,000 live births during 1988-92 (0-4 years before the survey). The child mortality rate declined from 29 per 1,000 surviving at age 1 during 1978-82 to 14 per 1,000 surviving at age 1 during 1988-92. All five mortality measures are lower in urban areas than rural areas.

Surprisingly, in urban areas of the Jammu region, the infant mortality rates, neonatal mortality rates and mortality rates for under-five years age population do not show the expected decline between the periods 10-14 years and 5-9 years prior to the survey. This may be due to large sampling errors in urban areas.

Socioeconomic Differentials in Infant and Child Mortality

Table 8.4 and Figure 8.2 show infant and child mortality statistics for the 10-year period preceding the survey, by selected background characteristics. Infant mortality rates are nearly 27 percent higher in rural areas than in urban areas, that is, 52 per 1,000 live births compared to 41 per 1,000 live births. Children in rural areas of the Jammu region experience 36 percent higher risk of dying before reaching their fifth birthday than urban children. Postneonatal and child mortality are also lower in urban areas, as expected.

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, Jammu Region of J & K, 1993

Background characteristic	Neonatal mortality (NN)	Postneonatal mortality ¹ (PNN)	Infant mortality (I ₀)	Child mortality (C ₀)	Under-five mortality (U ₀)
Residence					
Urban	29.2	11.3	40.5	12.2	52.3
Rural	32.4	19.3	51.6	20.3	70.9
Mother's education					
Illiterate	33.6	21.3	54.9	22.4	76.1
Literate, < middle complete (38.3)	(38.3)	(11.9)	(50.2)	(25.5)	(74.4)
Middle school complete (28.5)	(28.5)	(26.8)	(55.3)	(5.2)	(60.3)
High school and above	22.8	5.3	28.1	9.9	37.7
Religion					
Hindu	31.4	16.3	47.7	20.1	66.8
Muslim	32.7	25.5	58.2	19.1	76.1
Caste/tribe					
Scheduled caste	37.7	20.0	57.7	24.0	80.3
Other (Non-SC/ST)	29.8	17.6	47.4	17.3	63.9
Medical maternity care²					
No antenatal or delivery care	(27.9)	(12.6)	(40.5)	*	(45.9)
Either antenatal or delivery care	27.4	9.0	36.5	(6.6)	42.8
Both antenatal and delivery care	27.6	14.7	42.4	(131.7)	168.4
Total	31.9	18.2	50.1	19.2	68.3

Note: Total includes the mortality experience of other religious groups and scheduled tribes, which is based on fewer than 250 unweighted births and is not shown separately.

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

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

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

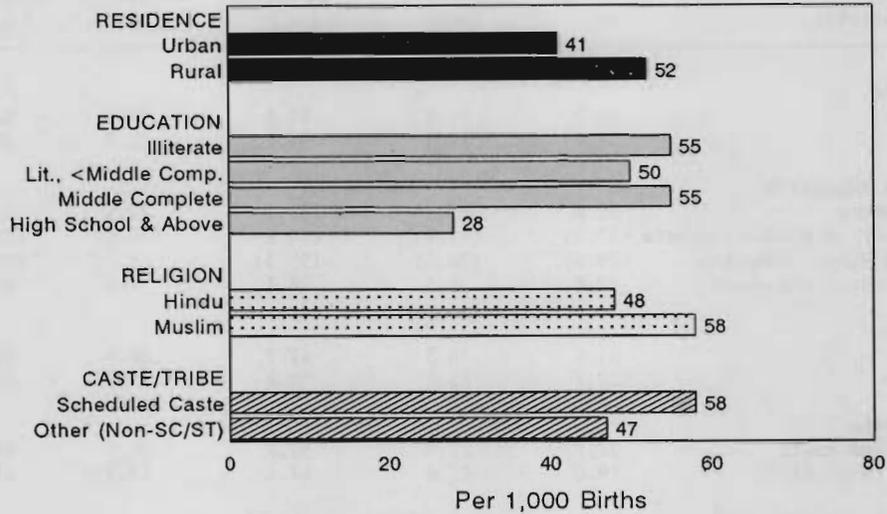
²Rates for the four-year period before the survey. Medical care is that given by a doctor, nurse, trained midwife, or other health professional in a hospital, clinic, or health centre or care received at home from a health worker.

Infant mortality declines considerably with an increase in the education of the mother, as one would expect. It is 55 per 1,000 live births for illiterate mothers and 28 per 1,000 live births for mothers with at least a high school education. With the exception of child mortality, all five indicators of mortality show lower values for Hindus than Muslims. All five indicators of mortality show higher values for scheduled caste women than other women (non-SC/ST). The presence of medical maternity care for mothers does not seem to make much difference in the mortality rates, although the evidence is inconclusive due to lack of sufficiently large sample.

Demographic Differentials in Infant and Child Mortality

This section examines differentials in early childhood mortality by various demographic characteristics of both the child and the mother. Table 8.5 and Figure 8.3 present mortality rates for the 10 years preceding the survey by sex of the child, age of the mother when the child was born, birth order, length of the previous birth interval and size of the child at birth.

Figure 8.2
 Infant Mortality Rates by Selected
 Background Characteristics



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

NFHS, Jammu Region of J & K, 1993

Although the data on age-specific death rates shown in Table 8.2 (referring to the period 1991-92) indicate that the female death rate for the age group 0-4 is less than the male death rate by 20 percent, the infant and child mortality rates in table 8.5 (referring to the 10-year period preceding the survey) show an opposite female/male ratio. During the neonatal period, males and females have a similar risk of dying. Postneonatal mortality, however is 47 percent higher for females than males, and child mortality (ages 1-4) is 69 percent higher for females than for males. Higher female mortality relative to male mortality after the age of weaning has been observed in other studies conducted in South Asia and is thought to reflect the relative nutritional and medical neglect of girls after breastfeeding has ceased.

Except for child mortality, the 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. In the case of child mortality, the rate increases with the increase in mother's age at birth. Infant mortality is highest for children of mothers under age 20 (54 per 1,000 live births) and age 40 and over (69 per 1,000 live births). The higher risk for births to women under age 20 is the more salient statistic, however, since births to women under age 20 are relatively common and births to women in their forties are rare. The lowest infant mortality rate, approximately 46 per 1,000 live births, is for women in the prime childbearing years (20-29 years old). Differentials by birth order again show the expected U-shaped pattern with the exception of postneonatal mortality, which increases steadily with birth order. There is, of course, a close correlation between age of mother and birth order, with higher order births occurring at older ages.

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, Jammu Region of J & K, 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	32.1	14.8	46.9	14.5	60.7
Female	31.7	21.8	53.6	24.5	76.8
Mother's age at birth					
< 20	35.2	18.9	54.1	13.4	66.7
20-29	27.7	17.8	45.5	19.2	63.8
30-39	51.0	18.1	69.1	22.3	89.9
Birth order					
1	38.2	14.6	52.8	15.3	67.3
2-3	22.7	17.1	39.8	13.9	53.2
4-6	39.9	21.2	61.1	23.8	83.5
Previous birth interval					
< 24 months	45.0	30.7	75.7	27.0	100.7
24-47 months	18.8	16.5	35.4	21.5	56.1
48+ months	(35.1)	(5.8)	(40.9)	(1.4)	(42.3)
Birth size²					
Average	21.6	5.7	27.3	45.8	71.9
Small	(42.1)	(25.3)	(67.4)	*	*

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

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

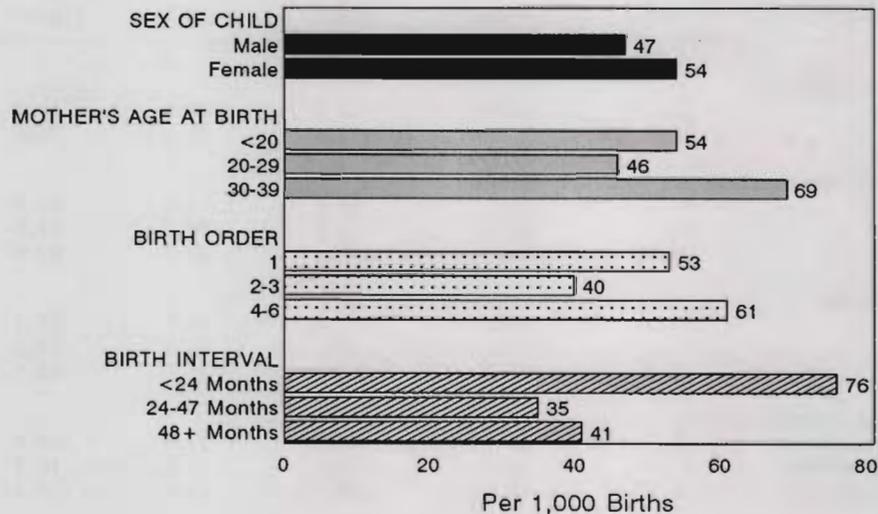
¹Computed as the difference between the infant and neonatal mortality rates

²Birth size as reported by the mothers; rates for the four-year period before the survey

There is a strong association between child spacing and the survival chances of children. Infant mortality risks increase sharply as the length of the preceding birth interval decreases. Infant mortality is over twice as high for children with a preceding interval of less than 24 months as for children with a preceding interval of 24-47 months (76 compared to 35 per 1,000 live births); and the effect of a preceding interval of less than 24 months compared with 48 months or more is similar. Child mortality, under-five mortality, and postneonatal mortality all rise sharply as previous birth interval declines.

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. Since respondents may not know the weight of their children at birth, they were asked to report the size of their babies at birth, whether they were "large", "average", or "small". This information was collected only for births during the four-year period preceding the survey. The last panel of Table 8.5 shows infant and child mortality statistics for births classified as "average" and "small". The mortality estimates for children reported to be "large" are not shown separately in the table due to fewer than 250 unweighted children in this category. Children who are perceived by their mothers to be smaller than average at birth experience higher mortality rates than children perceived to be average, particularly in their first month of life and in infancy.

Figure 8.3
 Infant Mortality Rates by Selected
 Demographic Characteristics



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

NFHS, Jammu Region of J & K, 1993

8.4 High-Risk Fertility Behaviour

Certain patterns of childbearing are associated with elevated levels of infant and child mortality. Table 8.5 shows substantially higher mortality risks for children of very young mothers, and for births occurring within 24 months of a previous birth. Since couples may control each of these risk factors by the use of family planning, it may be possible for couples to reduce the risks of mortality to their children.

Table 8.6 shows, for births during the five years preceding the interview, percentages with mothers in various "elevated risk" categories. The purpose of this table is to identify areas in which changes in women's behaviour might effect a reduction in mortality risks for their children. 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 "elevated risk" category to the proportion of deceased children among children not in any "elevated 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 policymaker. For the prospective mother, the critical issue is how much greater the risks are in the various "elevated risk" categories. For example, it is very important to avoid childbearing below age 18, because the mortality risk for children to mothers below this age is 3.07 times as high as the risk for children not in any "elevated risk" category.

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 and residence, Jammu Region of J & K, 1993

High-risk category	Births in last 5 years		Percentage of currently married women ^a
	Percent of births	Risk ratio	
URBAN			
Not in any high-risk category	69.2	1.00	52.1 ^b
Single high-risk category			
Age<18: Age under 18 years at birth	2.5	*	--
Age>34: Age over 34 years at birth	0.8	*	9.7
BI<24 : Birth interval under 24 months	15.9	(2.90)	10.6
BO>3 : Birth order higher than 3	6.5	*	7.5
Subtotal	25.7	2.99	27.8
Multiple high-risk category			
Age<18 & BI<24 ^c	--	*	0.1
Age>34 & BI<24	--	*	0.1
Age>34 & BO>3	1.9	*	17.4
Age>34 & BI<24 & BO>3	--	*	0.4
BI<24 & BO>3	3.3	*	2.0
Subtotal	5.2	*	20.1
In any high-risk category	30.8	3.24	47.9
Total percent	100.0	NA	100.0
Number	270	NA	464
RURAL			
Not in any high-risk category	53.6	1.00	50.2 ^b
Single high-risk category			
Age<18: Age under 18 years at birth	3.5	(2.99)	1.3
Age>34: Age over 34 years at birth	0.4	*	2.7
BI<24 : Birth interval under 24 months	13.7	1.35	10.1
BO>3 : Birth order higher than 3	18.3	1.57	10.2
Subtotal	35.9	1.61	24.3
Multiple high-risk category			
Age<18 & BI<24 ^c	0.4	*	0.2
Age>34 & BI<24	--	*	0.1
Age>34 & BO>3	3.9	(1.58)	16.3
Age>34 & BI<24 & BO>3	0.4	*	1.1
BI<24 & BO>3	5.8	(2.48)	7.8
Subtotal	10.5	2.35	25.5
In any high-risk category	46.4	1.78	49.8
Total percent	100.0	NA	100.0
Number	1631	NA	2183

Table 8.6 High-risk fertility behaviour (Contd.)

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 and residence, Jammu Region of J & K, 1993

High-risk category	Births in last 5 years		Percentage of currently married women ^a
	Percent of births	Risk ratio	
TOTAL			
Not in any high-risk category	55.8	1.00	50.6 ^b
Single high-risk category			
Age<18: Age under 18 years at birth	3.3	(3.07)	1.0
Age>34: Age over 34 years at birth	0.4	*	4.0
BI<24 : Birth interval under 24 months	14.0	1.54	10.2
BO>3 : Birth order higher than 3	16.6	1.72	9.7
Subtotal	34.4	1.75	24.9
Multiple high-risk category			
Age<18 & BI<24 ^c	0.3	*	0.2
Age>34 & BI<24	--	*	0.1
Age>34 & BO>3	3.6	(1.55)	16.5
Age>34 & BI<24 & BO>3	0.3	*	1.0
BI<24 & BO>3	5.5	(2.83)	6.8
Subtotal	9.7	2.55	24.5
In any high-risk category	44.2	1.93	49.4
Total percent	100.0	NA	100.0
Number	1901	NA	2647

Note: 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.

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

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

-- Less than 0.05 percent

NA: Not applicable

^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.

From the point of view of policymakers in health and family welfare, the magnitudes of the risk ratios should be considered in conjunction with the percentage of women in each "elevated risk" category. Looking again at Table 8.6, for example, we see that the highest risk ratio is for births to women under 18 years of age. Only 3 percent of the births fall in this category, however, so that even a complete avoidance of such births will have little effect on the overall level of infant mortality. On the other hand, births of order higher than three have a lower risk ratio, 1.72 to 2.83, but 26 percent of births are in categories with birth order higher than 3. Discouraging more than three children is, therefore, likely to have a greater impact on overall mortality levels than births to women less than age 18.

The last column of Table 8.6 shows the proportion of currently married women who would fall into each of the risk categories if they were to become pregnant at the present time. Almost half of these women are in categories with risk ratios substantially 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 live in rural areas, 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. Recognizing 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). Family planning services were integrated with maternal and child health services and nutrition services when the Minimum Needs Programme was initiated during the Fifth Five Year Plan (1974-79). The primary objective was to provide minimum 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 and it has now been further strengthened by introducing the Child Survival and Safe Motherhood Programme (Ministry of Health and Family Welfare, 1993). 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).

Maternal and child health services in rural areas of India are delivered mainly by government-run Primary Health Centres and sub-centres. Services for pregnant women and children can 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 supposed 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 which 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 infants and children.

An important 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;

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immunizations; episodes of illnesses such as acute respiratory infection, fever and diarrhoea and the treatment received; 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 mother's 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 relates to the children born during the four years preceding the survey. If a woman had more than one live birth during the four years preceding the survey, the information was collected for up to three live births and all of these births are taken into account in the analysis.

9.1 Maternal Care Indicators

Antenatal Care

Antenatal care 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 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 reduce the incidence of low birth weight babies and thus reduce perinatal, neonatal and infant mortality.

A pregnant woman can receive antenatal care either by visiting a doctor or 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, during 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 during 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. In all, the information is available for 1,526 live births in the last four years. Although the interviewer was instructed to record all responses if more than one source of antenatal care outside the home was mentioned for the same pregnancy, only the most qualified provider was counted in the table. In Jammu, mothers received antenatal care for four-fifths (80 percent) of their births during the last four years. Allopathic doctors provided antenatal care for almost one-half (49 percent) of births and other health professionals (such as nurses/midwives, ayurvedic doctors and homoeopathic doctors) provided care for another 29 percent of births. Mothers received antenatal care only at home from health workers for only 1 percent of births. For another 1 percent of births, the mothers

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, Jammu Region of J & K, 1993

Background characteristic	Antenatal care provider (outside home) ¹				No ANC	Miss- ing	Total percent	Number of births
	ANC only at home from health worker	Doctor	Other health professional	Traditional birth attendant, other ²				
Mother's age at birth								
< 20	0.6	34.3	37.9	1.3	25.8	0.6	100.0	193
20-34	0.8	51.7	28.3	0.8	18.4	--	100.0	1265
35+	1.8	33.8	19.0	--	45.4	--	100.0	68
Birth order								
1	--	55.2	32.6	0.8	11.2	0.3	100.0	475
2-3	0.9	51.3	30.4	0.8	16.6	--	100.0	660
4-5	1.0	43.0	26.4	1.0	28.6	--	100.0	252
6+	2.7	24.6	16.2	0.9	55.6	--	100.0	139
Residence								
Urban	--	80.7	15.4	--	3.9	--	100.0	215
Rural	1.0	43.5	31.4	1.0	23.2	0.1	100.0	1312
Education								
Illiterate	1.2	31.7	30.5	1.1	35.4	0.2	100.0	806
Literate, < middle complete	1.1	53.1	38.3	0.6	7.0	--	100.0	226
Middle school complete	--	68.0	28.3	--	3.7	--	100.0	202
Hjgh school and above	--	78.9	18.9	0.9	1.3	--	100.0	293
Religion								
Hindu	1.1	52.6	31.2	0.8	14.3	--	100.0	1121
Muslim	--	29.2	21.0	1.2	48.6	--	100.0	307
Sikh	--	67.9	30.8	--	1.3	--	100.0	94
Caste/tribe								
Scheduled caste	1.3	40.7	33.7	0.3	24.0	--	100.0	476
Other (Non-SC/ST)	0.6	52.5	27.2	1.1	18.5	0.1	100.0	1033
Total ³	0.8	48.7	29.1	0.8	20.4	0.1	100.0	1526

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

-- 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.

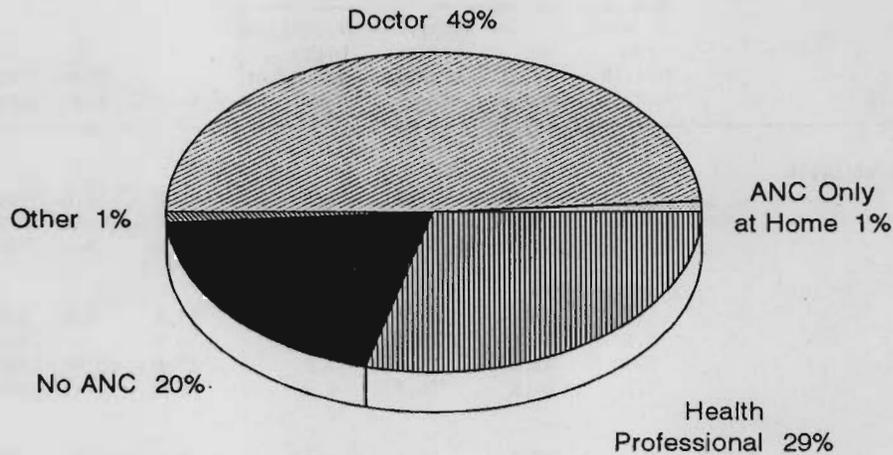
²Includes hakim and "Don't know"

³Births in the period 1-47 months prior to the survey. Total includes 5 and 18 births to women belonging to other religions and scheduled tribes respectively, which are not shown separately.

received antenatal care outside the home from traditional birth attendants. In these tabulations, those who received care outside the home are classified as "outside home", whether or not they also received care at home from a health worker.

The coverage of antenatal care is highest (82 percent) among births to mothers age 20-34 and lowest (55 percent) among births to mothers age 35 and over. In fact, most of the births during the last four years occurred to women age 20-34, and the utilization of antenatal care services is quite high for the births to these mothers. There is a negative relationship

Figure 9.1
Sources of Antenatal Care (ANC)
During Pregnancy



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

NFHS, Jammu Region of J & K, 1993

between the order of births and coverage of antenatal care. The mothers of first order births are more likely to receive antenatal care than those of higher order births. Mothers receiving antenatal care from doctors are likely to be younger and of lower parity. As expected, utilization of antenatal care is more common in urban areas (96 percent) than in rural areas (77 percent). The proportion of births whose mothers received antenatal care increases steadily with an increase in the educational level of the mother, from 65 percent for illiterate mothers to 93 percent for mothers who had completed middle school and almost all mothers who had completed high school and beyond. As expected, more educated women are more likely to receive antenatal care from doctors. Religion seems to have an important bearing on the utilization of antenatal care services. The utilization of antenatal services is almost universal among Sikhs, but only one-half (51 percent) of births to Muslim mothers and 86 percent of births to Hindu mothers have received these services. Mothers from scheduled castes are less likely to receive antenatal care than non-SC/ST women.

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, it is often difficult for working women from lower socioeconomic groups to attend an antenatal clinic that often because they

may face the loss of wages in such cases. Under these 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 2.5 for home visits, 3.7 for visits outside the home and 3.8 for visits of either type. It is clear that women in Jammu are far behind in following the standards set for antenatal visits. The median number of visits is larger in urban areas (5.8) than in rural areas (3.6), but there is no substantial urban-rural difference regarding home visits by health workers, primarily because no home visits were made by health workers to the mothers of a large majority (98 percent) of births in both urban and rural areas. However, the comparative nearness of antenatal care services and the ease in getting transport in urban areas could be important factors for the larger number of outside visits in urban areas.

Obstetricians advise that antenatal care should begin within 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). The median gestational age for the first antenatal care visit of any type (home or outside) in Jammu region is 4.6 months, 3.2 months in urban areas and 4.8 months in rural areas. In both urban and rural areas, the median age of gestation is slightly higher for home visits (4.8 and 5.4 months in urban and rural areas, respectively) than for outside visits (3.2 and 4.8 months in urban and rural areas, respectively). The proportion of births to mothers who received antenatal care for the first time in the first trimester is 64 percent in urban areas and 26 percent in rural areas. On the other hand, the proportion of births to mothers who received antenatal care for the first time in the second and third trimester is higher in rural areas than urban areas, indicating that women in rural areas of Jammu come for these services at a later stage of pregnancy, possibly when they have some problems. Consequently, the number of visits are also fewer than desired. The lack of antenatal care puts women and their children at higher risk of mortality.

Tetanus Toxoid Vaccination

In India, an important cause of death among neonates is neonatal tetanus, which 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 unsterilized 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). Where expert medical help is not available, as is common in many rural areas, the fatality rate is close to 100 percent. However, neonatal tetanus is a preventable disease. 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 immunization programme for expectant mothers through tetanus toxoid 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 step up the pace of

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, according to residence, Jammu Region of J & K, 1993

ANC visits/ months pregnant	Home visits	Outside visits	Any type
URBAN			
Number of ANC visits			
None	97.8	3.9	3.9
1 visit	0.5	3.4	3.4
2-3 visits	1.2	28.7	27.7
4 or more visits	0.5	64.1	65.1
Total percent	100.0	100.0	100.0
Median number of visits (for those with ANC)	2.8	5.7	5.8
Months pregnant at the time of the first ANC visit			
No antenatal care	97.8	3.9	3.9
First trimester	0.5	63.4	63.6
Second trimester	1.0	27.0	27.0
Third trimester	0.7	5.8	5.5
Total percent	100.0	100.0	100.0
Median months pregnant at first visit (for those with ANC)	4.8	3.2	3.2
Number of live births ¹	215	215	215
RURAL			
Number of ANC visits			
None	97.7	24.1	23.2
1 visit	0.6	5.8	5.5
2-3 visits	1.6	40.9	41.5
4 or more visits	--	29.1	29.7
Don't know/missing	0.1	0.1	0.1
Total percent	100.0	100.0	100.0
Median number of visits (for those with ANC)	2.5	3.6	3.6
Months pregnant at the time of the first ANC visit			
No antenatal care	97.7	24.1	23.2
First trimester	0.5	25.5	25.9
Second trimester	1.2	41.4	41.9
Third trimester	0.5	8.9	8.9
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)	5.4	4.8	4.8
Number of live births ¹	1312	1312	1312

Table 9.2 Number of antenatal care visits and stage of pregnancy (Contd.)

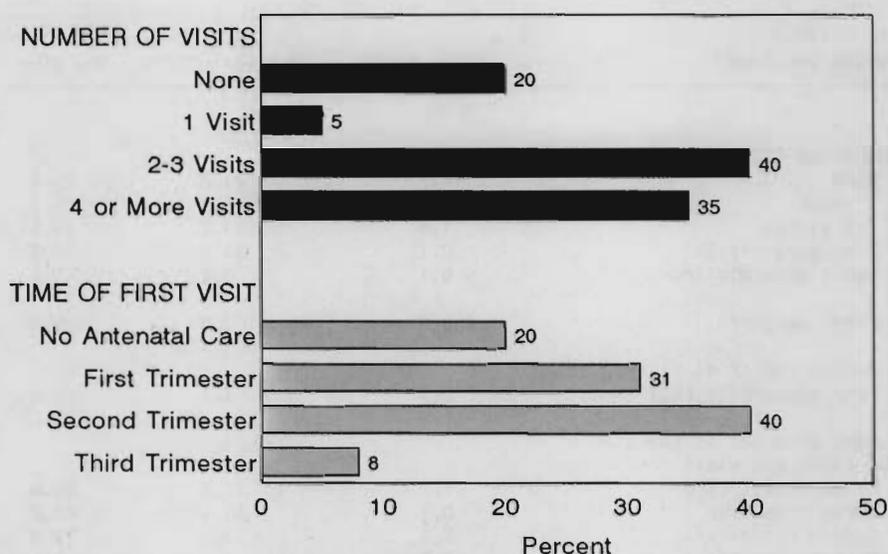
Percent distribution of live births during the four years preceding the survey by number of antenatal care (ANC) visits, and by the stage of pregnancy at the time of the first visit, according to residence, Jammu Region of J & K, 1993

ANC visits/ months pregnant	Home visits	Outside visits	Any type
TOTAL			
Number of ANC visits			
None	97.7	21.3	20.4
1 visit	0.6	5.5	5.2
2-3 visits	1.6	39.2	39.8
4 or more visits	0.1	34.0	34.7
Don't know/missing	0.1	0.1	0.1
Total percent	100.0	100.0	100.0
Median number of visits (for those with ANC)			
	2.5	3.7	3.8
Months pregnant at the time of the first ANC visit			
No antenatal care	97.7	21.3	20.4
First trimester	0.5	30.9	31.2
Second trimester	1.2	39.3	39.8
Third trimester	0.5	8.4	8.4
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)			
	5.3	4.6	4.6
Number of live births¹	1526	1526	1526
-- Less than 0.05 percent			
¹ Births in the period 1-47 months prior to the survey.			

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. One 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). One booster is recommended if two doses were received less than three years ago (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. 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. Twenty-two percent of births were to mothers who did not receive a single dose of tetanus toxoid vaccine, 9 percent were to those who received only one dose and 69 percent were to those who received two or more doses. The coverage of immunization for tetanus is lower for older mothers (age 35 and above) than for younger and middle age mothers. The coverage of immunization for tetanus is significantly higher in urban areas with 85 percent receiving two or

Figure 9.2
Number and Timing of Antenatal Visits



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

NFHS, Jammu Region of J & K, 1993

more doses than in rural areas with 66 percent receiving two or more doses. Furthermore, one-fourth of births in rural areas were to mothers who had not received any dose of tetanus toxoid.

For births in the last four years, tetanus toxoid coverage is lower for mothers pregnant with higher order birth and mothers belonging to scheduled castes. A marked positive relationship is observed between the educational attainment of the mother and the coverage rate for tetanus toxoid vaccination. The proportion of births whose mothers had received one or more doses of tetanus toxoid vaccine increases steadily from 63 percent for illiterate mothers to 98 percent for mothers with at least a high school education. The coverage rate for immunization against tetanus is almost universal among Sikhs, and is substantially higher among births to Hindu mothers (85 percent) than to Muslim mothers (48 percent).

Iron and Folic Acid Tablets

Proper maternal nutritional care is important for the healthy intrauterine growth of a baby and may affect the birth weight of a baby. 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. However, it has also been shown that improvement in nutritional status coupled with improved health care in pregnancy have substantially improved birth weights (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 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. A majority (71 percent) of births in Jammu were to mothers who had received iron and folic acid tablets. As expected, the receipt of iron and folic acid tablets is substantially higher in urban areas (87 percent) than in rural areas (68 percent). The

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, Jammu Region of J & K, 1993

Background characteristic	Number of tetanus toxoid injections			Total percent	Percent given iron/folic tablets	Number of births
	None	One dose	Two doses or more			
Mother's age at birth						
< 20	27.8	5.8	66.5	100.0	65.7	193
20-34	19.7	9.6	70.7	100.0	72.5	1265
35+	49.0	9.1	41.8	100.0	51.0	68
Birth order						
1	12.5	3.7	83.9	100.0	80.9	475
2	15.0	11.3	73.7	100.0	77.8	369
3	22.3	11.9	65.8	100.0	71.3	291
4	26.4	13.4	60.2	100.0	63.4	168
5	43.2	14.6	42.2	100.0	52.9	84
6+	54.7	7.6	37.8	100.0	34.7	139
Residence						
Urban	5.1	10.1	84.8	100.0	86.5	215
Rural	24.8	9.0	66.3	100.0	68.1	1312
Education						
Illiterate	37.5	8.9	53.6	100.0	53.6	806
Lit., < middle complete	8.3	14.9	76.8	100.0	82.7	226
Middle school complete	4.6	6.5	88.9	100.0	91.5	202
High school and above	2.1	7.1	90.8	100.0	93.9	293
Religion						
Hindu	15.4	9.1	75.5	100.0	78.1	1121
Muslim	52.0	9.3	38.7	100.0	36.9	307
Sikh	1.3	9.4	89.2	100.0	92.8	94
Caste/tribe						
Scheduled caste	26.8	8.4	64.8	100.0	67.8	476
Other (Non-SC/ST)	19.8	9.2	70.9	100.0	72.5	1033
Total¹	22.0	9.1	68.9	100.0	70.7	1526

¹Births in the period 1-47 months prior to the survey. Total includes 5 and 18 births to women belonging to other religions and scheduled tribes respectively, which are not shown separately.

pattern of distribution of iron and folic acid tablets is almost the same as the pattern for tetanus toxoid injections.

Place of Delivery and Assistance During Delivery

Another important thrust of maternal and child health services is the encouragement of institutional deliveries (deliveries in a private or public health facility) under the supervision of trained health professionals. In order to ascertain the success of this thrust in the Jammu region respondents were asked where they gave birth and who assisted at the delivery, for each birth during the four years before the survey.

Table 9.4 presents the percent distribution of live births occurring during the four years preceding the survey according to place of delivery and selected background characteristics. Of 1,526 live births, only 22 percent occurred in medical institutions, with 17 percent in public institutions and 5 percent in private medical institutions (Figure 9.3). The percentage of births that took place in medical institutions is approximately two and a half times as high in urban areas (47 percent) as in rural areas (18 percent). The proportion of births occurring in health facilities is higher for mothers age 20-34 years, mothers having their first child, mothers belonging to neither scheduled castes nor scheduled tribes, and to mothers with at least a high school education. The greatest differentials are found by religion. Only 9 percent of births to Muslim women occurred in a health facility, compared with 23 percent among Hindus and 53 percent among Sikhs.

Home deliveries are most prevalent (96 percent) for births to mothers who did not receive antenatal care. The proportion of births taking place in health facilities is higher for mothers who had four or more antenatal care visits (43 percent) than among those who had 1-3 antenatal care visits (15 percent). This could be due to the availability of services for both antenatal care and delivery and/or to complications during pregnancy which may lead women to seek more antenatal care. It is also possible that the increase in the number of visits could have established rapport between the provider of services and the user of services, which led users to seek an institutional delivery.

Table 9.5 presents 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 the delivery, but only the most qualified attendant is counted in the table. In all, 31 percent of the births were attended by either a doctor (23 percent) or a nurse/midwife (8 percent). Almost three-fifths (59 percent) of all births were attended by traditional birth attendants and 9 percent were attended only by relatives, friends or neighbours.

As expected, a higher proportion of deliveries were attended by doctors in urban areas (49 percent) than in rural areas (19 percent). Among the deliveries which took place in private health institutions, 93 percent were attended by doctors and 5 percent by nurse/midwives, whereas among deliveries in public health institutions, 86 percent were attended by doctors and 14 percent by nurse/midwives. Among deliveries taking place in the woman's own home, more than three-fourths were assisted by traditional birth attendants, 12 percent by only relatives or others and less than 5 percent by doctors. Births to women who had four or more antenatal

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, Jammu Region of J & K, 1993

Background characteristic	Place of delivery						Total percent	Number of live births ¹
	Health facility/institution		Home			Don't know/missing		
	Public	Private	Own home	Parents' home	Other			
Mother's age at birth								
< 20	14.2	1.5	81.5	1.6	0.6	0.6	100.0	193
20-34	17.7	5.5	73.0	3.1	0.6	--	100.0	1265
35+	9.9	6.2	83.9	--	--	--	100.0	68
Birth order								
1	25.1	8.5	62.6	3.0	0.5	0.3	100.0	475
2-3	18.6	4.0	73.2	3.8	0.5	--	100.0	660
4-5	4.8	2.8	90.4	1.0	1.0	--	100.0	252
6+	2.7	1.8	93.7	0.9	0.9	--	100.0	139
Residence								
Urban	26.5	20.5	50.4	2.4	0.2	--	100.0	215
Rural	15.3	2.5	78.6	2.9	0.7	0.1	100.0	1312
Education								
Illiterate	6.9	0.8	89.1	2.3	0.8	0.2	100.0	806
Lit., <middle complete	18.0	2.1	76.0	2.8	1.1	--	100.0	226
Middle school complete	34.5	3.5	59.1	2.6	0.3	--	100.0	202
High school and above	31.5	19.9	44.3	4.3	--	--	100.0	293
Religion								
Hindu	17.2	5.6	73.2	3.2	0.8	--	100.0	1121
Muslim	8.7	0.3	89.4	1.6	--	--	100.0	307
Sikh	40.0	13.0	44.3	2.7	--	--	100.0	94
Caste/tribe								
Scheduled caste	11.7	1.8	82.9	2.8	0.8	--	100.0	476
Other (Non-SC/ST)	19.5	6.6	70.5	2.8	0.5	0.1	100.0	1033
Antenatal care visits								
None	2.6	0.4	93.8	2.0	1.2	--	100.0	312
1-3 visits	13.9	0.8	82.7	2.6	0.1	--	100.0	683
4+ visits	29.3	13.2	53.0	3.5	0.9	--	100.0	530
Total¹	16.9	5.0	74.6	2.8	0.6	0.1	100.0	1526

-- Less than 0.05 percent

¹Births in the period 1-47 months prior to the survey. Total includes 5 births to women belonging to other religions, 18 births to scheduled tribe women and 1 birth to women with missing information on antenatal care visits, which are not shown separately.

visits were more likely to be assisted by doctors at the time of delivery than births to women with fewer visits or no antenatal care.

Thus, in the Jammu region a very large majority of live births (77 percent) are delivered at home, and among home deliveries, the majority (88 percent) are attended by traditional birth attendants or untrained persons. This situation is not conducive to child survival and safe motherhood.

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, Jammu Region of J & K, 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	16.2	6.9	65.0	11.7	0.3	100.0	193
20-34	24.3	8.8	57.7	8.8	0.4	100.0	1265
35+	16.1	4.4	70.3	9.1	--	100.0	68
Birth order							
1	35.1	10.1	49.2	5.5	0.1	100.0	475
2-3	22.0	9.8	58.3	9.7	0.2	100.0	660
4-5	11.5	4.4	75.3	8.8	--	100.0	252
6+	6.3	2.5	68.6	19.8	2.7	100.0	139
Residence							
Urban	49.4	17.8	29.6	2.9	0.2	100.0	215
Rural	18.6	6.8	64.1	10.2	0.4	100.0	1312
Mother's education							
Illiterate	9.8	4.5	71.0	14.3	0.4	100.0	806
Lit., < middle complete	20.3	13.0	58.3	7.3	1.1	100.0	226
Middle school complete	36.3	12.1	50.1	1.5	--	100.0	202
High school and above	51.8	12.6	33.8	1.8	--	100.0	293
Religion							
Hindu	24.7	9.3	59.2	6.4	0.4	100.0	1121
Muslim	8.4	3.9	65.6	21.7	0.4	100.0	307
Sikh	49.0	11.8	38.1	1.1	--	100.0	94
Caste/tribe							
Scheduled caste	16.4	6.3	65.8	11.2	0.3	100.0	476
Other (Non-SC/ST)	26.2	9.2	56.3	7.9	0.4	100.0	1033
Antenatal care							
None	4.6	--	68.4	26.1	1.0	100.0	312
1-3 visits	16.3	8.3	68.6	6.4	0.4	100.0	683
4+ visits	42.3	13.3	41.6	2.8	--	100.0	530
Place of delivery							
Public health facility	86.1	13.9	--	--	--	100.0	258
Private health facility	93.1	5.3	1.6	--	--	100.0	76
Own home	4.6	6.9	75.9	12.0	0.5	100.0	1139
Parents' home	(8.3)	(15.4)	(75.2)	(1.2)	(--)	100.0	43
Total²	22.9	8.3	59.2	9.2	0.4	100.0	1526

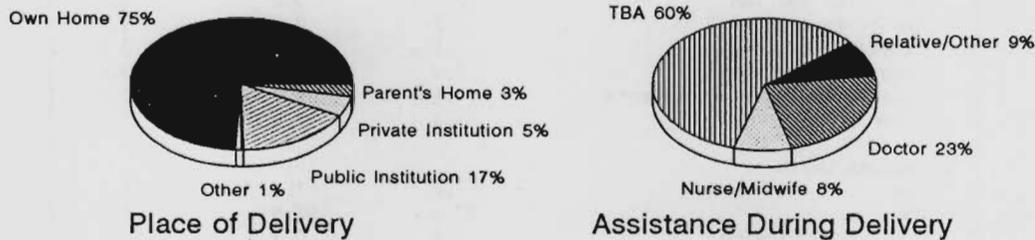
() Based on 25-49 unweighted cases

-- 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 5 and 18 births to women belonging to other religions and scheduled tribes respectively, 1 birth to a woman with missing information on antenatal care and 1 birth to a woman with missing information on place of delivery, and 9 births with "Other" place of delivery, which are not shown separately.

Figure 9.3
Place of Delivery and
Assistance During Delivery



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

NFHS, Jammu Region of J & K, 1993

The pattern of the assistance at deliveries by medical personnel (doctors or nurse/midwives) by background characteristics is similar to that observed for deliveries in institutions/health facilities, with higher assistance by medical persons for births to women in the age group 20-34, to women delivering first order births and to more educated mothers. Births to Sikhs and to mothers belonging to neither scheduled castes nor scheduled tribes are also more likely to be assisted by medical professionals than births to mothers belonging to other religions or scheduled castes; and births to Hindu mothers are more likely to be assisted by medical professionals than births to Muslim mothers.

Delivery Characteristics

The percent distribution of live births in the last four years according to complications during delivery, prematurity, birth weight and mother's estimate of the baby's size at birth are presented in Table 9.6. As reported by mothers, 80 percent of the deliveries had no complications. Long period of labour (11 percent) and Caesarian section (5 percent) are the most common complications reported. Births delivered by Caesarian section are somewhat more common in urban areas (12 percent) than in rural areas (3 percent) and prolonged labour is slightly more common in rural areas than in urban areas. Only a very small percentage of births (1 percent) are reported as premature.

A large majority of babies (86 percent) were not weighed at birth (67 percent in urban areas and 89 percent in rural areas), which is to be expected since the majority of the

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, according to residence, Jammu Region of J & K, 1993

Delivery characteristic	Urban	Rural	Total
Complications at delivery¹			
No complications	71.1	81.3	79.9
Caesarian section	12.0	3.2	4.5
Use of forceps	0.7	0.5	0.5
Excessive bleeding	1.0	0.4	0.5
Long period of labour	9.4	10.7	10.5
Delayed delivery of placenta	1.4	0.7	0.8
Other	5.3	3.4	3.7
Premature birth			
Yes	2.2	1.1	1.3
No	97.6	98.8	98.6
Don't know/missing	0.2	0.1	0.1
Total percent	100.0	100.0	100.0
Birth weight			
Less than 2.5 kg	4.6	2.2	2.5
2.5 kg or more	15.2	3.6	5.2
Don't know/missing	13.3	4.8	6.0
Not weighed	67.0	89.4	86.3
Total percent	100.0	100.0	100.0
Size at birth			
Large	7.5	6.4	6.5
Average	68.7	71.0	70.7
Small	23.4	22.5	22.6
Don't know/missing	0.5	0.1	0.1
Total percent	100.0	100.0	100.0
Number of births ²	215	1312	1526

¹All complications were recorded if there was more than one complication. Births with missing information on complications are not included.

²Births in the period 1-47 months prior to the survey.

deliveries took place at home. Moreover, for 13 percent of births in urban areas and 5 percent of births in rural areas the baby was weighed but information on birth weight was not available. Thus, the resulting sample of birth weights is small and subject to substantial selection bias. One-third of babies whose weight at birth was known had low birth weight (less than 2.5 kg). Since 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. It has been the general experience that the mother can give useful information about the size of the newborn baby. In Jammu, more than three-fourths of live births (77 percent) both in urban and rural areas are reported to be average (71 percent) or large (6 percent) in size and less than one-fourth are reported to be small in size (23 percent).

Table 9.7 shows the relationship between delivery characteristics and such characteristics as antenatal care, previous birth interval and mother's age at childbirth. Complications are most common for births to mothers who had four or more antenatal visits. This suggests that there

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, Jammu Region of J & K, 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	92.1	80.7	71.8	84.4	87.2	82.6	67.1	79.7	79.5	86.8
Caesarian section	0.8	3.0	8.5	3.0	2.0	3.5	8.8	2.6	4.9	1.8
Use of forceps	--	0.4	0.9	0.2	0.2	--	1.3	0.6	0.5	--
Excessive bleeding	0.4	0.6	0.3	1.6	0.2	1.0	--	0.6	0.4	0.8
Long period of labour	6.3	13.1	9.6	8.2	8.8	11.2	13.7	10.7	10.5	10.6
Delayed delivery of placenta	--	0.7	1.3	0.5	--	1.4	1.7	1.6	0.7	--
Other	0.4	1.8	8.1	2.1	1.6	1.7	8.0	3.8	3.9	--
Premature birth										
Yes	1.6	1.0	1.4	1.1	0.7	2.1	1.8	1.7	1.1	3.7
No	98.4	98.9	98.6	98.9	99.2	97.9	97.9	97.6	98.9	96.3
Don't know/missing	--	0.1	--	--	0.1	--	0.3	0.6	--	--
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	0.4	1.1	5.6	1.0	1.4	3.7	4.4	1.3	2.7	2.6
2.5 kg or more	0.4	2.4	11.8	5.7	3.4	4.3	7.7	4.0	5.7	--
Don't know/missing	1.6	3.5	11.5	2.6	4.2	7.1	9.6	5.0	6.2	3.7
Not weighed	97.6	93.0	71.1	90.7	91.1	85.0	78.2	89.7	85.3	93.8
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	5.0	7.8	5.9	6.9	7.2	4.7	6.1	5.9	6.9	1.8
Average	72.3	67.3	74.3	69.5	73.0	74.4	67.0	68.6	70.7	75.5
Small	22.7	24.8	19.8	23.3	19.7	20.6	26.6	24.8	22.3	22.7
Don't know/missing	--	0.2	--	0.2	--	0.3	0.3	0.6	0.1	--
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	312	683	530	261	610	175	480	193	1265	68

-- Less than 0.05 percent

¹All complications were recorded if there was more than one complication. Births with missing information on complications are not included.

²Births in the period 1-47 months prior to the survey.

is a tendency among pregnant women having some complications to obtain antenatal care more often. Complications at delivery, especially Caesarian section and long periods of labour, are reported more frequently for first births than for higher order births. Complications at delivery are slightly more frequent for births with a previous birth interval of four or more years than for births with shorter intervals. Births with a previous birth interval of four or more years and births to women age 35 and over are more likely to be premature; however the incidence of such cases is quite small. The percentage of newborns who were weighed at birth is higher for those whose mothers received antenatal care, those with a previous birth interval of more than four years, those who were first births and those whose mothers were age 34 or less at the time of

childbirth. Among births for whom data on birth weight is available, first births, births to mothers who had four or more antenatal care visits and births with a previous birth interval of four or more years are more likely to be underweight. The percentage of births reported as small is higher for first births, births to mothers who did not receive antenatal care or who had 1-3 antenatal care visits, births with a previous birth interval of less than two years, and births to mothers below age 20 at the time of childbirth. However, many of these differentials are small.

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 vaccination services easily available to all eligible children. Immunization against polio was introduced in 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 in 1985-86 (Ministry of Health and Family Welfare, 1991).

In order to provide an impetus to 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 with the objective of covering at least 85 percent of all infants by 1990 against six vaccine preventable diseases, and of achieving 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 contains 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.

During the fieldwork, each mother was asked whether she had a vaccination card for each 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 before 12 months of age according to the source of information (i.e., vaccination card or mother's report). This age group was chosen for

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, Jammu Region of J & K, 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				
URBAN												
Vaccinated at any time before interview												
Vaccination card	96.6	--	100.0	100.0	100.0	100.0	100.0	100.0	91.5	89.8	--	31
Mother's report	(87.5)	(2.5)	(85.0)	(82.5)	(82.5)	(87.5)	(85.0)	(82.5)	(77.5)	(77.5)	(12.5)	21
Either source	92.9	1.0	93.9	92.9	92.9	94.9	93.9	92.9	85.9	84.8	5.1	51
Vaccinated by 12 months of age²												
	92.9	1.0	93.9	91.2	91.2	94.9	92.2	91.2	80.4	84.8	6.7	51
RURAL												
Vaccinated at any time before interview												
Vaccination card	97.6	1.6	100.0	99.2	94.4	100.0	99.2	93.5	80.6	75.8	--	155
Mother's report	64.1	2.1	66.9	64.8	59.3	66.9	64.8	58.6	54.5	51.7	33.1	181
Either source	79.6	1.9	82.2	80.7	75.5	82.2	80.7	74.7	66.5	62.8	17.8	336
Vaccinated by 12 months of age²												
	77.3	1.9	81.5	78.7	72.1	81.5	78.7	71.4	54.8	49.7	18.5	336
TOTAL												
Vaccinated at any time before interview												
Vaccination card	97.4	1.3	100.0	99.3	95.3	100.0	99.3	94.6	82.4	78.1	--	186
Mother's report	66.5	2.1	68.8	66.6	61.7	69.0	66.9	61.1	56.8	54.4	31.0	202
Either source	81.3	1.7	83.7	82.3	77.8	83.8	82.4	77.1	69.1	65.7	16.2	388
Vaccinated by 12 months of age²												
	79.3	1.7	83.1	80.3	74.6	83.3	80.5	74.0	58.3	54.2	17.0	388

() Based on 25-49 unweighted 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 vaccine (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

analysis because international guidelines specify that children should be fully immunized by the time they complete their first year of life. Of the 388 children in the age group 12-23 months, vaccination cards were available for less than one-half (48 percent) of children in Jammu (60 percent in urban areas and 46 percent in rural areas).

Based on the information either recorded on a card or reported by the mother, 66 percent of children age 12-23 months are fully vaccinated¹ and 16 percent have not received any vaccinations. Thus, the findings on immunization indicate that the Jammu region ranks second after Goa in the immunization of children (International Institute for Population Sciences, 1994).

Analysis of vaccine specific data shows that coverage for BCG is 81 percent. The highest coverage is for the first dose of DPT and polio (84 percent each) and the lowest is for measles (69 percent). Seventy-eight and 77 percent of children have received three doses of DPT and polio vaccine, respectively. The DPT and polio coverage rates are about the same because both vaccines are normally administered together. Not all children who begin with the DPT and polio series go on to complete it. The dropout rate from the first dose to the third dose of DPT and polio vaccine is 7-8 percent.

The analysis of the vaccine specific data also indicates higher coverage for each type of vaccine in urban areas than in rural areas. Eighty-five percent of children are fully vaccinated in urban areas compared with 63 percent in rural areas. Dropout rates for DPT and polio are also lower in urban areas than in rural areas. As expected, levels of coverage are much higher for children with a vaccination card than those without a 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. The percentage of children who received BCG and the third dose of DPT and polio by 12 months of age is only slightly lower (2 to 3 percent) than the percentage who received these vaccines at any time before the survey. However, the gap is wider for measles, which is supposed to be given when the child is nine months old. Almost one in six 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 is higher for male children, children of lower-order births, children in urban areas, children of educated mothers, of Hindus and of mothers belonging to neither scheduled castes nor scheduled tribes. Vaccination coverage shows similar differentials. Comparing sexes, coverage is higher among male children for every type of vaccine with the exception of polio at birth. For example, 67 percent of male children are fully vaccinated compared to 64 percent of female children. This pattern indicates that female children are discriminated against in the utilization of immunization services. These differentials could be an important factor in the higher female mortality in infancy and childhood observed in Table 8.5.

¹ 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 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, Jammu Region of J & K, 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	82.2	1.3	84.8	82.9	78.4	84.8	82.9	78.4	71.3	67.4	15.2	53.2	193
Female	80.4	2.2	82.6	81.7	77.2	82.9	82.0	75.9	66.9	64.0	17.1	42.6	195
Birth order													
1	87.8	1.5	90.4	89.3	85.1	90.4	89.3	85.1	81.6	76.9	9.6	54.7	117
2-3	83.3	2.8	85.7	83.3	77.1	85.7	83.3	75.7	67.2	64.5	14.3	48.8	180
4-5	71.1	--	75.1	75.1	73.1	75.1	75.1	73.1	60.3	56.3	24.9	42.6	62
Residence													
Urban	92.9	1.0	93.9	92.9	92.9	94.9	93.9	92.9	85.9	84.8	5.1	59.6	51
Rural	79.6	1.9	82.2	80.7	75.5	82.2	80.7	74.7	66.5	62.8	17.8	46.1	336
Mother's education													
Illiterate	67.3	0.7	70.6	68.3	63.1	70.6	68.3	62.4	52.9	49.6	29.4	38.0	190
Lit., < middle complete	86.3	--	90.3	88.3	84.3	91.1	89.1	84.3	75.4	68.5	8.9	53.6	62
Middle school complete	(99.0)	(9.8)	(100.0)	(100.0)	(95.1)	(100.0)	(100.0)	(92.6)	(91.6)	(86.7)	(--)	(66.1)	51
High school and above	98.5	0.6	98.5	98.5	95.6	98.5	98.5	95.6	87.2	87.2	1.5	54.9	85
Religion													
Hindu	89.4	1.9	91.8	90.3	85.0	92.0	90.5	84.6	75.4	72.1	8.0	54.3	284
Muslim	48.3	--	51.4	49.9	46.8	51.4	49.9	46.8	42.1	39.0	48.6	20.5	81
Caste/tribe													
Scheduled caste	79.3	1.3	79.3	74.9	71.1	79.3	74.9	69.8	59.1	57.8	20.7	47.0	98
Other (Non-SC/ST)	83.0	1.9	85.8	85.4	80.6	86.0	85.6	80.1	73.3	69.2	14.0	48.6	284
Total	81.3	1.7	83.7	82.3	77.8	83.8	82.4	77.1	69.1	65.7	16.2	47.9	388

Note: Total includes 22 and 5 children belonging to the Sikh religion and scheduled tribes respectively, and 27 children of birth order 6 and above, who are not shown separately.

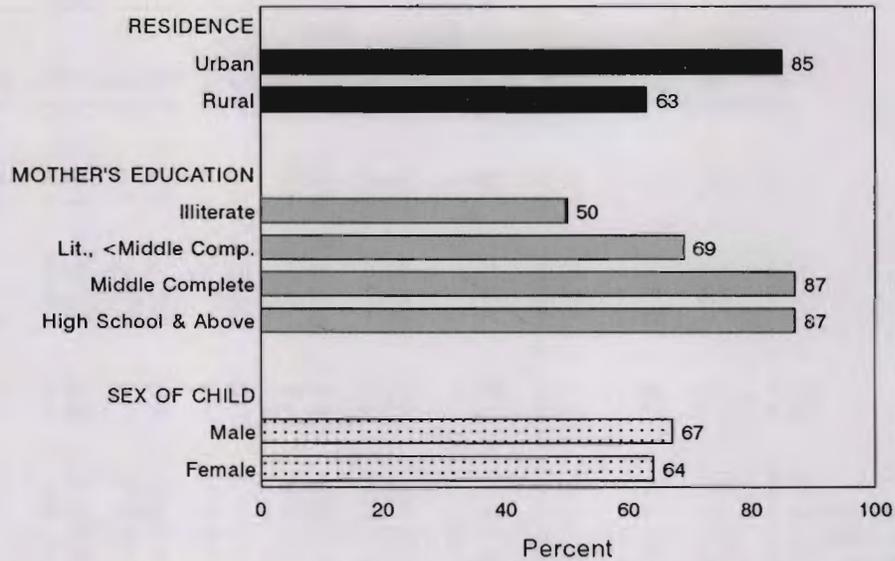
() Based on 25-49 unweighted cases

-- 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 vaccine (excluding polio 0)

First order babies are in an advantageous position with respect to the possession of vaccination cards and vaccination coverage. The relationship between vaccination coverage and birth order is consistently negative for all vaccinations except polio at birth. A large majority of first order births occur to younger women who have been observed to have a higher degree of utilization of health care services, such as antenatal and natal services. As in the case of utilization of maternal health services, there is a consistent positive relationship between the educational level of the mother and utilization of immunization services. The proportion who received all vaccines is 50 percent for children whose mothers are illiterate and 87 percent for children whose mothers have completed high school. The proportion of children fully vaccinated is higher among Hindus (72 percent) than among Muslims (39 percent). Children from scheduled castes are much less likely to have been vaccinated against childhood diseases than other children.

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



NFHS, Jammu Region of J & K, 1993

Table 9.10 shows the percentage of children age one to three years 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 and residence. The table illustrates changes in the 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 with a vaccination card, the proportion vaccinated during the first year of life is estimated separately for children in each age group. The row labelled "No vaccinations" indicates the percentage of children who had received no vaccinations by 12 months of age.

The proportion of children whose vaccination status was determined by seeing a vaccination card declines with an increase in the age of the child. This may reflect not only an upward trend in the use of vaccination cards, but also an upward trend in overall vaccination coverage. In addition, in many cases the vaccination cards of older children are discarded once they have completed their vaccinations or the cards are lost.

The highest level of vaccination coverage for each vaccine is observed for children age 12-23 months. The coverage then progressively declines with increasing age up through 36-47 months. This general phenomenon is also observed for all vaccines in rural areas and urban areas. The only exceptions are for the first two doses of DPT and polio in urban areas where the relationship is dome-shaped, with children age 24-35 months having received proportionately more vaccinations than older or younger children.

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 and residence, Jammu Region of J & K, 1993

Vaccination status	Current age of child in months			Total
	12-23	24-35	36-47	
URBAN				
Vaccination card shown to interviewer	59.6	43.4	30.4	44.3
Percent vaccinated at 0-11 months ¹				
BCG	92.9	92.9	89.8	91.9
Polio 0	1.0	3.0	2.0	2.0
DPT				
1	93.9	98.0	94.1	95.3
2	91.2	94.6	92.2	92.7
3	91.2	89.4	88.2	89.6
Polio				
1	94.9	97.0	95.1	95.7
2	92.2	93.6	94.1	93.3
3	91.2	88.3	88.2	89.2
Measles	80.4	73.1	58.7	70.6
All vaccinations ²	84.8	73.5	58.1	72.0
No vaccinations	6.7	2.0	4.9	4.5
Number of children	51	51	53	155
RURAL				
Vaccination card shown to interviewer	46.1	30.4	21.5	33.3
Percent vaccinated at 0-11 months ¹				
BCG	77.3	75.7	65.0	72.9
Polio 0	1.9	1.3	1.3	1.5
DPT				
1	81.5	76.7	64.7	74.7
2	78.7	72.1	63.4	71.7
3	72.1	65.7	59.7	66.1
Polio				
1	81.5	77.1	64.4	74.7
2	78.7	71.7	62.7	71.4
3	71.4	64.6	58.9	65.3
Measles	54.8	48.4	33.1	45.9
All vaccinations ²	49.7	45.0	30.0	42.0
No vaccinations	18.5	22.4	33.2	24.4
Number of children	336	288	291	915

Table 9.10 Vaccinations in the first year of life by current age (Contd.)

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 and residence, Jammu Region of J & K, 1993.

Vaccination status	Current age of child in months			Total
	12-23	24-35	36-47	
TOTAL				
Vaccination card shown to interviewer	47.9	32.4	22.8	34.9
Percent vaccinated at 0-11 months¹				
BCG	79.3	78.3	68.7	75.6
Polio 0	1.7	1.6	1.4	1.6
DPT				
1	83.1	79.9	69.4	77.7
2	80.3	75.6	68.0	74.8
3	74.6	69.5	64.3	69.7
Polio				
1	83.3	80.1	69.2	77.8
2	80.5	75.1	67.6	74.6
3	74.0	68.3	63.6	68.8
Measles	58.3	52.2	37.1	49.6
All vaccinations ²	54.2	48.9	34.1	46.1
No vaccinations	17.0	19.3	28.6	21.5
Number of children	388	339	344	1071

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).

Child Morbidity and Treatment Patterns

As the two major causes of death among infants and children in India are acute respiratory infection and diarrhoea, the NFHS collected information on the occurrence of the symptoms of these two diseases (Central Bureau of Health Intelligence, 1991). 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 last two weeks 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., symptoms of acute respiratory infection (ARI), fever and diarrhoea during the two weeks prior to the survey and the percentage with diarrhoea in the 24 hours before the survey by selected background characteristics.

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 percentage with diarrhoea in the 24 hours before the survey, according to selected background characteristics, Jammu Region of J & K, 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	4.5	17.2	23.8	3.4	12.4	179
6-11 months	4.5	27.2	27.9	2.8	12.2	215
12-23 months	5.9	28.7	26.9	4.7	11.8	388
24-35 months	3.3	18.4	20.2	4.2	5.9	339
36-47 months	3.6	15.7	15.1	1.2	6.1	344
Sex						
Male	4.9	22.7	24.1	3.0	10.4	771
Female	3.8	20.4	20.4	3.7	7.9	694
Birth order						
1	2.7	21.5	19.7	2.5	9.2	449
2-3	4.9	21.2	24.2	3.5	9.7	645
4-5	3.9	23.3	20.6	3.4	8.3	238
6+	8.0	21.1	25.1	5.1	8.8	132
Residence						
Urban	3.0	18.3	24.6	3.0	10.3	206
Rural	4.6	22.2	22.0	3.4	9.0	1258
Mother's education						
Illiterate	4.8	22.3	22.4	4.2	9.5	772
Lit., < middle complete	5.4	25.9	27.4	3.7	10.0	217
Middle school complete	4.5	19.4	21.5	4.0	9.7	192
High school and above	2.2	18.0	18.9	0.2	7.5	283
Religion						
Hindu	3.6	19.8	21.7	2.6	8.9	1073
Muslim	6.4	28.3	24.1	6.7	11.3	295
Sikh	6.8	22.8	24.9	1.4	7.1	92
Caste/tribe						
Scheduled caste	4.4	22.6	23.2	4.3	8.4	457
Other (Non-SC/ST)	4.4	21.1	21.6	2.7	9.7	987
Source of drinking water						
Piped water	3.8	17.0	20.4	2.7	8.3	565
Ground water	5.5	23.7	26.2	2.2	8.2	247
Well water	4.7	21.0	21.5	3.4	8.8	399
Surface water	3.7	31.4	25.3	5.8	13.3	239
Total	4.4	21.6	22.3	3.3	9.2	1464

Note: Figures are for children born in the period 1-47 months prior to the survey. Total includes 4 and 20 children belonging to other religions and scheduled tribes, respectively, and 15 children with other sources of drinking water, who are not shown separately.

¹Includes diarrhoea in the past 24 hours

²Includes diarrhoea with blood

Only one in 23 children suffered from the symptoms of ARI during the two weeks preceding the survey. ARI was more prevalent among children age 12-23 months than among children of other ages. The prevalence of ARI is slightly higher among male children (one in twenty) than female children (one in twenty-six). The prevalence of ARI generally increases with birth order of the child and decreases with educational level of the mother. The prevalence of ARI is higher in rural than urban areas, and among Muslim and Sikh children than among Hindu children.

Fever was one of the two most prevalent of the three conditions examined, with 22 percent of children suffering from it during the two weeks prior to the survey. The prevalence of fever was particularly high among children age 12-23 months (29 percent) and among infants age 6-11 months (27 percent). Male children, children living in rural areas, Muslim children and scheduled caste children were somewhat more prone to fever. Excluding illiterate mothers, a negative relationship is observed between the prevalence of fever and the level of education of the mother.

Diarrhoea was as prevalent as fever during the two weeks before the survey, with 22 percent of children having any type of diarrhoea and 3 percent of children having bloody diarrhoea. Nine 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 prevalence of diarrhoea is highest among infants age 6-11 months (28 percent), after which it declines with increasing age. Diarrhoea is also more prevalent among male children (24 percent), children of birth order six and above (25 percent), children whose mothers are Muslims or Sikhs (24 to 25 percent), and among those taking their drinking water from surface or ground water (25 to 26 percent), which may be contaminated. The prevalence of diarrhoea is lower (19 percent) among children whose mothers have completed high school and above. The incidence rate of diarrhoea is higher in urban areas (25 percent) than in rural areas (22 percent).

Treatment of ARI

Table 9.12 presents information on the type of treatment received by children suffering from ARI. Seventy-eight percent of the children who suffered from ARI symptoms during the past two weeks were taken to a health facility for treatment or were treated by a doctor or other health professional. Only 10 percent of children with ARI did not receive any treatment. Twenty-five percent were treated with cough syrup, 13 percent with injections and 10 percent were given antibiotic pills or syrup. A home remedy was administered in 6 percent of the cases. More than two-thirds of children (69 percent) suffering from ARI were given other treatments.

Treatment of Fever

Table 9.13 shows the type of treatment given to children suffering from fever during the two weeks before the survey by selected background characteristics. Seventy-one percent of the children with fever were taken to a health facility or provider for treatment of fever. Seven percent were treated with antimalarial medicines, 10 percent were treated with antibiotics in the form of pills or syrup and 11 percent were given injections. A higher proportion of children (73 percent) were given some other kind of treatment and 11 percent were not given any

Table 9.12 Treatment of acute respiratory infection

Among all children under four years who had cough accompanied by fast breathing during the two weeks prior to the survey, the percentage taken to a health facility or provider and percentage given treatment, Jammu Region of J & K, 1993

Treatment	Percentage
Taken to a health facility or provider ¹	77.6
Antibiotic pill or syrup	10.3
Injection	12.6
Cough syrup	25.0
Home remedy/herbal medicine	5.9
Other	68.8
None	9.8
Number of children with ARI	64

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

treatment. Differentials in the treatment of fever by background characteristics reveal that the proportion of children who were taken to a health facility or were treated by a doctor or other health professional was higher among younger children (age below 6 months), urban children, children of literate mothers and children whose mothers belong to neither scheduled castes nor scheduled tribes.

Treatment of Diarrhoea

Diarrhoea is a major killer of children, especially children under five years of age. Deaths from acute diarrhoea are most often due to the dehydration that results from the loss of water and electrolytes (Black, 1984). However, nearly all dehydration related deaths can be prevented by prompt administration of rehydration solutions. Because deaths due to diarrhoea are a significant proportion of all deaths to children, the government has launched the Oral Rehydration Therapy Programme as a high priority activity for increasing child survival. A major purpose of this programme is to increase awareness among women and the community of the causes and treatment of diarrhoea. Mothers are instructed in the use of Oral Rehydration Salt (ORS) packets, which are made readily available. The programme also gives instruction in the use of home-made rehydration solutions made of sugar, salt and water, which are known as Recommended Home Solutions (RHS). This education is given mostly through the electronic and print media, and in adult literacy classes. Documentaries covering the topic of diarrhoea among children and the use of ORS and preparation of RHS are regularly shown in cinema theatres and movie halls. Spot 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 two-thirds of mothers who had births during the last four years know about ORS and a little less than one-half (44 percent) had ever used ORS packets. This is in close agreement with previous studies conducted in Jammu which have shown that between

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, Jammu Region of J & K, 1993

Background characteristic	Among children with fever							Number of children
	Per-centage taken to a health facility or provider ¹	Percentage treated with					None	
		Anti-malarial	Antibiotic pill or syrup	Injection	Home remedy/herbal medicine	Other		
Child's age								
< 6 months	(78.7)	(13.9)	(9.8)	(8.1)	(4.1)	(77.9)	(8.1)	31
6-11 months	73.5	5.2	10.8	11.6	4.3	82.4	6.4	59
12-23 months	69.5	4.3	6.4	10.9	9.5	74.5	10.1	111
24-35 months	71.1	12.0	14.2	8.9	6.0	61.4	14.1	62
36-47 months	67.0	6.5	10.8	12.5	6.9	70.3	16.2	54
Sex								
Male	71.9	6.6	10.1	9.1	9.6	72.3	9.3	175
Female	70.0	8.1	9.5	12.6	3.5	73.9	13.2	142
Birth order								
1	70.7	8.1	11.5	9.4	4.4	74.8	11.6	97
2-3	77.6	6.2	11.5	9.9	11.0	73.0	6.4	137
4-5	(67.5)	(5.4)	(4.5)	(10.9)	(4.5)	(72.0)	(18.1)	55
Residence								
Urban	82.2	8.2	26.0	9.6	1.4	82.2	--	38
Rural	69.5	7.2	7.6	10.8	7.6	71.7	12.6	279
Mother's education								
Illiterate	64.2	5.8	6.7	11.5	10.2	66.0	16.0	172
Lit., < middle complete	(80.0)	(10.7)	(7.6)	(13.3)	(2.2)	(82.6)	(4.4)	56
Middle school complete	(70.9)	(6.7)	(17.6)	--	(4.7)	(83.8)	(6.7)	37
High school and above	84.1	9.0	17.1	12.4	2.5	78.2	4.9	51
Religion								
Hindu	70.3	7.7	10.8	10.5	4.4	75.8	11.2	212
Muslim	70.0	8.1	6.4	9.0	13.5	62.8	13.5	83
Caste/tribe								
Scheduled caste	64.2	6.1	14.6	7.8	8.5	70.1	9.7	103
Other (Non-SC/ST)	73.7	8.1	7.1	12.3	6.2	73.8	12.0	209
Source of drinking water								
Piped water	72.7	9.8	15.1	7.7	4.4	73.8	10.4	96
Ground water	(73.4)	(2.1)	(10.3)	(10.7)	(2.1)	(76.8)	(10.7)	58
Well water	67.2	4.5	--	13.4	9.0	77.6	10.4	84
Surface water	70.0	10.0	11.7	11.7	11.7	63.3	13.3	75
Total	71.0	7.3	9.8	10.6	6.9	73.0	11.1	317

Note: Total includes Sikh children, scheduled tribe children, 4 children with other sources of water, and 28 children with birth order 6 and above, who are not shown separately.

() Based on 25-49 unweighted cases

-- Less than 0.05 percent

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

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, Jammu Region of J & K, 1993

Background characteristic	Know about ORS packets	Have ever used ORS packets	Number of mothers
Mother's age			
15-19	54.9	27.9	61
20-24	65.8	43.2	365
25-29	70.2	46.4	441
30-34	68.1	47.1	205
35+	54.2	38.8	104
Residence			
Urban	84.7	61.1	173
Rural	63.1	40.9	1003
Mother's education			
Illiterate	53.8	34.3	619
Lit., < middle complete	67.9	44.8	166
Middle school complete	75.9	51.2	154
High school and above	91.5	63.4	236
Religion			
Hindu	66.1	43.5	867
Muslim	61.9	42.8	237
Sikh	83.9	54.0	69
Caste/tribe			
Scheduled caste	58.0	37.4	359
Other (Non-SC/ST)	69.8	46.7	801
Mother's exposure to media			
Exposed to media	76.6	52.2	827
Watches television weekly	81.3	56.2	557
Listens to radio weekly	76.6	52.5	746
Visits cinema/theatre monthly	(82.6)	(41.2)	33
Not exposed to any of the media	41.8	24.1	349
Total	66.3	43.9	1176

() Based on 25-49 unweighted cases

Note: There were no reported births during last four years to women age 13-14. Total includes 3 women belonging to other religions and 14 scheduled tribe women, who are not shown separately.

62 and 72 percent of currently married women possess knowledge regarding ORS (Bhat, 1990, 1991). Both knowledge and use of ORS are relatively low among mothers below age 20 and above age 34, rural mothers, illiterate mothers, Muslim mothers and scheduled caste mothers. Mass media has evidently played an important role in disseminating knowledge about oral rehydration programmes. Both knowledge and use of ORS is much higher among women who have exposure to media (77 and 52 percent, respectively) than those who do not have exposure to any type of media (42 and 24 percent, respectively).

Table 9.15 provides information regarding the type of treatment obtained for children who had diarrhoea during the two weeks before the survey. Among children who suffered from diarrhoea during the two weeks preceding the survey, 71 percent were taken to a health facility or provider for treatment. Nine percent of children were not treated at all. Treatment at a health

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, Jammu Region of J & K, 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												
<6 months	(68.7)	(30.3)	(14.9)	(39.8)	(29.6)	(43.1)	(11.2)	(2.9)	(71.6)	(13.0)	43	
6-11 months	75.3	44.1	28.1	53.3	11.3	42.6	13.0	5.0	80.7	6.3	60	
12-23 months	73.3	38.4	22.9	50.1	16.2	44.1	11.1	6.5	75.2	8.9	104	
24-35 months	72.0	25.4	25.1	38.7	23.1	51.5	15.1	2.6	77.9	6.2	68	
36-47 months	59.3	21.8	16.6	34.1	15.6	56.7	9.8	4.4	67.9	14.0	52	
Sex												
Male	68.9	33.2	17.4	42.0	23.2	47.3	10.6	4.6	75.4	8.6	185	
Female	72.9	32.8	28.7	47.5	12.1	47.2	14.0	4.6	74.9	9.9	142	
Birth order												
1	81.2	31.6	19.3	39.6	14.8	53.0	10.9	4.6	80.9	6.2	89	
2-3	75.4	41.4	27.5	54.2	21.1	38.1	11.9	3.5	78.9	3.5	156	
4-5	(61.2)	(22.5)	(21.4)	(38.8)	(15.3)	(53.6)	(20.4)	(11.2)	(64.8)	(16.3)	49	
6+	(33.3)	(12.9)	(6.9)	(19.8)	(19.8)	(65.1)	(3.8)	(0.0)	(57.6)	(33.3)	33	
Residence												
Urban	75.5	42.9	32.7	57.1	22.4	35.7	16.3	5.1	75.5	5.1	51	
Rural	69.7	31.2	20.4	42.1	17.6	49.3	11.3	4.5	75.1	10.0	276	
Mother's education												
Illiterate	58.3	21.2	14.5	31.3	14.2	58.6	12.6	3.9	71.0	14.2	173	
Lit., <middle complete	85.6	41.3	23.6	54.8	23.6	41.3	5.1	9.3	85.6	3.0	59	
Middle complete	(84.1)	(53.1)	(36.0)	(64.7)	(16.6)	(32.3)	(15.9)	(3.0)	(73.8)	(6.1)	41	
High school and above	82.9	46.6	35.1	59.4	27.4	28.4	15.3	2.9	78.1	2.3	54	
Religion												
Hindu	70.0	30.5	18.7	40.7	20.0	50.3	12.0	5.2	76.6	8.6	233	
Muslim	63.1	34.5	21.5	42.3	13.0	50.7	12.3	2.5	68.4	14.1	71	
Caste/tribe												
Scheduled caste	66.3	27.2	17.6	39.1	24.2	50.3	10.4	3.5	68.8	14.9	106	
Other (Non-SC/ST)	73.4	35.9	25.4	47.4	15.0	45.0	13.3	5.3	78.1	6.1	214	
Total	70.6	33.0	22.3	44.4	18.4	47.2	12.1	4.6	75.2	9.2	327	

Note: Figures are for children born in the period 1-47 months prior to the survey. Total includes 23 Sikh children and 8 scheduled tribe children, who are not shown separately.

() Based on 25-49 unweighted cases

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

facility or by a health provider was most common for children age 6-35 months, female children, those of first birth order, those living in urban areas, children whose mothers are literate, Hindu children, and those belonging to neither scheduled castes nor scheduled tribes. Further observation of Table 9.15 reveals that 33 percent of children suffering from diarrhoea were treated with ORS packets and 22 percent received a Recommended Home Solution. In order to reduce dehydration due to diarrhoea, mothers are also advised to increase the supply of fluids to children with diarrhoea. However, a little less than one-half (47 percent) of the children received neither oral rehydration therapy treatment (ORS or RHS) nor increased fluids. Only 18 percent of children received an increased supply of fluids, such as water, lemon and sugar water, milk, juice, soup, coconut water, tea, barley water, or breast milk.

Although fluid therapy alone may be useful in preventing deaths from acute dehydration, treatment with antibiotics may be useful in reducing the duration and volume of diarrhoea. Overall, 12 percent of children with diarrhoea were given antibiotic pills or syrup, 5 percent received injections and 75 percent were treated at home with something other than RHS. Oral rehydration therapy (ORS or RHS) was not used extensively by any population subgroup, but such treatment was even less common for children under 6 months or over 23 months of age, male children, those of high birth orders, rural children, children with illiterate mothers and children belonging to scheduled castes.

When a child has diarrhoea, it is inappropriate to reduce the child's 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 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 (88 percent), the frequency of breastfeeding remained the same (82 percent) or increased (6 percent) during diarrhoea. Some differences in the frequency of breastfeeding were observed by the age of the child. The frequency of breastfeeding was reduced or stopped for 12 percent of children with diarrhoea, and the percentage was higher for children age 1-3 years (15 percent) than for children under age one (8 percent). The amount of other fluids given to children was more likely to be decreased when the diarrhoea began. In fact, other fluids were reduced for 30 percent of children with diarrhoea, and the percentage was higher among children age 1-3 years (33 percent) than children under age one (24 percent).

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, Jammu Region of J & K, 1993

Feeding practices during diarrhoea	Age of the child		
	<1 year ¹	1-3 years	Total ²
Breastfeeding frequency³			
Same as usual	86.1	78.9	81.7
Increased	5.7	6.3	6.1
Reduced	7.6	13.2	11.0
Stopped	--	1.6	1.0
Don't know/missing	0.6	--	0.2
Total percent	100.0	100.0	100.0
Number of children	92	144	237
Amount of fluids given			
Same as usual	59.7	51.5	54.1
More	15.9	15.5	15.6
Less	24.3	33.1	30.3
Total percent	100.0	100.0	100.0
Number of children with diarrhoea	103	225	327

-- Less than 0.05 percent

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 affect both the mother and her child. They influence the child's nutritional status, which in turn has an effect on the risk of dying. In particular, breastfeeding has been shown to reduce the risk of morbidity and mortality and improve the nutritional status of children. Breastfeeding also has a direct bearing on the mother's period of postpartum infertility and hence on the length of birth intervals and overall fertility levels. These effects depend on both the duration and the intensity of breastfeeding, as well as the age at which the child receives supplemental liquids and foods.

International recommendations for the feeding of infants and young children are contained in the Innocenti Declaration on the Protection, Promotion and Support of Breastfeeding (1990) and the report of the WHO Working Group on Infant Feeding (World Health Organization, 1991). It is recommended that infants receive 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 birthday or beyond. It is further recommended that a feeding bottle should not be used at any age. In addition, the recommendations of the Baby Friendly Hospitals Initiative, launched by WHO, include early initiation of breastfeeding.

Several indicators of breastfeeding practices have been suggested by WHO. These include the ever breastfed rate, the exclusive breastfeeding rate, the timely complementary feeding rate, the continued breastfeeding rates, and the bottle feeding rate. The *exclusive breastfeeding rate* is based on current status information for infants whose current age is under four months; it is defined as the proportion of these infants who receive only breast milk. The *timely complementary feeding rate* is the proportion of infants in the 6-9 month age group who receive both breast milk and solid or semi-solid food. The *continued breastfeeding rate through one year of age* is reflected in the proportion of children 12-15 months of age who are being breastfed, and the proportion of infants who are still breastfed in the 20-23 month age group constitutes the *continued breastfeeding rate up through two years of age*. Bottle feeding is reflected in the proportion of infants who were fed using a bottle with a nipple. These indicators will be highlighted in the presentation of the data on breastfeeding and other feeding practices in the Jammu region.

The NFHS obtained fairly detailed information on infant feeding and child nutrition. Data on breastfeeding and supplementation were obtained from a series of questions in Section 4 of the Woman's Questionnaire, which inquired about births occurring since January 1989. These questions were asked for up to three births during this period. Information on child nutrition was obtained by measuring the weight and height of these children, using devices designed and manufactured especially for this purpose. The nutritional status of a child was judged by comparing the child's weight and height with an international reference growth curve.

The anthropometric measurements were obtained following the guidelines in the United Nations Manual, "How to Weigh and Measure Children" (United Nations, 1986). The children's weight was measured to the nearest 100 grams using a hanging spring weighing machine, and their height or length was measured to the nearest 0.1 centimetres using an adjustable measuring board. Training of the measurers followed the recommendations in the UN Manual.

10.1 Breastfeeding and Supplementation

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 1,540 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 the Jammu region, with 96 percent of all children having been breastfed. This agrees closely with previous studies conducted in Jammu indicating that between 95 and 98 percent of children have been breastfed (Bhat, 1990, 1991). The practice of breastfeeding is high in all groups, ranging from 94 to 98 percent.

The early initiation of breastfeeding is important since 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 which reduce the risk of postpartum haemorrhage and facilitate expulsion of the placenta. Colostrum and breast milk are sufficient for newborn infants; it is not necessary to feed them anything else. In fact, when the neonate is given anything else, contaminants may cause infection, leading to diarrhoea.

It is also recommended that the first breast milk should be given to the child rather than squeezed from the breast because it contains colostrum, which provides natural immunity to the child. 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 1,185 births). Although almost all children are breastfed, it is rare for breastfeeding to begin very soon after delivery. In fact, only 7 percent of children began breastfeeding within one hour of birth and only 41 percent began breastfeeding during the first 24 hours of their life. NFHS data, not shown, indicate that the practice of squeezing the first milk from the breast is very common in Jammu. In fact, 84 percent of women who breastfeed do squeeze the first milk from the breast before they begin breastfeeding their babies. 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 almost no difference in the timing of initiation of breastfeeding by the sex of the child or the caste/tribe, but there are differences according to some other background characteristics and the circumstances of the delivery. Among the three religious groups the percentage of children born to Muslim women who are breastfed within the first 24 hours of their life is higher (49 percent) than that of children born to Hindu women (39 percent) or Sikh women (40 percent). The postponement of breastfeeding is most common in rural areas and among women who are literate but have not completed middle school. The postponement of breastfeeding is least likely for children whose births took place in health facilities and those

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, Jammu Region of J & K, 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	96.4	813	7.6	42.0	624
Female	96.0	727	6.6	39.8	561
Residence					
Urban	93.8	216	9.8	48.1	174
Rural	96.6	1324	6.7	39.7	1010
Mother's education					
Illiterate	97.6	811	8.1	39.6	620
Lit., < middle complete	94.0	227	3.6	35.3	169
Middle school complete	95.2	207	4.7	41.8	155
High school and above	94.8	296	8.8	47.8	240
Religion					
Hindu	95.8	1130	6.7	38.8	876
Muslim	98.0	312	8.5	49.1	237
Sikh	96.5	94	9.0	39.6	69
Caste/tribe					
Scheduled caste	97.3	479	7.6	41.6	361
Other (Non-SC/ST)	95.6	1044	7.0	40.9	810
Assistance at delivery					
Health professional	94.7	478	7.5	46.8	388
Traditional birth attendant	96.9	914	6.9	39.2	693
Other or none	96.6	148	7.2	30.7	104
Place of delivery					
Public health facility	96.1	258	9.3	51.2	203
Private health facility	87.8	76	9.5	45.9	65
Own home	96.9	1153	6.4	38.1	876
Parents' home	(97.1)	43	(8.7)	(45.0)	35
Total	96.2	1540	7.1	41.0	1185

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 9 children with "other" place of delivery, 5 children belonging to other religions, 18 scheduled tribe children, and 1 child with missing information on place of delivery, who are not shown separately. The total among last-born children includes 3 children belonging to other religions, 14 scheduled tribe children, and 6 children with other place of delivery, who are not shown separately.

() Based on 25-49 unweighted cases

¹Includes children who started breastfeeding within one hour of birth

whose births were attended by health professionals. If short intervals between birth and first breastfeeding are indicative of salutary circumstances for the child, then public health facilities would be ranked as the best place for a delivery, followed by private health facilities, the mother's parents' home, and the mother's own home. Although there are some differences in the initiation of breastfeeding by background characteristics, the postponement of breastfeeding in all groups shows that feeding practices for newborn infants are not beneficial. Breastfeeding

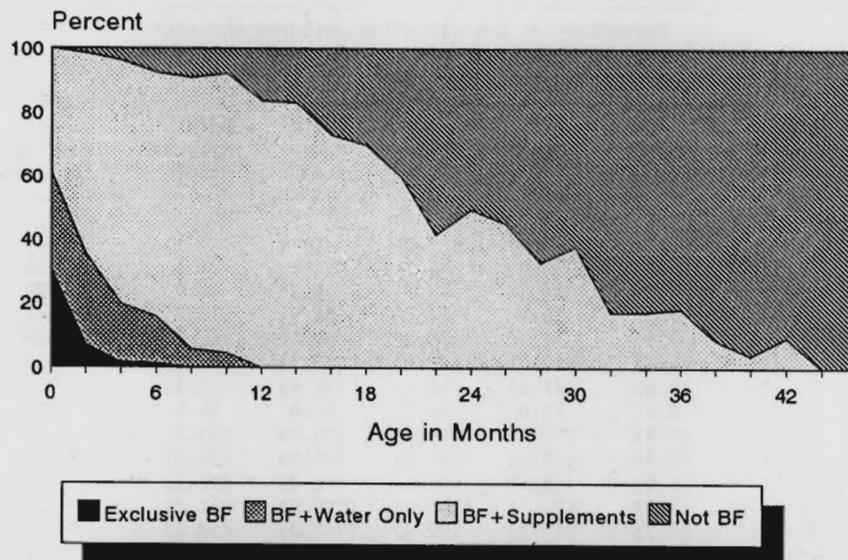
was initiated, as recommended, within the first hour for only 1 in 14 babies. Overall, nearly 6 in 10 infants did not start breastfeeding even in the first 24 hours of life.

For children currently being breastfed, mothers were asked if the children had been given any other liquids or solid foods at any time the previous day or night. 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. It is recommended that children be exclusively breastfed for the first 4-6 months and that solid or mushy food be introduced into the child's diet at 4-6 months of age. In the Jammu region, however, even at age 0-3 months, 53 percent of babies are given supplements. On average, only 17 percent of infants under four months are given only breast milk and 46 percent receive full breastfeeding. The proportion of children exclusively breastfed declines rapidly with age of child, from 31 percent of children age 0-1 month to 1 percent of children age 6-7 months, and almost no child is exclusively breastfed thereafter. The proportion of children receiving supplements along with breast milk steadily increases from 39 percent of children age 0-1 month

Table 10.2 Breastfeeding status by child's age							
Percent distribution of living children by breastfeeding status, according to child's age in months, Jammu Region of J & K, 1993							
Age in months	Percentage among all living children					Total percent	Number of living children
	Not breast-feeding	Exclusively breast-feeding	Plain water only	Breastfeeding and Supplements	DK supplements		
0 - 1	(--)	(30.7)	(30.4)	(38.9)	(--)	100.0	49
2 - 3	1.5	7.2	27.9	63.4	--	100.0	69
4 - 5	3.8	1.7	17.9	76.7	--	100.0	75
6 - 7	7.5	1.3	14.4	76.8	--	100.0	94
8 - 9	9.1	--	5.7	85.2	--	100.0	66
10-11	7.8	--	4.6	87.6	--	100.0	55
12-13	16.4	--	--	83.6	--	100.0	60
14-15	16.8	--	--	83.2	--	100.0	69
16-17	(27.0)	(--)	(--)	(73.0)	(--)	100.0	50
18-19	30.1	--	--	69.9	--	100.0	70
20-21	40.0	--	--	60.0	--	100.0	77
22-23	58.7	--	--	41.3	--	100.0	61
24-25	50.6	--	--	49.4	--	100.0	61
26-27	54.9	--	--	44.1	1.0	100.0	51
28-29	67.3	--	--	32.7	--	100.0	59
30-31	62.5	--	--	37.5	--	100.0	50
32-33	82.9	--	--	17.1	--	100.0	65
34-35	(82.8)	(--)	(--)	(17.2)	(--)	100.0	53
36-37	81.8	--	--	18.2	--	100.0	62
38-39	91.5	--	--	8.5	--	100.0	59
40-41	96.1	--	--	3.9	--	100.0	64
42-43	90.5	--	--	9.5	--	100.0	77
44-45	(100.0)	(--)	(--)	(--)	(--)	100.0	41
46-47	(100.0)	(--)	(--)	(--)	(--)	100.0	42

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 unweighted cases
 -- Less than 0.05 percent

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, Jammu Region of J & K, 1993

to 88 percent of children age 10-11 months, and decreases thereafter with age as the proportion receiving breastfeeding declines. In fact, the proportion of children not breastfed increases steadily with age of child, rising from 1 percent of children age 0-3 months to 59 percent age 22-23 months and 96 percent age 40-41 months.

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 hours before the interview. The numbers of children in each age group are shown in the far right column. Note that the absolute number of breastfeeding children, which is not large in the survey at any age, declines with increasing age after seven months of age, so that the percentages for older ages are based on even smaller numbers of cases.

The use of infant formula is quite rare in Jammu. The percentages given infant formula are low for children under age 4 months (2 percent), generally increase slightly up to age 12-13 months with a maximum level of 10 percent and then decrease as the child grows older. Supplementation of breast milk by other milk (such as cow's milk or buffalo's milk) generally rises with age until age 14-15 months, where the proportion receiving other milk reaches 79 percent, and then falls off slightly at older ages. Thirty-three percent of children under age 4 months receive other liquids such as juice or tea and this proportion increases to over 95 percent by age 12-13 months. Supplementation by solid or mushy foods rises from 7 percent at age 4-5 months to 95 percent by age 16-17 months. Almost all children above age two years are given solid or mushy foods. Only 49 percent of children in the age group 6-9 months receive both

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, Jammu Region of J & K, 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	(--)	(23.6)	(23.0)	(--)	(21.1)	49
2 - 3	1.5	39.8	39.3	--	28.8	68
4 - 5	4.9	64.3	32.9	6.7	41.0	72
6 - 7	3.8	56.9	57.7	34.5	38.7	87
8 - 9	2.6	74.1	74.1	69.4	42.8	60
10-11	(4.1)	(64.3)	(78.1)	(78.1)	(41.8)	50
12-13	(9.6)	(77.2)	(96.4)	(84.9)	(25.3)	50
14-15	0.9	78.6	96.9	92.6	34.5	57
16-17	(8.2)	(59.9)	(96.6)	(95.2)	(23.2)	37
18-19	(8.2)	(78.6)	(97.5)	(94.9)	(20.5)	49
20-21	(6.5)	(73.5)	(94.6)	(96.2)	(16.3)	46
22-23	(7.0)	(80.1)	(100.0)	(100.0)	(11.2)	25
24-25	(4.1)	(65.3)	(90.0)	(100.0)	(18.2)	30
26-29	(3.0)	(74.8)	(97.0)	(97.1)	(19.4)	41
30-33	(--)	(60.7)	(100.0)	(100.0)	(10.1)	30
34-43	(--)	(68.8)	(100.0)	(100.0)	(--)	35

Note: Supplementation refers to last 24 hours. Percentages by type of supplement among breastfeeding children may sum to more than 100.0 because children may have received more than one type of supplement.

() Based on 25-49 unweighted cases

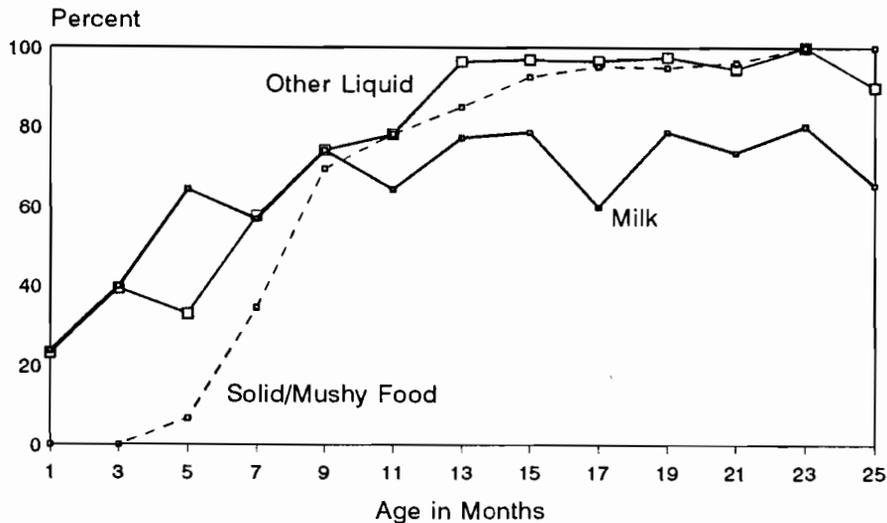
-- Less than 0.05 percent

breast milk and solid foods, as recommended.

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 because the period of amenorrhoea is shortened when mothers feed their children from bottles with nipples. In addition, because it is difficult to sterilize the nipple properly, the use of bottles with nipples exposes children to an increased risk of developing diarrhoea and other diseases. The use of bottles with nipples is relatively uncommon in the Jammu region, increasing from 21 percent in the first two months after birth to a high of 43 percent for children age 8-9 months, after which it declines slowly to zero for children over three years of age.

Table 10.4 shows several statistics describing the length of breastfeeding for selected background variables. The median length of breastfeeding overall is just under 22 months, or slightly less than two years. Supplementation begins early, however; the median length of exclusive breastfeeding is only 0.5 months and the median length of full breastfeeding is 1.4 months. The mean durations of any breastfeeding, exclusive breastfeeding, and full breastfeeding are 23.6 months, 1.5 months and 3.3 months, respectively. The mean durations are somewhat longer than the median durations because 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

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, Jammu Region of J & K, 1993

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 each measure of breastfeeding, the prevalence-incidence mean is very close to the mean calculated in the conventional manner.

Male children are breastfed slightly longer than female children (22.8 months compared with 21.3 months). Rural children are breastfed substantially longer (22.9 months) than urban children (17.6 months). Length of breastfeeding declines sharply and steadily with increasing education, from 24.6 months for children of illiterate mothers to only 17.9 months for children of mothers with high school and above education. There is little difference in the length of breastfeeding among Hindu and Muslim children but the duration of breastfeeding among Sikh children is relatively lower. Children of scheduled caste women breastfeed a little longer than children of non-SC/ST women. It is worthwhile to note that the children of mothers who are working in a family firm or business have much longer duration of breastfeeding (24.5 months) than among those who are either not working (20.7 months) or employed outside home (19.8 months). Differences by mother's exposure to media are of consequence only for mothers who visit the cinema/theatre monthly (shorter period of breastfeeding) and mothers not exposed to any media (longer period). The median duration of breastfeeding for children whose delivery

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, Jammu Region of J & K, 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	22.8	0.5	1.4	813	90.1	115
Female	21.3	0.6	1.4	727	85.4	78
Residence						
Urban	17.6	0.4	1.7	216	(79.6)	25
Rural	22.9	0.6	1.4	1324	89.6	168
Mother's education						
Illiterate	24.6	0.7	2.1	811	90.4	104
Literate, < middle complete	22.6	0.4	0.5	227	*	25
Middle school complete	19.7	0.4	0.9	207	(89.4)	28
High school and above	17.9	0.5	0.7	296	(81.3)	35
Religion						
Hindu	22.7	0.5	0.7	1130	90.4	134
Muslim	22.5	1.0	2.6	312	(84.0)	47
Sikh	19.6	1.6	2.1	94	*	11
Caste/tribe						
Scheduled caste	24.7	0.6	1.6	479	92.6	57
Other (Non-SC/ST)	21.7	0.5	1.3	1044	86.1	133
Mother's work status						
Not working	20.7	0.5	1.0	980	90.0	134
Working in family farm/business	24.5	1.4	2.8	478	85.7	53
Employed by someone else	19.8	1.6	1.6	63	*	5
Mother's exposure to media						
Exposed to media	20.3	0.5	0.6	1081	87.2	128
Watches television weekly	20.6	0.4	0.5	721	87.4	91
Listens to radio weekly	20.3	0.5	0.6	978	86.1	118
Visits cinema/theatre monthly	8.5	0.4	0.4	43	*	5
Not exposed to any of the media	25.9	0.6	3.2	459	90.3	65
Assistance at delivery						
Health professional	18.3	0.4	0.5	478	88.1	66
Traditional birth attendant	24.0	0.6	1.6	914	90.0	110
Other or none	23.8	0.8	2.2	148	*	17
Total¹	22.1	0.5	1.4	1540	88.2	193
Mean for all children¹	23.6	1.5	3.3	1540	NA	NA
P/I for all children³	24.3	0.7	2.8	1540	NA	NA

Note: Total for children under 4 years includes 5 children with other religions, 18 scheduled tribe children, 20 children with self-employed mothers; and the total for children under 6 months includes 25 children whose mothers are literate, < middle complete, 1 child with other religion, and 3 scheduled tribe children, 1 child with self-employed mother, 5 children with mothers visiting cinema/theatre monthly, and 17 children with assistance at delivery from other sources, who are not shown separately. NA: Not applicable

() Based on 25-49 unweighted cases

* Percentage not shown; based on fewer than 25 unweighted cases

¹Medians and means are based on current status

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

³Prevalence-incidence mean

was attended by a health professional is substantially less than for those attended by a traditional birth attendant or others.

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. Eighty-eight percent of children under six months of age were breastfed six or more times on the day before the interview. This finding demonstrates the high intensity of breastfeeding in the Jammu region.

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 and height measurements were obtained for each child. Children under two years old were measured lying down on an adjustable measuring board, while those age two and above were measured in a standing position. 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. The following indices were calculated for children under age four:

- 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 (Agarwal et al., 1991) has concluded that the WHO standard is applicable to Indian children in general.

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 deemed to be severely undernourished.

Each of the indices provides somewhat different information about nutritional status. 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 20 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 in the analysis are children whose month and year of birth were not reported by the mother, and those with grossly improbable weight and height 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. Forty-five percent of all children under age four are underweight (weight-for-age more than two standard deviations below reference median), including 14 percent who are severely so (weight-for-age more than three standard deviations below the reference median). Forty-one percent of all children are stunted (height-for-age more than two standard deviations below the reference median), including 19 percent who are severely so (height-for-age more than three standard deviations below the reference median).

Perhaps the most serious nutritional problem is wasting (weight-for-height more than two standard deviations below the reference median). It afflicts 15 percent of children under age four, including 4 percent who suffer from severe wasting (weight-for-height more than three standard deviations below the reference median). Although the percentages of wasted children are much lower than those of stunted or underweight children, wasting is a much more serious condition because children who are wasted for an extended period are at very high risk of dying.

The percentage of children who are underweight or stunted rapidly increases with age up to three years of age, with particularly large increases during the first two years of life (Figure 10.3). Wasting, by contrast, peaks during the second year of life. Generally, undernutrition is lowest in the first six months of life, when most babies are being breastfed. However severe wasting attains its peak during the first year of life.

There is only slight evidence that female children are nutritionally disadvantaged. A larger percentage of females than males are underweight and wasted but the percentage stunted is the same for males and females.

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, Jammu Region of J & K, 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	1.7	10.3	3.5	14.7	2.7	7.7	137
6-11 months	8.1	35.0	11.6	29.4	4.5	13.0	166
12-23 months	16.0	50.7	21.9	46.9	4.3	21.1	297
24-35 months	20.4	55.6	22.8	46.3	3.9	19.4	266
36-47 months	14.4	49.8	22.8	48.9	1.6	8.2	274
Sex							
Male	11.8	41.6	18.8	40.9	3.2	13.4	587
Female	15.9	47.5	18.4	40.8	3.5	16.3	552
Birth order							
1	11.3	39.2	14.3	35.9	4.8	14.9	348
2-3	13.8	46.3	19.4	41.8	3.2	14.9	505
4-5	16.2	44.9	22.2	41.6	2.5	14.5	189
6+	17.8	53.0	22.7	52.0	1.3	14.5	98
Previous birth interval²							
First birth	11.5	39.4	14.5	36.6	4.7	14.7	352
< 24 months	15.6	48.8	22.4	40.0	3.3	11.8	204
24-47 months	14.2	48.9	20.1	44.2	3.1	17.5	465
48+ months	15.7	34.5	18.4	41.9	0.9	9.8	118
Total	13.8	44.5	18.6	40.8	3.4	14.8	1139

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 or stunted increases sharply with birth order. This may result from higher-order births occurring more often to disadvantaged women. The more serious condition of wasting, on the other hand, varies little by birth order. This different relationship between birth order and wasting, as opposed to the other two indicators of undernutrition, is worthy of further study. The percentage of children who are underweight is lower for children with a birth interval of 48 or more months than for those with an interval of less than 48 months, and the same is true for severe stunting. Curiously, wasting is greatest for children with a previous birth interval of intermediate length (24-47 months).

Table 10.6 shows nutritional status by selected background characteristics among children under 4 years of age. Rural children are more undernourished with respect to all the indicators, than children in urban areas, and the differences are quite substantial (Figure 10.4). Rural children are 50 percent more likely to be underweight and stunted than urban children and 40

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, Jammu Region of J & K, 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	
Residence							
Urban	9.1	31.0	12.2	28.0	2.1	10.9	170
Rural	14.6	46.8	19.7	43.1	3.6	15.5	969
Mother's education							
Illiterate	20.1	55.5	27.5	52.9	4.1	18.6	557
Lit., <middle complete	11.7	43.4	14.4	36.6	4.2	16.1	178
Middle school complete	8.4	37.2	9.5	29.5	2.2	10.4	170
High school and above	4.0	24.4	7.4	23.6	2.0	8.1	234
Religion							
Hindu	14.3	45.9	18.2	40.6	3.6	14.9	858
Muslim	14.4	46.9	26.4	50.8	2.6	15.6	195
Sikh	7.5	25.0	4.5	21.1	3.0	10.5	83
Caste/tribe							
Scheduled caste	17.4	52.9	21.6	46.4	5.3	18.2	359
Other (Non-SC/ST)	12.2	40.3	17.3	37.8	2.6	13.2	765
Total	13.8	44.5	18.6	40.8	3.4	14.8	1139

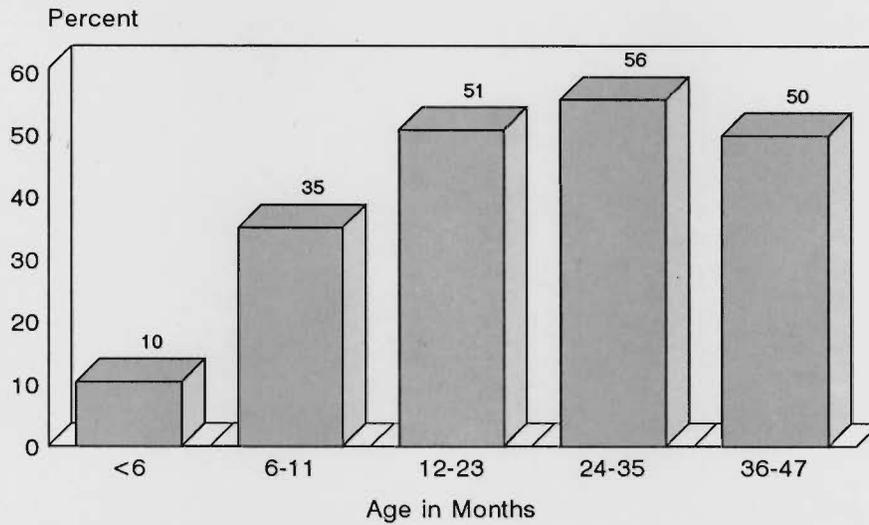
Note: Figures are for children born 1-47 months prior to the survey. Each of the indices is expressed in standard deviation units (SD) from the median of the International Reference Population. The percentages of children who are more than three and more than two standard deviation units below the median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

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

percent more likely to be wasted. There are considerable differences in nutritional status among children of various religious groups. Sikh children are much better nourished than Hindu and Muslim children. For example, 21 percent of Sikh children are stunted and 5 percent are severely so, whereas among Hindu and Muslim children the corresponding percentages are 41 and 18, and 51 and 26, respectively. Hindu children are less likely to be stunted than Muslim children, but the percentages underweight and wasted are similar for Hindus and Muslims. the percentages of scheduled caste children who are underweight (53 percent), stunted (46 percent) and wasted (18 percent) are higher than those for non-SC/ST children (40 percent underweight, 38 percent stunted, and 13 percent wasted).

The association between nutritional status and mother's education is quite strong and consistent. As expected, the children of illiterate mothers are undernourished at a higher rate than children of mothers who have completed high school and above. For example, 56 percent of children of illiterate mothers are underweight compared with 24 percent of children of mothers with at least a high school education. The same is true with respect to percentages stunted and wasted.

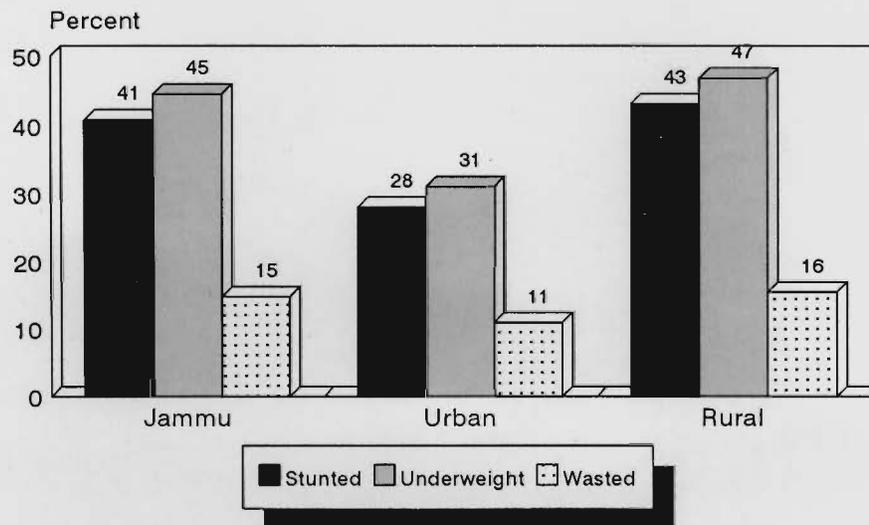
Figure 10.3
Percentage of Children Under Age Four
Who Are Underweight by Age



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

NFHS, Jammu Region of J & K, 1993

Figure 10.4
Undernutrition Among Children
Under Four Years of Age



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

NFHS, Jammu Region of J & K, 1993

CHAPTER 11

VILLAGE PROFILE

The use of family planning methods, health services and educational facilities often depends as much on the supply of such services and facilities as on the demand. The NFHS included a Village Questionnaire to assess the availability, or supply, of family planning and other health and educational services in rural areas.

Information was obtained on the quality of roads that connect the village to other places, and the distance to transportation depots such as train stations and bus stands, the nearest town, and block and tahsil headquarters. A series of questions was included on the availability and distance to various types of educational institutions and programmes, as well as health personnel and facilities. The existence of important support services and facilities in the village (including banks, cooperative societies, post offices, markets and shops) was also determined because they contribute to the quality of life in the village and can serve as one indicator of the degree of isolation of the village.

The supervisor of each interviewing team was responsible for locating key informants in the village who were knowledgeable about village facilities and infrastructure. The village headman (*Sarpanch*) would usually be contacted by the supervisor to obtain an overview of the village and names of other persons who could provide more specific information. For example, a teacher or school principal might be asked about available schools and educational services, a doctor or health practitioner could be questioned about health facilities, the village land record keeper (*Patwari*) could provide information about heavy equipment and other capital goods used for farming, and the village level worker (VLW) might be asked about the availability of electricity, irrigation and other production infrastructure, and about various rural development programmes. Based upon the responses from these informants, the supervisor filled in the questionnaire during the fieldwork in each village. The information in this chapter is based on questionnaires completed for 75 villages (67 PSUs) in the NFHS sample.

It may be noted here that a distinctive feature of Jammu is its small villages which are widely scattered due to the hilly terrain. This combination of circumstances makes it difficult to provide infrastructure to every village.

11.1 Distance from the Nearest Town and Transportation Facility

Table 11.1 presents the distribution of sample villages according to the distance from the nearest town, railway station and bus stand. Twenty-six percent of the villages are within 5 km of a town, approximately 7 percent are within 5 km of a railway station, and the majority (78 percent) of the villages are within 5 km of a bus stand. The median distances to the nearest town, railway station, and bus stand, are 9 km, 42 km, and 2 km, respectively. Bus service is generally much more accessible to the villages in Jammu than railway because only two districts in the Jammu region have a railway facility.

Table 11.1 Distance from nearest town and transportation facility

Percent distribution of villages according to distance from the nearest town, railway station and bus stand, Jammu Region of J & K, 1993

Distance	Educational facility		
	Nearest town	Nearest railway station	Nearest bus stand
< 5 km	25.6	6.7	78.3
5-9 km	30.1	6.2	9.0
10+ km	43.8	87.1	11.8
Don't know/ missing	0.4	--	0.9
Total percent	100.0	100.0	100.0
Median distance	8.5	42.0	2.2
-- Less than 0.05 percent			

11.2 Availability of Educational Facilities

As indicated in previous chapters of this report, the availability of education is very important for the improvement of health and family welfare. Women with a high school education have fewer and healthier children than illiterate women.

In Jammu and Kashmir education is free up to the university level and priority has been given to the development and extension of educational facilities in rural areas. The NFHS data confirm the fruitfulness of efforts made by the state government in extending educational facilities to the rural areas. Eighty percent of the villages in the Jammu region have a primary school located within the village and the remaining 20 percent have one within 5 km of the village (Table 11.2). Proximity to higher levels of educational facilities decreases sharply with

Table 11.2 Distance from nearest educational facility

Percent distribution of villages according to distance from nearest educational facility, Jammu Region of J & K, 1993

Distance	Educational facility				
	Primary school	Middle school	Secondary school	Higher secondary school	College
Within village	80.2	30.6	12.1	1.0	--
< 5 km	19.8	53.7	39.4	22.8	3.1
5-9 km	--	15.3	30.3	33.6	4.6
10+ km	--	--	18.1	37.4	92.3
Don't know/missing	--	0.4	--	5.2	--
Total percent	100.0	100.0	100.0	100.0	100.0
Median distance	0.0	2.5	4.8	7.7	32.8
-- Less than 0.05 percent					

increasing level of the facility, as one would expect. Thirty-one percent of the villages have a middle school located within the village, 12 percent have a secondary school, 1 percent have a higher secondary school and there is no college located within a village. The proportion of villages with a middle school, secondary school, higher secondary school, and colleges within 5 km of the village are 54 percent, 39 percent, 23 percent, and 3 percent, respectively. The median distance of the villages from a middle school is approximately 3 km, and from a secondary or higher secondary school is about 5-8 km. However, 92 percent of all villages in Jammu are 10 km or more from the nearest college.

11.3 Availability of Health Facilities

The availability of health facilities either within or close to a village is critical to the health and well-being of village mothers and their children. Table 11.3 shows the distance of villages from the nearest health facility as well as the percentage of ever-married women in rural areas who have access to the facilities. Forty-eight percent of the villages in Jammu have some form of health facility within the village, an additional 42 percent are within 5 km of a facility of some kind, and the remaining 10 percent are within 5-9 km of a health facility. The most common facility found within the villages is a sub-centre (30 percent), followed by a dispensary/clinic (29 percent). Twenty-six percent have a Primary Health Centre located in the village or within 5 km of the village. The median distance to a sub-centre is 2 km, and the

Table 11.3 Distance from nearest health facility						
Percent distribution of villages and ever-married women age 13-49, according to distance from nearest health facility, Jammu Region of J & K, 1993						
Distance	Health facility					
	Primary Health Centre	Sub-centre	Either PHC/Sub-centre	Hospital	Dispensary/clinic	Any health facility
VILLAGES						
Within village	2.7	30.4	30.9	0.2	28.6	48.1
< 5 km	23.6	38.4	42.5	9.0	49.2	41.6
5-9 km	36.7	15.5	13.0	5.8	9.7	10.3
10+ km	36.1	15.2	13.5	71.7	7.4	--
Don't know/missing	0.9	0.4	--	13.2	5.1	--
Total percent	100.0	100.0	100.0	100.0	100.0	100.0
Median distance	6.6	2.0	2.0	24.8	2.2	1.0
EVER-MARRIED WOMEN						
Within village	5.7	42.5	44.3	3.6	39.8	62.1
< 5 km	27.7	25.3	28.1	10.9	38.8	26.6
5-9 km	32.3	17.4	16.1	9.5	9.8	11.3
10+ km	32.8	12.6	11.5	65.8	6.5	--
Don't know/missing	1.5	2.3	--	10.2	5.1	--
Total percent	100.0	100.0	100.0	100.0	100.0	100.0
Median distance	6.3	1.7	1.6	18.7	1.3	0.8
-- Less than 0.05 percent						

median distance to a Primary Health Centre is 7 km. As expected, the median distance of villages from a hospital is the greatest (25 km), with 72 percent of all villages 10 km or more from the nearest hospital.

The percent distribution of ever-married women according to the distance to the nearest health facility are also shown in Table 11.3. Sixty-two percent of ever-married women have easy access to a health facility within their village, the most common facility being a sub-centre. The percentages of ever-married women having access to various health facilities which are arranged in descending order of the facilities within the villages are 44 percent for PHC/sub-centre, 40 percent for dispensary/clinic, and 4 percent for hospital. Access to a Government hospital or PHC continues to be limited and a large proportion of ever-married women are 10 km or more from the nearest hospital.

11.4 Availability of Other Facilities and Services

Health personnel are also very important for the provision of health services to mothers and their children. Table 11.4 indicates the availability of health personnel within the villages. Twenty-five percent of the villages have a village health guide, nearly 22 percent have a trained birth attendant, and 7 percent have a mobile health unit or have been visited by a mobile health unit.

Table 11.4 also details the availability of various other facilities and services in the villages. Eighty-nine percent of the villages are electrified. Among the government rural development programmes, the most important in the villages of Jammu is the Integrated Rural Development Programme (IRDP) which exists in 30 percent of the villages. Eight percent of villages have the National Rural Employment Programme (NREP) and another 5 percent have Training the Youth for Self-Employment (TRYSEM).

Facility/service	Percentage
<i>Anganwadi</i>	43.7
Adult education classes	7.8
Village health guide	25.2
Trained birth attendant	21.7
Mobile health unit	6.9
Electricity	89.0
Bank	9.0
Cooperative society	4.5
Post office	29.4
Market/shop	68.2
Fair price shop	12.7
<i>Mahila Mandal</i>	6.6
Youth club	0.4
Integrated Rural Development Programme (IRDP)	30.4
National Rural Employment Programme (NREP)	7.8
Training the Youth for Self-employment (TRYSEM)	5.3

Forty-four percent of the villages have an *Anganwadi* centre (a preschool child care centre under the Integrated Child Development Scheme), 8 percent have adult education classes and 7 percent have *Mahila Mandals* (women's clubs). Youth clubs are virtually nonexistent (less than 1 percent) in villages. Few (5 percent) of the villages have any type of cooperative society. Sixty-eight percent of the villages have a market or other type of shop and approximately 13 percent have a fair price shop. Nine percent have a bank and 29 percent have a post office.

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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 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 to use straightforward formulas for calculating sampling errors. However, the NFHS sample is the result of a multi-stage stratified sample design, and consequently, it is 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 that are means, proportions or ratios. The JACKKNIFE repeated replication method is used for variance estimation of 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 greater than 1.0 indicates the increase in the sampling error due to the use of a more complex and less statistically efficient design. ISSAS also computes the relative error and confidence limits for the estimates.

Sampling errors for the NFHS are calculated for selected variables considered to be of primary interest. The results are presented in this appendix for the state as a whole and for urban and rural areas, separately. 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 unweighted (N) and weighted (WN) cases, 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, Jammu Region of J & K, 1993

VARIABLE	ESTIMATE	BASE POPULATION
Sex ratio	Ratio	Household <i>de facto</i> population
Illiterate	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 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
Fertility rates	Rate	All women, population
Mortality rates	Rate	Births, population

Table A.2 Sampling errors, Jammu Region of J & K, 1993

Variable/residence	Value (R)	Standard error (SE)	Number of cases		Standard error assum- ing SRS (SER)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits	
			Unweighted (N)	Weighted (WN)				R-2SE	R+2SE
SEX RATIO (Household <i>de facto</i> population)									
Urban	972	17.773	2783	1449	20.194	0.880	0.018	936.4	1007.5
Rural	975	13.299	5626	7065	14.748	0.902	0.014	948.2	1001.4
Total	974	11.441	8409	8514	11.912	0.960	0.012	951.4	997.2
ILLITERATE (Household <i>de facto</i> population, age 6 and over)									
Urban	0.172	0.015	4808	2504	0.007	2.133	0.086	0.143	0.202
Rural	0.411	0.015	9445	11861	0.007	2.291	0.037	0.380	0.442
Total	0.369	0.012	14253	14365	0.006	2.222	0.033	0.345	0.394
PIPED WATER AS SOURCE OF DRINKING WATER (Households)									
Urban	0.897	0.017	988	515	0.010	1.763	0.019	0.863	0.931
Rural	0.315	0.042	1851	2324	0.011	3.874	0.133	0.231	0.399
Total	0.420	0.034	2839	2839	0.009	3.623	0.080	0.353	0.488
PUMPED WATER AS SOURCE OF DRINKING WATER (Households)									
Urban	0.061	0.010	988	515	0.008	1.325	0.166	0.041	0.081
Rural	0.173	0.035	1851	2324	0.009	3.936	0.200	0.104	0.243
Total	0.153	0.029	2839	2839	0.007	4.233	0.187	0.096	0.210
WELL WATER AS SOURCE OF DRINKING WATER (Households)									
Urban	0.032	0.009	988	515	0.006	1.580	0.275	0.015	0.050
Rural	0.312	0.038	1851	2324	0.011	3.564	0.123	0.235	0.389
Total	0.262	0.031	2839	2839	0.008	3.734	0.118	0.200	0.323
SURFACE WATER AS SOURCE OF DRINKING WATER (Households)									
Urban	0.006	0.004	988	515	0.002	1.418	0.577	0.000	0.013
Rural	0.190	0.016	1851	2324	0.009	1.708	0.082	0.159	0.221
Total	0.157	0.013	2839	2839	0.007	1.834	0.080	0.132	0.182
OTHER SOURCE OF DRINKING WATER (Households)									
Urban	0.004	0.003	988	515	0.002	1.246	0.622	0.000	0.009
Rural	0.009	0.003	1851	2324	0.002	1.448	0.350	0.003	0.016
Total	0.008	0.003	2839	2839	0.002	1.571	0.323	0.003	0.014
ILLITERATE (Ever-married women age 13-49)									
Urban	0.211	0.024	945	489	0.013	1.810	0.114	0.163	0.259
Rural	0.644	0.026	1821	2277	0.011	2.317	0.040	0.592	0.696
Total	0.567	0.021	2766	2766	0.009	2.214	0.037	0.525	0.609
WITH SECONDARY EDUCATION OR MORE (Ever-married women age 13-49)									
Urban	0.506	0.034	945	489	0.016	2.086	0.067	0.438	0.574
Rural	0.119	0.019	1821	2277	0.008	2.512	0.160	0.081	0.157
Total	0.188	0.016	2766	2766	0.007	2.141	0.085	0.156	0.219
CURRENTLY MARRIED (Ever-married women age 13-49)									
Urban	0.948	0.006	945	489	0.007	0.896	0.007	0.935	0.961
Rural	0.959	0.005	1821	2277	0.005	0.985	0.005	0.950	0.968
Total	0.957	0.004	2766	2766	0.004	1.028	0.004	0.949	0.965

Table A.2 Sampling errors, Jammu Region of J & K, 1993 (Contd.)

Variable/residence	Value (R)	Standard error (SE)	Number of cases		Standard error assuming SRS (SER)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits	
			Unweighted (N)	Weighted (WN)				R-2SE	R+2SE
MEAN NUMBER OF CHILDREN EVER BORN (Ever-married women age 13-49)									
Urban	2.616	0.063	945	489	0.056	1.127	0.024	2.490	2.742
Rural	3.259	0.047	1821	2277	0.053	0.898	0.014	3.165	3.354
Total	3.145	0.040	2766	2766	0.041	0.964	0.013	3.066	3.225
MEAN NUMBER OF CHILDREN SURVIVING (Ever-married women age 13-49)									
Urban	2.466	0.061	945	489	0.051	1.189	0.025	2.344	2.587
Rural	2.947	0.040	1821	2277	0.047	0.853	0.014	2.867	3.027
Total	2.862	0.034	2766	2766	0.037	0.928	0.012	2.794	2.931
KNOW AT LEAST ONE CONTRACEPTIVE METHOD (Currently married women age 13-49)									
Urban	0.998	0.002	896	464	0.002	0.993	0.002	0.995	1.001
Rural	0.997	0.001	1746	2183	0.001	0.989	0.001	0.994	0.999
Total	0.997	0.001	2642	2647	0.001	1.066	0.001	0.994	0.999
KNOW SOURCE FOR ANY MODERN METHOD (Currently married women age 13-49)									
Urban	0.992	0.004	896	464	0.003	1.303	0.004	0.985	1.000
Rural	0.972	0.005	1746	2183	0.004	1.308	0.005	0.962	0.982
Total	0.975	0.004	2642	2647	0.003	1.422	0.004	0.967	0.984
HAVE EVER USED ANY METHOD (Currently married women age 13-49)									
Urban	0.737	0.016	896	464	0.015	1.082	0.022	0.705	0.768
Rural	0.538	0.017	1746	2183	0.012	1.433	0.032	0.504	0.572
Total	0.573	0.014	2642	2647	0.010	1.455	0.024	0.545	0.601
CURRENTLY USING ANY METHOD (Currently married women age 13-49)									
Urban	0.644	0.018	896	464	0.016	1.118	0.028	0.608	0.680
Rural	0.462	0.016	1746	2183	0.012	1.310	0.034	0.431	0.493
Total	0.494	0.013	2642	2647	0.010	1.335	0.026	0.468	0.520
CURRENTLY USING ANY MODERN METHOD (Currently married women age 13-49)									
Urban	0.501	0.020	896	464	0.017	1.191	0.040	0.461	0.541
Rural	0.375	0.016	1746	2183	0.012	1.351	0.042	0.343	0.406
Total	0.397	0.013	2642	2647	0.010	1.382	0.033	0.370	0.423
CURRENTLY USING PILLS (Currently married women age 13-49)									
Urban	0.025	0.008	896	464	0.005	1.508	0.318	0.009	0.040
Rural	0.011	0.002	1746	2183	0.002	0.861	0.197	0.007	0.015
Total	0.013	0.002	2642	2647	0.002	0.998	0.167	0.009	0.018
CURRENTLY USING COPPER T/IUD (Currently married women age 13-49)									
Urban	0.070	0.009	896	464	0.009	1.011	0.123	0.053	0.088
Rural	0.019	0.005	1746	2183	0.003	1.426	0.246	0.010	0.028
Total	0.028	0.004	2642	2647	0.003	1.248	0.143	0.020	0.036
CURRENTLY USING CONDOMS (Currently married women age 13-49)									
Urban	0.131	0.012	896	464	0.011	1.030	0.089	0.107	0.154
Rural	0.044	0.006	1746	2183	0.005	1.130	0.127	0.032	0.055
Total	0.059	0.005	2642	2647	0.005	1.085	0.084	0.049	0.069

Table A.2 Sampling errors, Jammu Region of J & K, 1993 (Contd.)

Variable/residence	Value (R)	Standard error (SE)	Number of cases		Standard error assuming SRS (SER)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits	
			Unweighted (N)	Weighted (WN)				R-2SE	R+2SE
CURRENTLY USING FEMALE STERILIZATION (Currently married women age 13-49)									
Urban	0.225	0.016	896	464	0.014	1.180	0.073	0.192	0.258
Rural	0.259	0.014	1746	2183	0.010	1.290	0.052	0.232	0.286
Total	0.253	0.012	2642	2647	0.008	1.365	0.046	0.230	0.276
CURRENTLY USING MALE STERILIZATION (Currently married women age 13-49)									
Urban	0.050	0.006	896	464	0.007	0.846	0.123	0.038	0.063
Rural	0.042	0.006	1746	2183	0.005	1.200	0.137	0.031	0.054
Total	0.044	0.005	2642	2647	0.004	1.228	0.112	0.034	0.054
CURRENTLY USING PERIODIC ABSTINENCE (Currently married women age 13-49)									
Urban	0.039	0.008	896	464	0.006	1.209	0.200	0.023	0.055
Rural	0.033	0.004	1746	2183	0.004	0.945	0.122	0.025	0.041
Total	0.034	0.004	2642	2647	0.004	1.024	0.106	0.027	0.041
USING PUBLIC SOURCE FOR CONTRACEPTIVE METHOD (Current users of modern methods)									
Urban	0.628	0.030	449	232	0.023	1.313	0.048	0.568	0.688
Rural	0.862	0.016	654	818	0.013	1.152	0.018	0.831	0.893
Total	0.811	0.014	1103	1050	0.012	1.198	0.017	0.782	0.839
DO NOT WANT ANY MORE CHILDREN (Currently married women age 13-49)									
Urban	0.441	0.018	896	464	0.017	1.081	0.041	0.405	0.477
Rural	0.338	0.014	1746	2183	0.011	1.269	0.043	0.309	0.367
Total	0.356	0.012	2642	2647	0.009	1.320	0.035	0.331	0.381
WANT TO DELAY BIRTH AT LEAST TWO YEARS (Currently married women age 13-49)									
Urban	0.138	0.012	896	464	0.012	1.003	0.084	0.115	0.162
Rural	0.183	0.010	1746	2183	0.009	1.027	0.052	0.164	0.202
Total	0.175	0.008	2642	2647	0.007	1.096	0.046	0.159	0.192
IDEAL NUMBER OF CHILDREN (Ever-married women age 13-49)									
Urban	2.325	0.030	916	474	0.025	1.216	0.013	2.265	2.385
Rural	2.867	0.035	1770	2213	0.021	1.693	0.012	2.797	2.938
Total	2.772	0.029	2686	2687	0.017	1.706	0.010	2.714	2.829
IDEAL NUMBER OF SONS (Ever-married women age 13-49)									
Urban	1.128	0.032	916	474	0.026	1.249	0.028	1.064	1.192
Rural	1.646	0.032	1770	2213	0.019	1.711	0.020	1.581	1.711
Total	1.554	0.026	2686	2687	0.016	1.663	0.017	1.502	1.607
IDEAL NUMBER OF DAUGHTERS (Ever-married women age 13-49)									
Urban	0.795	0.025	916	474	0.017	1.410	0.031	0.746	0.844
Rural	1.011	0.020	1770	2213	0.013	1.463	0.019	0.971	1.050
Total	0.973	0.016	2686	2687	0.011	1.512	0.017	0.940	1.006
RECEIVED NO ANTEMATAL CARE (Births in last 4 years)									
Urban	0.039	0.013	415	215	0.012	1.149	0.344	0.012	0.065
Rural	0.233	0.020	1049	1312	0.015	1.350	0.088	0.192	0.274
Total	0.205	0.018	1464	1526	0.012	1.459	0.086	0.170	0.240

Table A.2 Sampling errors, Jammu Region of J & K, 1993 (Contd.)

Variable/residence	Value (R)	Standard error (SE)	Number of cases		Standard error assuming SRS (SER)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits	
			Unweighted (N)	Weighted (WN)				R-2SE	R+2SE
RECEIVED TETANUS TOXOID (2 DOSES) (Births in last 4 years)									
Urban	0.848	0.022	415	215	0.019	1.156	0.026	0.803	0.893
Rural	0.663	0.021	1049	1312	0.017	1.260	0.031	0.621	0.704
Total	0.689	0.018	1464	1526	0.013	1.351	0.026	0.652	0.725
RECEIVED MEDICAL ASSISTANCE AT DELIVERY (Births in last 4 years)									
Urban	0.672	0.036	415	215	0.026	1.380	0.054	0.600	0.744
Rural	0.255	0.024	1049	1312	0.015	1.576	0.095	0.206	0.303
Total	0.313	0.022	1464	1526	0.014	1.620	0.070	0.269	0.357
HAD DIARRHOEA IN THE LAST 24 HOURS (Children under 4 years of age)									
Urban	0.103	0.016	399	206	0.016	0.995	0.152	0.072	0.134
Rural	0.090	0.010	1006	1258	0.009	1.114	0.112	0.070	0.111
Total	0.092	0.009	1405	1464	0.008	1.176	0.098	0.074	0.110
HAD DIARRHOEA IN THE LAST 2 WEEKS (Children under 4 years of age)									
Urban	0.246	0.025	399	206	0.022	1.121	0.102	0.195	0.296
Rural	0.220	0.014	1006	1258	0.013	1.040	0.063	0.192	0.247
Total	0.223	0.012	1405	1464	0.011	1.114	0.056	0.198	0.248
TREATED WITH ORS (Children with diarrhoea in the last 2 weeks)									
Urban	0.429	0.052	98	51	0.053	0.990	0.121	0.325	0.533
Rural	0.312	0.033	221	276	0.033	1.002	0.107	0.246	0.379
Total	0.330	0.029	319	327	0.028	1.058	0.089	0.272	0.389
CONSULTED MEDICAL PERSONNEL FOR DIARRHOEA (Children with diarrhoea in the last 2 weeks)									
Urban	0.755	0.049	98	51	0.044	1.116	0.065	0.656	0.854
Rural	0.697	0.032	221	276	0.033	0.971	0.046	0.633	0.760
Total	0.706	0.028	319	327	0.027	1.051	0.040	0.650	0.762
SHOWING VACCINATION CARD (Children age 12-23 months)									
Urban	0.596	0.043	99	51	0.049	0.880	0.073	0.509	0.683
Rural	0.461	0.038	269	336	0.031	1.248	0.083	0.385	0.537
Total	0.479	0.034	368	388	0.025	1.328	0.071	0.411	0.546
RECEIVED BCG VACCINATION (Children age 12-23 months)									
Urban	0.929	0.026	99	51	0.026	0.996	0.028	0.878	0.981
Rural	0.796	0.035	269	336	0.025	1.410	0.044	0.726	0.865
Total	0.813	0.031	368	388	0.020	1.541	0.038	0.752	0.874
RECEIVED DPT VACCINATION (3 DOSES) (Children age 12-23 months)									
Urban	0.929	0.030	99	51	0.026	1.173	0.033	0.869	0.990
Rural	0.755	0.038	269	336	0.026	1.449	0.050	0.679	0.831
Total	0.778	0.034	368	388	0.021	1.590	0.043	0.710	0.845

Table A.2 Sampling errors, Jammu Region of J & K, 1993 (Contd.)

Variable/residence	Value (R)	Standard error (SE)	Number of cases		Standard error assuming SRS (SER)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits	
			Unweighted (N)	Weighted (WN)				R-2SE	R+2SE
RECEIVED POLIO VACCINATION (3 DOSES) (Children age 12-23 months)									
Urban	0.929	0.030	99	51	0.026	1.173	0.033	0.869	0.990
Rural	0.747	0.038	269	336	0.027	1.448	0.051	0.670	0.824
Total	0.771	0.034	368	388	0.021	1.588	0.044	0.703	0.839
RECEIVED MEASLES VACCINATION (Children age 12-23 months)									
Urban	0.859	0.040	99	51	0.035	1.127	0.046	0.780	0.938
Rural	0.665	0.034	269	336	0.029	1.177	0.051	0.597	0.734
Total	0.691	0.030	368	388	0.024	1.280	0.044	0.630	0.751
FULLY VACCINATED (Children age 12-23 months)									
Urban	0.848	0.040	99	51	0.036	1.097	0.047	0.769	0.928
Rural	0.628	0.034	269	336	0.030	1.162	0.055	0.559	0.697
Total	0.657	0.031	368	388	0.024	1.258	0.046	0.596	0.718

Table A.2 Sampling errors, Jammu Region of J & K, 1993 (Contd.)

Variable/residence	Value (R)	Standard error (SE)	Relative error (SE/R)	Confidence limits	
				R-2SE	R+2SE
TOTAL FERTILITY RATE (Women age 15-49)					
Urban	2.131	0.097	0.046	1.936	2.325
Rural	3.363	0.116	0.035	3.130	3.596
Total	3.130	0.097	0.031	2.936	3.324
TOTAL FERTILITY RATE (Women age 15-44)					
Urban	2.131	0.097	0.046	1.936	2.325
Rural	3.328	0.113	0.034	3.102	3.554
Total	3.103	0.094	0.030	2.914	3.292
AGE-SPECIFIC FERTILITY RATE (Age group 15-19)					
Urban	0.026	0.005	0.181	0.017	0.035
Rural	0.058	0.006	0.107	0.046	0.070
Total	0.054	0.005	0.099	0.043	0.064
AGE-SPECIFIC FERTILITY RATE (Age group 20-24)					
Urban	0.144	0.011	0.078	0.121	0.166
Rural	0.243	0.010	0.041	0.223	0.263
Total	0.223	0.008	0.038	0.207	0.240
AGE-SPECIFIC FERTILITY RATE (Age group 25-29)					
Urban	0.165	0.013	0.078	0.140	0.191
Rural	0.216	0.014	0.063	0.189	0.243
Total	0.206	0.011	0.054	0.184	0.228
AGE-SPECIFIC FERTILITY RATE (Age group 30-34)					
Urban	0.081	0.013	0.154	0.056	0.107
Rural	0.093	0.011	0.123	0.070	0.115
Total	0.090	0.009	0.104	0.072	0.109
AGE-SPECIFIC FERTILITY RATE (Age group 35-39)					
Urban	0.010	0.005	0.501	0.000	0.019
Rural	0.045	0.009	0.189	0.028	0.062
Total	0.038	0.007	0.182	0.024	0.052
AGE-SPECIFIC FERTILITY RATE (Age group 40-44)					
Urban	0.000	NC	NC	NC	NC
Rural	0.011	0.004	0.390	0.002	0.020
Total	0.009	0.003	0.391	0.002	0.015
AGE-SPECIFIC FERTILITY RATE (Age group 45-49)					
Urban	0.000	NC	NC	NC	NC
Rural	0.007	0.005	0.717	0.000	0.017
Total	0.005	0.004	0.711	0.000	0.013

Table A.2 Sampling errors, Jammu Region of J & K, 1993 (Contd.)

Variable/residence	Value (R)	Standard error (SE)	Relative error (SE/R)	Confidence limits	
				R-2SE	R+2SE
NEONATAL MORTALITY (5-year period preceding survey)					
Urban	29.795	8.792	0.295	12.212	47.379
Rural	32.307	5.167	0.160	21.973	42.640
Total	31.947	4.584	0.143	22.780	41.114
INFANT MORTALITY ${}_4q_0$ (5-year period preceding survey)					
Urban	39.162	9.724	0.248	19.715	58.609
Rural	46.505	5.673	0.122	35.160	57.851
Total	45.449	5.036	0.111	35.377	55.521
CHILD MORTALITY ${}_4q_1$ (5-year period preceding survey)					
Urban	7.677	3.481	0.453	0.714	14.639
Rural	15.441	3.229	0.209	8.984	21.899
Total	14.337	2.807	0.196	8.724	19.950
UNDER-FIVE MORTALITY ${}_5q_0$ (5-year period preceding survey)					
Urban	46.538	9.661	0.208	27.217	65.860
Rural	61.229	6.205	0.101	48.818	73.639
Total	59.135	5.483	0.093	48.169	70.100
CRUDE BIRTH RATE (Based on Household Questionnaire)					
Urban	21.741	1.455	0.067	19.431	24.051
Rural	28.625	1.203	0.042	26.219	31.031
Total	27.522	1.044	0.038	25.434	29.610
CRUDE DEATH RATE (Based on Household Questionnaire)					
Urban	8.929	0.809	0.091	7.311	10.547
Rural	8.624	0.688	0.080	7.248	10.000
Total	8.683	0.587	0.068	7.509	9.857
CRUDE RATE OF NATURAL INCREASE (Based on Household Questionnaire)					
Urban	12.808	1.604	0.125	9.600	16.016
Rural	20.000	1.395	0.068	17.210	22.790
Total	18.841	1.205	0.064	16.431	21.251
CRUDE BIRTH RATE (Based on birth history)					
Urban	21.650	1.264	0.058	19.123	24.177
Rural	29.402	1.040	0.035	27.322	31.483
Total	28.025	0.886	0.032	26.253	29.797

SRS: Simple random sample

NC: Not calculated because the denominator is 0.000

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 documented that ages are poorly reported 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. In interviewer training for the NFHS, 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 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 age data is the number of persons whose ages were recorded as not known or missing. In Jammu, age was recorded for every person 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 misidentify eligible women in the NFHS in Jammu.

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 Jammu, the extent

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Table B.1 Household age distribution

Single year age distribution of the *de facto* household population by sex (weighted), Jammu Region of J & K, 1993

Age	Male		Female		Age	Male		Female	
	Number	Percent	Number	Percent		Number	Percent	Number	Percent
<1	234	2.7	206	2.5	38	90	1.1	78	0.9
1	208	2.4	181	2.2	39	23	0.3	65	0.8
2	190	2.2	196	2.4	40	193	2.3	99	1.2
3	212	2.5	179	2.2	41	16	0.2	59	0.7
4	201	2.4	172	2.1	42	55	0.6	58	0.7
5	249	2.9	218	2.6	43	16	0.2	56	0.7
6	249	2.9	221	2.7	44	16	0.2	51	0.6
7	233	2.7	192	2.3	45	188	2.2	96	1.2
8	193	2.3	217	2.6	46	29	0.3	50	0.6
9	196	2.3	174	2.1	47	28	0.3	45	0.5
10	246	2.9	229	2.8	48	40	0.5	54	0.7
11	180	2.1	139	1.7	49	14	0.2	33	0.4
12	284	3.3	240	2.9	50	202	2.4	55	0.7
13	189	2.2	202	2.4	51	8	0.1	44	0.5
14	219	2.6	208	2.5	52	37	0.4	67	0.8
15	199	2.3	197	2.4	53	10	0.1	33	0.4
16	240	2.8	215	2.6	54	13	0.2	24	0.3
17	173	2.0	177	2.1	55	139	1.6	159	1.9
18	259	3.0	244	2.9	56	22	0.3	22	0.3
19	145	1.7	148	1.8	57	14	0.2	34	0.4
20	202	2.4	246	3.0	58	31	0.4	28	0.3
21	97	1.1	160	1.9	59	6	0.1	8	0.1
22	191	2.2	175	2.1	60	219	2.6	233	2.8
23	105	1.2	139	1.7	61	6	0.1	6	0.1
24	113	1.3	161	1.9	62	27	0.3	25	0.3
25	230	2.7	195	2.3	63	5	0.1	5	0.1
26	100	1.2	125	1.5	64	5	0.1	3	--
27	108	1.3	150	1.8	65	136	1.6	113	1.4
28	134	1.6	151	1.8	66	11	0.1	7	0.1
29	91	1.1	100	1.2	67	8	0.1	4	0.1
30	235	2.8	154	1.9	68	12	0.1	10	0.1
31	37	0.4	92	1.1	69	1	--	2	--
32	141	1.7	95	1.2	70+	336	3.9	252	3.0
33	47	0.5	103	1.2					
34	39	0.5	101	1.2					
35	271	3.2	109	1.3					
36	81	1.0	113	1.4					
37	35	0.4	93	1.1					
					Total	8514	100.0	8295	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

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 80 percent of children, which is also acceptable because in any survey many children are not at home or they are ill at the time of the survey so cannot be measured. 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.

Table B.2 Age distribution of eligible and interviewed women

Percent distribution of the *de facto* household population of women age 10-54 and of interviewed women age 13-49, and percentage of eligible women who were interviewed (weighted), Jammu Region of J & K, 1993

Age	All women	Ever-married women	Interviewed women		Percent interviewed
			Number	Percent	
10 - 12	608	1	NA	NA	NA
13 - 14	410	2	1	0.0	70.4
15 - 19	980	178	163	5.9	91.3
20 - 24	881	560	517	18.7	92.4
25 - 29	721	674	605	21.9	89.7
30 - 34	546	536	503	18.2	93.8
35 - 39	458	458	426	15.4	93.1
40 - 44	324	323	303	11.0	93.9
45 - 49	279	279	247	8.9	88.6
50 - 54	223	222	NA	NA	NA
13 - 49	4599	3010	2766	100.0	91.9

Note: The *de facto* population includes all residents and non residents who slept in the household the night before the interview. To allow comparison of distributions, weights for both households and interviewed women are household weights.

NA: Not applicable

Table B.3 Completeness of reporting

Percentage of observations missing information for selected demographic and health questions (weighted), Jammu Region of J & K, 1993

Subject	Reference group	Percentage missing information	Number of cases
Birth date	Births in last 15 years		
Month only		0.33	5819
Month and year		0.00	5819
Age at death	Deaths to births in last 15 years	0.00	446
Age at 1st marriage	Ever-married women	0.00	2766
Women's education	Ever-married women	0.00	2766
Child's size at birth	All births in last 0-47 months	0.00	1540
Anthropometry¹	Living children age 0-47 months		
Height		18.21	1478
Weight		18.16	1478
Height or weight		19.54	1478
Diarrhoea in last 2 weeks	Living children age 0-47 months	0.29	1478

¹Child not measured

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 100 percent of living children listed in the birth history had complete birth dates recorded as did 97 percent of children who had died. 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 information 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 Jammu, the cutoff date for asking the health questions was 1 January

Table B.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 (weighted), Jammu Region of J & K, 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	204	6	210	100.0	100.0	100.0	706	250	687	NA	NA	NA
1992	379	20	399	100.0	100.0	100.0	1019	552	989	NA	NA	NA
1991	378	17	395	100.0	100.0	100.0	1019	1052	1020	103	97	102
1990	359	15	374	100.0	100.0	100.0	860	1101	869	110	104	110
1989	274	12	286	100.0	100.0	100.0	789	1227	804	67	41	65
1988	462	45	506	100.0	97.2	99.8	856	1247	885	141	228	146
1987	383	27	410	99.1	100.0	99.1	801	1098	818	91	78	90
1986	382	24	406	99.2	100.0	99.3	953	1572	981	100	79	99
1985	378	34	412	99.9	96.3	99.6	1009	958	1005	107	126	108
1984	327	30	358	99.6	95.8	99.3	822	1141	845	85	90	86
1983	390	33	423	100.0	100.0	100.0	989	860	978	121	90	118
1982	316	44	360	99.4	97.1	99.2	730	1034	762	162	265	170
1987-1991	1855	116	1971	99.8	98.9	99.8	865	1160	880	NA	NA	NA
1982-1986	1793	165	1958	99.6	97.7	99.5	903	1060	916	NA	NA	NA
1977-1981	1606	175	1781	99.6	98.6	99.5	871	1115	893	NA	NA	NA
1972-1976	1166	154	1320	98.9	94.3	98.3	874	899	877	NA	NA	NA
1972 or earlier	914	148	1061	99.4	93.7	98.6	902	840	893	NA	NA	NA
All	7917	784	8700	99.6	96.7	99.3	883	981	891	NA	NA	NA

NA: Not applicable

¹Both 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 .

1989. An examination of Table B.4 indicates that there is little or 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 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 Jammu, because 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 for 0-4 years, 5-9 years and 10-14 years prior to the survey are 69, 76 and 65, respectively.

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 moderate increase over time from 60 to 73. One problem that is inherent

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 (weighted), Jammu Region of J & K, 1993				
Age at death (days)	Years preceding survey			
	0-4	5-9	10-14	0-14
<1	17	30	28	75
1	4	11	9	24
2	6	3	2	10
3	6	1	6	12
4	1	2	3	5
5	6	1	5	12
6	1	3	1	5
7	0	0	1	1
8	1	3	8	12
9	1	1	0	2
10	6	1	3	10
11	4	2	1	7
12	0	1	5	6
13	0	1	0	1
15	6	2	1	9
16	0	1	0	1
17	0	0	1	1
18	0	0	3	3
20	0	1	0	1
21	0	1	4	5
22	0	1	0	1
23	1	0	0	1
24	0	1	0	1
25	0	0	1	1
0-30	59	66	81	206
Percent early neonatal ¹	69	76	65	70
¹ 0-6 days/0-30 days				

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 the 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 Jammu as a whole are not likely to be understated by more than 2-3 percent due to age misreporting. There was 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 the Jammu NFHS childhood mortality data suggests that there is no serious underreporting of deaths during the time periods for which mortality rates are estimated. 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.

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 (weighted), Jammu Region of J & K, 1993

Age at death (months)	Years preceding survey			
	0-4	5-9	10-14	0-14
<1	59	66	81	206
1	6	4	10	21
2	4	9	3	16
3	2	6	9	17
4	2	5	6	12
5	1	5	5	11
6	1	1	9	11
7	0	1	5	6
8	0	6	1	8
9	3	5	3	10
10	1	3	1	6
11	1	1	3	4
12	4	4	13	21
13	0	1	1	3
14	0	1	1	3
15	1	1	0	2
16	0	1	0	1
18	3	8	7	18
0-11	80	113	134	327
Percent neonatal ¹	73	58	60	63

¹Under 1 month/under 1 year

APPENDIX C

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Ministry of Health and Family Welfare

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APPENDIX D
SURVEY INSTRUMENTS

**NATIONAL FAMILY HEALTH SURVEY
(MCH AND FAMILY PLANNING)
HOUSEHOLD 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: 25px; height: 25px;"></td><td style="width: 25px; height: 25px;"></td><td style="width: 25px; height: 25px;"></td><td style="width: 25px; height: 25px;"></td></tr> <tr><td style="width: 25px; height: 25px;"></td><td style="width: 25px; height: 25px;"></td><td style="width: 25px; height: 25px;"></td><td style="width: 25px; height: 25px;"></td></tr> <tr><td style="width: 25px; height: 25px;"></td><td style="width: 25px; height: 25px;"></td><td style="width: 25px; height: 25px;"></td><td style="width: 25px; height: 25px;"></td></tr> <tr><td style="width: 25px; height: 25px;"></td><td style="width: 25px; height: 25px;"></td><td style="width: 25px; height: 25px;"></td><td style="width: 25px; height: 25px;"></td></tr> <tr><td style="width: 25px; height: 25px;"></td><td style="width: 25px; height: 25px;"></td><td style="width: 25px; height: 25px;"></td><td style="width: 25px; height: 25px;"></td></tr> <tr><td style="width: 25px; height: 25px;"></td><td style="width: 25px; height: 25px;"></td><td style="width: 25px; height: 25px;"></td><td style="width: 25px; height: 25px;"></td></tr> <tr><td style="width: 25px; height: 25px;"></td><td style="width: 25px; height: 25px;"></td><td style="width: 25px; height: 25px;"></td><td style="width: 25px; height: 25px;"></td></tr> <tr><td style="width: 25px; height: 25px;"></td><td style="width: 25px; height: 25px;"></td><td style="width: 25px; height: 25px;"></td><td style="width: 25px; height: 25px;"></td></tr> </table>																																
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 OF HOUSEHOLD HEAD _____																																	
ADDRESS OF HOUSEHOLD _____ _____ _____																																	

INTERVIEWER VISITS				
	1	2	3	FINAL VISIT
DATE	_____	_____	_____	DAY <table border="1" style="width: 20px; height: 20px;"></table>
				MONTH <table border="1" style="width: 20px; height: 20px;"></table>
				YEAR <table border="1" style="width: 20px; height: 20px;"></table>
INTERVIEWER'S NAME	_____	_____	_____	NAME <table border="1" style="width: 20px; height: 20px;"></table>
RESULT*	_____	_____	_____	RESULT <table border="1" style="width: 20px; height: 20px;"></table>
NEXT VISIT: DATE TIME	_____ _____	_____ _____		TOTAL NUMBER OF VISITS <table border="1" style="width: 20px; height: 20px;"></table>
<p>*RESULT CODES:</p> <p>1 COMPLETED</p> <p>2 HOUSEHOLD PRESENT BUT NO COMPETENT RESP. AT HOME</p> <p>3 HOUSEHOLD ABSENT</p> <p>4 POSTPONED</p> <p>5 REFUSED</p> <p>6 DWELLING VACANT OR ADDRESS NOT A DWELLING</p> <p>7 DWELLING DESTROYED</p> <p>8 DWELLING NOT FOUND</p> <p>9 OTHER _____ (SPECIFY)</p>				<p>TOTAL IN HOUSEHOLD <table border="1" style="width: 20px; height: 20px;"></table></p> <p>TOTAL ELIGIBLE WOMEN <table border="1" style="width: 20px; height: 20px;"></table></p> <p>LINE NO. OF RESP. TO HOUSE-HOLD SCHEDULE <table border="1" style="width: 20px; height: 20px;"></table></p>

NAME DATE	SPOT-CHECKED BY	FIELD EDITED BY	OFFICE EDITED BY	KEYED BY	KEYED BY
_____	_____	_____	_____	_____	<table border="1" style="width: 20px; height: 20px;"></table>

245

HOUSEHOLD SCHEDULE

1	RECORD THE TIME.	HOUR..... MINUTES.....	<table border="1" style="width: 100%; height: 40px;"> <tr><td style="width: 50%; height: 20px;"></td><td style="width: 50%; height: 20px;"></td></tr> <tr><td style="width: 50%; height: 20px;"></td><td style="width: 50%; 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)			MARITAL STATUS**	EDUCATION		
(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	IF ATTEND (12)
	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.	What is the relationship of (NAME) to the head of the household?	Does (NAME) usually live here?	Did (NAME) stay here last night?	Is (NAME) male or female?	How old is (NAME)?	What is the current marital status of (NAME)?	Can (NAME) read and write?	Has (NAME) ever been to school?	What is the highest grade (NAME) completed?***

LINE NO.	USUAL RESIDENTS AND VISITORS	RELATIONSHIP TO HEAD OF HOUSEHOLD*	RESIDENCE		SEX	AGE	IF AGED 6 YEARS OR OLD			
			YES NO	YES NO			CM S W D NM	YES NO	YES NO	GRADE
01			1 2	1 2	M F	IN YEARS	1 2 3 4 5	1 2	1 2	GRADE
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.

PERSON		AFTER COMPLETING COLUMNS 1-14 FOR ALL LISTED PERSONS, ASK:						ELIGIBILITY					
EDUCATIONAL SCHOOL	OCCUPATION	Does anyone listed suffer from:						CIRCLE LINE NUMBER OF WOMEN ELIGIBLE FOR INDIVIDUAL INTERVIEW (EVER MARRIED FEMALES AGED 13-49)					
	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)							
IF AGED LESS THAN 15 YEARS	Is (NAME) still in school? (13)	YES PARTIAL 1	YES COMPLETE 2	NO 3	YES 1	NO 2	YES 1	YES HANDS 2	YES LEGS 3	NO BOTH 4	YES 1	NO 2	
													01
													02
													03
													04
													05
													06
													07
													08

HOUSEHOLD SCHEDULE (CONTINUED)

(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
			YES NO	YES NO	M F	IN YEARS	CM S W D NM	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 | 05= GRANDCHILD | 09= BROTHER OR SISTER-IN-LAW |
| 02= WIFE OR HUSBAND | 06= PARENT | 10= OTHER RELATIVE |
| 03= SON OR DAUGHTER | 07= PARENT-IN-LAW | 11= ADOPTED/FOSTER CHILD |
| 04= SON OR DAUGHTER-IN-LAW | 08= BROTHER OR SISTER | 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	09
	<input type="checkbox"/>	1 2 3	1 2	1 2	1 2 3 4	1 2	10
	<input type="checkbox"/>	1 2 3	1 2	1 2	1 2 3 4	1 2	11
	<input type="checkbox"/>	1 2 3	1 2	1 2	1 2 3 4	1 2	12
	<input type="checkbox"/>	1 2 3	1 2	1 2	1 2 3 4	1 2	13
	<input type="checkbox"/>	1 2 3	1 2	1 2	1 2 3 4	1 2	14
	<input type="checkbox"/>	1 2 3	1 2	1 2	1 2 3 4	1 2	15
	<input type="checkbox"/>	1 2 3	1 2	1 2	1 2 3 4	1 2	16
	<input type="checkbox"/>	1 2 3	1 2	1 2	1 2 3 4	1 2	17
	<input type="checkbox"/>	1 2 3	1 2	1 2	1 2 3 4	1 2	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																																																
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	
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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>YES.....1 NO.....2</p>	→45
44	<p>How many births took place?</p>	<p>TOTAL BIRTHS..... <input type="text"/></p>	
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	<p>How many births took place?</p>	<p>TOTAL BIRTHS..... <input type="text"/></p>	
47	<p>CHECK 44 AND 46:</p>	<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 <hr/> (NAME)	RESIDENT...1 VISITOR...2	LINE NUMBER <input type="text"/> MOTHER DIED.....95 LEFT HH..96	AGE OF MOTHER <input type="text"/>	SINGLE...1 MULT....2	BOY...1 GIRL..2	MONTH... <input type="text"/> YEAR... <input type="text"/>	YES...1 (GO TO NEXT BIRTH) NO....2	DAYS....1 <input type="text"/> MONTHS..2 <input type="text"/>
02 <hr/> (NAME)	RESIDENT...1 VISITOR...2	LINE NUMBER <input type="text"/> MOTHER DIED.....95 LEFT HH..96	AGE OF MOTHER <input type="text"/>	SINGLE...1 MULT....2	BOY...1 GIRL..2	MONTH... <input type="text"/> YEAR... <input type="text"/>	YES...1 (GO TO NEXT BIRTH) NO....2	DAYS....1 <input type="text"/> MONTHS..2 <input type="text"/>
03 <hr/> (NAME)	RESIDENT...1 VISITOR...2	LINE NUMBER <input type="text"/> MOTHER DIED.....95 LEFT HH..96	AGE OF MOTHER <input type="text"/>	SINGLE...1 MULT....2	BOY...1 GIRL..2	MONTH... <input type="text"/> YEAR... <input type="text"/>	YES...1 (GO TO NEXT BIRTH) NO....2	DAYS....1 <input type="text"/> MONTHS..2 <input type="text"/>
04 <hr/> (NAME)	RESIDENT...1 VISITOR...2	LINE NUMBER <input type="text"/> MOTHER DIED.....95 LEFT HH..96	AGE OF MOTHER <input type="text"/>	SINGLE...1 MULT....2	BOY...1 GIRL..2	MONTH... <input type="text"/> YEAR... <input type="text"/>	YES...1 (GO TO NEXT BIRTH) NO....2	DAYS....1 <input type="text"/> MONTHS..2 <input type="text"/>
05 <hr/> (NAME)	RESIDENT...1 VISITOR...2	LINE NUMBER <input type="text"/> MOTHER DIED.....95 LEFT HH..96	AGE OF MOTHER <input type="text"/>	SINGLE...1 MULT....2	BOY...1 GIRL..2	MONTH... <input type="text"/> YEAR... <input type="text"/>	YES...1 (GO TO NEXT BIRTH) NO....2	DAYS....1 <input type="text"/> MONTHS..2 <input type="text"/>
06 <hr/> (NAME)	RESIDENT...1 VISITOR...2	LINE NUMBER <input type="text"/> MOTHER DIED.....95 LEFT HH..96	AGE OF MOTHER <input type="text"/>	SINGLE...1 MULT....2	BOY...1 GIRL..2	MONTH... <input type="text"/> YEAR... <input type="text"/>	YES...1 (GO TO NEXT BIRTH) NO....2	DAYS....1 <input type="text"/> MONTHS..2 <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</p>	60
59	How many persons died?	TOTAL DEATHS..... <input type="text"/>	
60	<p>Did any visitor to this household die since (Pongal/Makar Sankranti/January) 1991?</p>	<p>YES.....1</p> <p>NO.....2</p>	62
61	How many deaths took place?	TOTAL DEATHS..... <input type="text"/>	
62	CHECK 59 AND 61:	<p>ONE OR MORE DEATHS <input type="checkbox"/></p> <p>NO DEATHS <input type="checkbox"/></p>	75

RECORD NAMES OF DEATHS SINCE JANUARY 1991 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 (GO TO 73)← NO.....2	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 (GO TO 73)← NO.....2	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 (GO TO 73)← NO.....2	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 <input type="checkbox"/>		NUMBERS ARE DIFFERENT <input type="checkbox"/>		→ PROBE AND RECONCILE					
75	RECORD THE TIME.								HOUR.....	MINUTES.....

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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"> <tr><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> </table>																					
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)	<table border="1"> <tr><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> </table>																					
HOUSEHOLD NUMBER.....																						
NAME AND LINE NUMBER OF WOMAN _____	<table border="1"> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> </table>																					
ADDRESS OF HOUSEHOLD _____																						

INTERVIEWER VISITS				
	1	2	3	FINAL VISIT
DATE				DAY MONTH YEAR
INTERVIEWER'S NAME				NAME
RESULT*				RESULT
NEXT VISIT: DATE TIME				TOTAL NUMBER OF VISITS

*RESULT CODES:
1 COMPLETED 3 POSTPONED 5 PARTLY COMPLETED
2 NOT AT HOME 4 REFUSED 6 OTHER _____ (SPECIFY)

LANGUAGE OF QUESTIONNAIRE**.....	<table border="1"> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> </table>								
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								

	SPOT-CHECKED BY	FIELD EDITED BY	OFFICE EDITED BY	KEYED BY	KEYED BY
NAME	_____	_____	_____	_____	_____
DATE	_____	_____	_____	_____	_____

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	105 105
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	111 111 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" style="display: inline-table; vertical-align: middle;"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>				
111	Now 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" style="display: inline-table; vertical-align: middle;"> <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" style="display: inline-table; vertical-align: middle;"> <tr><td> </td><td> </td></tr> </table>				
114	How old were you when your first marriage dissolved?	AGE IN COMPLETED YEARS.....	<table border="1" style="display: inline-table; vertical-align: middle;"> <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" style="display: inline-table; vertical-align: middle;"> <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	→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 6-12 <input type="checkbox"/>	→126
	GRADE 0-5 <input type="checkbox"/>	GRADE 13+ <input type="checkbox"/>	→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	<p>CHECK Q.5 IN THE HOUSEHOLD SCHEDULE:</p> <p>THE WOMAN INTERVIEWED IS NOT A USUAL RESIDENT <input type="checkbox"/></p> <p style="margin-left: 100px;">↓</p> <p>THE WOMAN INTERVIEWED IS A USUAL RESIDENT <input type="checkbox"/> → 201</p>														
130	How long have you been visiting in this house?	DAYS.....1 <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table> MONTHS.....2 <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table> YEARS.....3 <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table>													
131	How much longer do you intend to stay here?	DAYS.....1 <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table> MONTHS.....2 <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table> YEARS.....3 <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table> DK.....998													
132	What is the main reason for your visiting this household?	VISITING FOR DELIVERY PURPOSE..1 VISITING FOR OTHER PURPOSE.....2													
133	<p>Now I would like to ask about the place in which you usually live.</p> <p>Do you usually live in a city, in a town, or in a village?</p> <p>IF CITY:</p> <p style="margin-left: 40px;">In which city do you live? _____</p>	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
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>A sewing machine?</td> <td>SEWING MACHINE.....1</td> <td>2</td> </tr> <tr> <td>A clock or watch?</td> <td>CLOCK/WATCH.....1</td> <td>2</td> </tr> <tr> <td>A sofa set?</td> <td>SOFA SET.....1</td> <td>2</td> </tr> <tr> <td>A fan?</td> <td>FAN.....1</td> <td>2</td> </tr> <tr> <td>A radio or transistor?</td> <td>RADIO/TRANSISTOR.....1</td> <td>2</td> </tr> <tr> <td>A refrigerator?</td> <td>REFRIGERATOR.....1</td> <td>2</td> </tr> <tr> <td>A television?</td> <td>TELEVISION.....1</td> <td>2</td> </tr> <tr> <td>A VCR or VCP?</td> <td>VCR/VCP.....1</td> <td>2</td> </tr> <tr> <td>A bicycle?</td> <td>BICYCLE.....1</td> <td>2</td> </tr> <tr> <td>A motorcycle or scooter?</td> <td>MOTORCYCLE/SCOOTER.....1</td> <td>2</td> </tr> <tr> <td>A car?</td> <td>CAR.....1</td> <td>2</td> </tr> <tr> <td>A bullock cart?</td> <td>BULLOCK CART.....1</td> <td>2</td> </tr> <tr> <td>A tractor?</td> <td>TRACTOR.....1</td> <td>2</td> </tr> <tr> <td>A thresher?</td> <td>THRESHER.....1</td> <td>2</td> </tr> <tr> <td>A water pump?</td> <td>WATER PUMP.....1</td> <td>2</td> </tr> </tbody> </table>		YES	NO	A sewing machine?	SEWING MACHINE.....1	2	A clock or watch?	CLOCK/WATCH.....1	2	A sofa set?	SOFA SET.....1	2	A fan?	FAN.....1	2	A radio or transistor?	RADIO/TRANSISTOR.....1	2	A refrigerator?	REFRIGERATOR.....1	2	A television?	TELEVISION.....1	2	A VCR or VCP?	VCR/VCP.....1	2	A bicycle?	BICYCLE.....1	2	A motorcycle or scooter?	MOTORCYCLE/SCOOTER.....1	2	A car?	CAR.....1	2	A bullock cart?	BULLOCK CART.....1	2	A tractor?	TRACTOR.....1	2	A thresher?	THRESHER.....1	2	A water pump?	WATER PUMP.....1	2	
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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; vertical-align: middle;"><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; vertical-align: middle;"><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; vertical-align: middle;"><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; vertical-align: middle;"><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		

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.

216	217	218	219	220	221 IF ALIVE:	222 IF ALIVE:	223 IF DEAD:
What name was given to your (first, 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? RECORD AGE IN COMPLETED YEARS.	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.

01 _____ (NAME)	SING...1 MULT...2	BOY...1 GIRL...2	MONTH.. <input type="text"/> YEAR... <input type="text"/>	YES...1 NO....2 ↓ 223	AGE IN YEARS <input type="text"/>	YES.....1 NO.....2 ↓ (GO TO NEXT BIRTH)	DAYS....1 MONTHS..2 YEARS...3
02 _____ (NAME)	SING...1 MULT...2	BOY...1 GIRL...2	MONTH.. <input type="text"/> YEAR... <input type="text"/>	YES...1 NO....2 ↓ 223	AGE IN YEARS <input type="text"/>	YES.....1 NO.....2 ↓ (GO TO NEXT BIRTH)	DAYS....1 MONTHS..2 YEARS...3
03 _____ (NAME)	SING...1 MULT...2	BOY...1 GIRL...2	MONTH.. <input type="text"/> YEAR... <input type="text"/>	YES...1 NO....2 ↓ 223	AGE IN YEARS <input type="text"/>	YES.....1 NO.....2 ↓ (GO TO NEXT BIRTH)	DAYS....1 MONTHS..2 YEARS...3
04 _____ (NAME)	SING...1 MULT...2	BOY...1 GIRL...2	MONTH.. <input type="text"/> YEAR... <input type="text"/>	YES...1 NO....2 ↓ 223	AGE IN YEARS <input type="text"/>	YES.....1 NO.....2 ↓ (GO TO NEXT BIRTH)	DAYS....1 MONTHS..2 YEARS...3
05 _____ (NAME)	SING...1 MULT...2	BOY...1 GIRL...2	MONTH.. <input type="text"/> YEAR... <input type="text"/>	YES...1 NO....2 ↓ 223	AGE IN YEARS <input type="text"/>	YES.....1 NO.....2 ↓ (GO TO NEXT BIRTH)	DAYS....1 MONTHS..2 YEARS...3
06 _____ (NAME)	SING...1 MULT...2	BOY...1 GIRL...2	MONTH.. <input type="text"/> YEAR... <input type="text"/>	YES...1 NO....2 ↓ 223	AGE IN YEARS <input type="text"/>	YES.....1 NO.....2 ↓ (GO TO NEXT BIRTH)	DAYS....1 MONTHS..2 YEARS...3
07 _____ (NAME)	SING...1 MULT...2	BOY...1 GIRL...2	MONTH.. <input type="text"/> YEAR... <input type="text"/>	YES...1 NO....2 ↓ 223	AGE IN YEARS <input type="text"/>	YES.....1 NO.....2 ↓ (GO TO NEXT BIRTH)	DAYS....1 MONTHS..2 YEARS...3

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? RECORD AGE IN COMPLETED YEARS.	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"/> <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"/> <input type="text"/> <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"/> <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"/> <input type="text"/> <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"/> <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"/> <input type="text"/> <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"/> <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"/> <input type="text"/> <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"/> <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"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>

224	COMPARE 208 WITH NUMBER OF BIRTHS IN HISTORY ABOVE AND MARK: NUMBERS ARE SAME <input type="checkbox"/> ↓ NUMBERS ARE DIFFERENT <input type="checkbox"/> (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. <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
225	CHECK 219 AND ENTER THE NUMBER OF BIRTHS SINCE JANUARY 1989. IF NONE, RECORD '0'. <input type="text"/>

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
226	CHECK 107: CURRENTLY MARRIED <input type="checkbox"/> WIDOWED <input type="checkbox"/> DIVORCED <input type="checkbox"/> SEPARATED <input type="checkbox"/>	_____ → 232	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	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	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)?
01	YES/SPONTANEOUS.....1 YES/PROBED.....2 NO.....3	YES.....1 NO.....2	YES.....1 NO.....2
	<u>Pill</u> Women can take a pill every day.		
02	YES/SPONTANEOUS.....1 YES/PROBED.....2 NO.....3	YES.....1 NO.....2	YES.....1 NO.....2
	<u>Loop or Copper I</u> Women can have a loop or coil placed inside them by a doctor or a nurse.		
03	YES/SPONTANEOUS.....1 YES/PROBED.....2 NO.....3	YES.....1 NO.....2	YES.....1 NO.....2
	<u>Injections</u> Women can have an injection given by a doctor or nurse which stops them from becoming pregnant for several months.		
04	YES/SPONTANEOUS.....1 YES/PROBED.....2 NO.....3	YES.....1 NO.....2	YES.....1 NO.....2
	<u>Condom or Nirodh</u> Men can use a rubber sheath during sexual intercourse.		
05	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
	<u>Female sterilization</u> Women can have an operation to avoid having any more children.		

	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 Male sterilization 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 Rhythm or Periodic abstinence 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 Withdrawal Men can be careful and pull out before climax.	YES.....1 NO.....2	
09	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/SPONTANEOUS.....1 NO.....3 YES.....1 NO.....2 YES.....1 NO.....2 YES.....1 NO.....2	

305 | CHECK 303: NOT A SINGLE "YES" (NEVER USED) | AT LEAST ONE "YES" (EVER USED) → SKIP TO 308

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
306	<p>Have you ever used anything or tried in any way to delay or avoid getting pregnant?</p>	<p>YES..... <input type="checkbox"/></p> <p>NO..... <input type="checkbox"/></p>	<p>→344</p>
307	<p>What have you used or done? CORRECT 303-305 (AND 302 IF NECESSARY).</p>		
308	<p>Now I would like to ask you about the time when you first did something or used a method to avoid getting pregnant.</p> <p>How many living children did you have at that time, if any?</p> <p>IF NONE, RECORD '00'.</p>	<p>NUMBER OF CHILDREN..... <input type="text"/> <input type="text"/></p>	
309	<p>CHECK 107:</p> <p>CURRENTLY MARRIED <input type="checkbox"/></p> <p>WIDOWED DIVORCED SEPARATED <input type="checkbox"/></p>	<p>→352</p>	
310	<p>CHECK 227:</p> <p>NOT PREGNANT OR UNSURE <input type="checkbox"/></p> <p>PREGNANT <input type="checkbox"/></p>	<p>→345</p>	
311	<p>CHECK 303:</p> <p>NEITHER STERILIZED <input type="checkbox"/></p> <p>HE OR SHE STERILIZED <input type="checkbox"/></p>	<p>→313A</p>	
312	<p>Are you or your husband currently doing something or using any method to delay or avoid getting pregnant?</p>	<p>YES.....1</p> <p>NO.....2</p>	<p>→342</p>

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
313	Which method are you using?	PILL.....01 LOOP/COPPER T.....02 INJECTION.....03 CONDOM/NIRODH.....04 FEMALE STERILIZATION.....05 MALE STERILIZATION.....06 RHYTHM/PERIODIC ABSTINENCE.....07 WITHDRAWAL.....08 OTHER.....09 (SPECIFY)	→321 →328 →330 →332 →341
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	Where did you obtain the pills the last time? _____ (NAME OF HOSPITAL IF CODE 11 OR 21)	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)	→352
321	Who inserted the (LOOP/COPPER T)?	GOVERNMENT DOCTOR.....1 GOVERNMENT PARAMEDIC.....2 PRIVATE DOCTOR.....3 PRIVATE NURSE.....4	
322	Where did you obtain the (LOOP/COPPER T)? _____ (NAME OF HOSPITAL IF CODE 11 OR 21)	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)	
323	For how many months have you been using the (LOOP/COPPER T) continuously? IF LESS THAN 1 MONTH, RECORD '00'.	MONTHS..... <input type="text"/> <input type="text"/> 8 YEARS OR LONGER.....96	
324	Since the (LOOP/COPPER T) was inserted, did any health worker visit you for follow-up related to use of the (LOOP/COPPER T)?	YES.....1 NO.....2	
325	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)?	YES.....1 NO.....2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
326	Have you had any problems with the use of the (LOOP/COPPER T)?	YES.....1 NO.....2	→352
327	What problems have you had? RECORD ALL PROBLEMS MENTIONED	CRAMPS.....A BACKACHE.....B IRREGULAR PERIODS.....C EXCESSIVE BLEEDING.....D WEAKNESS/INABILITY TO WORK.....E EXPULSION.....F OTHER.....G (SPECIFY)	→352
328	For how many months have you been using injections continuously? IF LESS THAN 1 MONTH, RECORD '00'.	MONTHS..... <input type="text"/> <input type="text"/> 8 YEARS OR LONGER.....96	
329	Where did you obtain the injection the last time? _____ (NAME OF HOSPITAL IF CODE 11 OR 21)	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)	→352
330	For how many months have you been using (condoms/Nirodhs) continuously? IF LESS THAN 1 MONTH, RECORD '00'.	MONTHS..... <input type="text"/> <input type="text"/> 8 YEARS OR LONGER.....96	
331	Where did you obtain the (condoms/Nirodhs) the last time? _____ (NAME OF HOSPITAL IF CODE 11 OR 21)	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	→352

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
332	In what month and year was the sterilization operation performed?	MONTH..... <input type="text"/> <input type="text"/> YEAR..... <input type="text"/> <input type="text"/> DK.....9998	→334
333	How long ago were (you/your husband) sterilized?	MONTHS AGO.....1 <input type="text"/> <input type="text"/> YEARS AGO.....2 <input type="text"/> <input type="text"/>	
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..... <input type="text"/> <input type="text"/> 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 style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; border-right: 1px solid black;">CURRENTLY MARRIED</td> <td style="width: 10%; text-align: center;"><input type="checkbox"/></td> <td style="width: 25%; border-right: 1px solid black;">WIDOWED DIVORCED SEPARATED</td> <td style="width: 10%; text-align: center;"><input type="checkbox"/></td> <td style="width: 30%;"></td> </tr> <tr> <td></td> <td style="text-align: center;">↓ v</td> <td></td> <td></td> <td style="text-align: right; vertical-align: middle;">→352</td> </tr> </table>		CURRENTLY MARRIED	<input type="checkbox"/>	WIDOWED DIVORCED SEPARATED	<input type="checkbox"/>			↓ v			→352
CURRENTLY MARRIED	<input type="checkbox"/>	WIDOWED DIVORCED SEPARATED	<input type="checkbox"/>										
	↓ v			→352									
345	Do you intend to use a method to delay or avoid pregnancy at any time in the future?	YES.....1 NO.....2 DK.....8	→347 →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 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)	→350										
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/NIRODH.....04 FEMALE STERILIZATION.....05 MALE STERILIZATION.....06 RHYTHM/PERIODIC ABSTINENCE.....07 WITHDRAWAL.....08 OTHER _____ 09 (SPECIFY) UNSURE.....98	→350										

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
349	<p>Where can you get (METHOD MENTIONED IN 348)?</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> <p>DK.....98</p>	→352
350	<p>Do you know of a place where you can obtain a method of family planning?</p>	<p>YES.....1</p> <p>NO.....2</p>	→352
351	<p>Where is that?</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	<p>In the last month, have you heard a message about family planning on:</p> <p>the radio?</p> <p>television?</p>	<p>YES NO</p> <p>RADIO.....1 2</p> <p>TELEVISION.....1 2</p>	
353	<p>Is it acceptable or not acceptable to you for family planning information to be provided on the radio or television?</p>	<p>ACCEPTABLE.....1</p> <p>NOT ACCEPTABLE.....2</p> <p>DK.....8</p>	

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"/>
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FROM Q. 216 AND Q. 220	LAST BIRTH	NEXT-TO-LAST BIRTH	SECOND-FROM-LAST BIRTH
	NAME <input type="text"/>	NAME <input type="text"/>	NAME <input type="text"/>
	ALIVE <input type="checkbox"/> DEAD <input type="checkbox"/>	ALIVE <input type="checkbox"/> DEAD <input type="checkbox"/>	ALIVE <input type="checkbox"/> DEAD <input type="checkbox"/>

403 At the time you became pregnant with (NAME), did you want to become pregnant <u>then</u> , did you want to wait until <u>later</u> or did you want <u>no (more)</u> 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"/>

	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____	
407	How many times did she visit you? NO. OF VISITS..... <input type="text"/> <input type="text"/>	NO. OF VISITS..... <input type="text"/> <input type="text"/>	NO. OF VISITS..... <input type="text"/> <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"/> <input type="text"/>	MONTHS..... <input type="text"/> <input type="text"/>	MONTHS..... <input type="text"/> <input type="text"/>	
411	How many times did you go for an antenatal check-up? NO. OF TIMES..... <input type="text"/> <input type="text"/> (SKIP TO 413)←	NO. OF TIMES..... <input type="text"/> <input type="text"/> (SKIP TO 413)←	NO. OF TIMES..... <input type="text"/> <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)

	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
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./MUNICPL HOSPITL..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./MUNICPL HOSPITL..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./MUNICPL HOSPITL..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>ANN/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>ANN/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>ANN/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	How much did (NAME) weigh? GRAMS.....1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> POUNDS OUNCES POUNDS....2 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> DK.....99998	GRAMS.....1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> POUNDS OUNCES POUNDS....2 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> DK.....99998	GRAMS.....1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> POUNDS OUNCES POUNDS....2 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> DK.....99998
424	Has your period returned since the birth of (NAME)? YES1 (SKIP TO 426) ← NO.....2 (SKIP TO 427) ←		
425		YES1 NO.....2 (SKIP TO 429) ←	YES1 NO.....2 (SKIP TO 429) ←
426	For how many months after the birth of (NAME) did you <u>not</u> have a period? MONTHS..... <input type="text"/> <input type="text"/> DK.....98	MONTHS..... <input type="text"/> <input type="text"/> DK.....98	MONTHS..... <input type="text"/> <input type="text"/> DK.....98
427	CHECK 227: RESPONDENT PREGNANT? NOT PREGNANT <input type="checkbox"/> PREGNANT OR UNSURE <input type="checkbox"/> (SKIP TO 429)		
428	Have you resumed sexual relations since the birth of (NAME)? YES.....1 NO.....2 (SKIP TO 430) ←		
429	For how many months after the birth of (NAME) did you <u>not have</u> sexual relations? MONTHS..... <input type="text"/> <input type="text"/> DK.....98	MONTHS..... <input type="text"/> <input type="text"/> DK.....98	MONTHS..... <input type="text"/> <input type="text"/> DK.....98

	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

	MONTHS..... <input type="text"/>	MONTHS..... <input type="text"/>	MONTHS..... <input type="text"/>
For how many months did you breastfeed (NAME)?	UNTIL DIED.....96 (SKIP TO 443)←	STILL BREASTFEEDING.....95 (SKIP TO 442)←	UNTIL DIED.....96 (SKIP TO 443)←

441

Why did you stop breastfeeding (NAME)?

	01	02	03	04	05	06	07	08	09	10	11
MOTHER ILL/WEAK.....	01	02	03	04	05	06	07	08	09	10	11
CHILD ILL/WEAK.....											
CHILD DIED.....											
NIPPLE/BREAST PROBLEM.....											
INSUFFICIENT MILK.....											
MOTHER WORKING.....											
CHILD REFUSED.....											
WEANING AGE.....											
BECAME PREGNANT.....											
STARTED USING CONTRACEPTION.....											
OTHER.....											
	(SPECIFY)										

442 CHECK 220: CHILD ALIVE?

	ALIVE <input type="checkbox"/>	DEAD <input type="checkbox"/>	ALIVE <input type="checkbox"/>	DEAD <input type="checkbox"/>	ALIVE <input type="checkbox"/>	DEAD <input type="checkbox"/>
	↓ (SKIP TO 444)	↓	↓ (SKIP TO 444)	↓	↓ (SKIP TO 444)	↓

	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
443	<p>Was (NAME) ever given water or anything else to drink or eat (other than breastmilk)?</p> <p>YES.....1 NO.....2 (SKIP TO 447)←</p>	<p>YES.....1 NO.....2 (SKIP TO 447)←</p>	<p>YES.....1 NO.....2 (SKIP TO 447)←</p>
444	<p>How many months old was (NAME) when you started giving the following on a regular basis?</p> <p>Plain water? AGE IN MONTHS..... <input type="text"/> <input type="text"/> NOT GIVEN.....96</p> <p>Formula or milk other than breastmilk? AGE IN MONTHS..... <input type="text"/> <input type="text"/> NOT GIVEN.....96</p> <p>Other liquids? AGE IN MONTHS..... <input type="text"/> <input type="text"/> NOT GIVEN.....96</p> <p>Any solid or mushy food? AGE IN MONTHS..... <input type="text"/> <input type="text"/> NOT GIVEN.....96</p> <p>IF LESS THAN 1 MONTH, RECORD '00'.</p>	<p>AGE IN MONTHS..... <input type="text"/> <input type="text"/> NOT GIVEN.....96</p> <p>(SKIP TO 447)</p>	<p>AGE IN MONTHS..... <input type="text"/> <input type="text"/> NOT GIVEN.....96</p> <p>(SKIP TO 447)</p>
445	<p>CHECK 220: CHILD ALIVE?</p>	<p>ALIVE <input type="checkbox"/> DEAD <input type="checkbox"/> ↓ ↓ (SKIP TO 447)</p>	
446	<p>Did (NAME) drink anything from a bottle with a nipple yesterday or last night?</p>	<p>YES.....1 NO.....2 DK.....8</p>	
447	<p>→ GO BACK TO 403 FOR NEXT BIRTH; OR, IF NO MORE BIRTHS, GO TO FIRST COLUMN OF 448.</p>		

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	<table border="1" style="width:100%; height: 20px;"> <tr><td style="width:50%;"></td><td style="width:50%;"></td></tr> </table>			<table border="1" style="width:100%; height: 20px;"> <tr><td style="width:50%;"></td><td style="width:50%;"></td></tr> </table>			<table border="1" style="width:100%; height: 20px;"> <tr><td style="width:50%;"></td><td style="width:50%;"></td></tr> </table>		

FROM Q. 216 AND Q. 220	<p align="center">LAST BIRTH</p> NAME _____ ALIVE <input type="checkbox"/> DEAD <input type="checkbox"/> <div style="text-align: center;">v v</div>	<p align="center">NEXT-TO-LAST BIRTH</p> NAME _____ ALIVE <input type="checkbox"/> DEAD <input type="checkbox"/> <div style="text-align: center;">v v</div>	<p align="center">SECOND-FROM-LAST BIRTH</p> NAME _____ ALIVE <input type="checkbox"/> DEAD <input type="checkbox"/> <div style="text-align: center;">v v</div>
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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
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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]
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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.	<table border="1" style="width:100%; border-collapse: collapse;"> <tr><th colspan="4">DAY</th><th colspan="4">MO</th><th colspan="4">YR</th></tr> <tr><td>BCG</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>P0</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>D1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>D2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>D3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>P1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>P2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>P3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>MEA</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>	DAY				MO				YR				BCG																P0																D1																D2																D3																P1																P2																P3																MEA																<table border="1" style="width:100%; 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	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</p> <p>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</p> <p>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</p> <p>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</p> <p>NO.....2 (SKIP TO 455) ←</p> <p>DK.....8</p>	<p>YES.....1</p> <p>NO.....2 (SKIP TO 455) ←</p> <p>DK.....8</p>	<p>YES.....1</p> <p>NO.....2 (SKIP TO 455) ←</p> <p>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</p> <p>NO.....2</p> <p>DK.....8</p>	<p>YES.....1</p> <p>NO.....2</p> <p>DK.....8</p>	<p>YES.....1</p> <p>NO.....2</p> <p>DK.....8</p>
	<p>A vaccination against diphtheria, whooping cough and tetanus given as an injection?</p> <p>IF YES:</p> <p>How many times?</p>	<p>YES.....1</p> <p>NO.....2</p> <p>DK.....8</p> <p>NUMBER OF TIMES..... <input type="text"/></p>	<p>YES.....1</p> <p>NO.....2</p> <p>DK.....8</p> <p>NUMBER OF TIMES..... <input type="text"/></p>	<p>YES.....1</p> <p>NO.....2</p> <p>DK.....8</p> <p>NUMBER OF TIMES..... <input type="text"/></p>
	<p>Polio vaccine, that is, drops in the mouth?</p> <p>IF YES:</p> <p>How many times?</p> <p>IF YES:</p> <p>When was the first polio vaccine given -- just after birth or later?</p>	<p>YES.....1</p> <p>NO.....2</p> <p>DK.....8</p> <p>NUMBER OF TIMES..... <input type="text"/></p> <p>JUST AFTER BIRTH.....1</p> <p>LATER.....2</p> <p>DK.....8</p>	<p>YES.....1</p> <p>NO.....2</p> <p>DK.....8</p> <p>NUMBER OF TIMES..... <input type="text"/></p> <p>JUST AFTER BIRTH.....1</p> <p>LATER.....2</p> <p>DK.....8</p>	<p>YES.....1</p> <p>NO.....2</p> <p>DK.....8</p> <p>NUMBER OF TIMES..... <input type="text"/></p> <p>JUST AFTER BIRTH.....1</p> <p>LATER.....2</p> <p>DK.....8</p>
	<p>An injection against measles?</p>	<p>YES.....1</p> <p>NO.....2</p> <p>DK.....8</p>	<p>YES.....1</p> <p>NO.....2</p> <p>DK.....8</p>	<p>YES.....1</p> <p>NO.....2</p> <p>DK.....8</p>

	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
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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
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456	Did (NAME) ever have:	YES NO	YES NO	YES NO
	Whooping cough?	WHOOPIING COUGH.... 1 2	WHOOPIING COUGH.... 1 2	WHOOPIING COUGH.... 1 2
	Measles?	MEASLES..... 1 2	MEASLES..... 1 2	MEASLES..... 1 2
	Polio?	POLIO..... 1 2	POLIO..... 1 2	POLIO..... 1 2
	Diphtheria?	DIPHTHERIA..... 1 2	DIPHTHERIA..... 1 2	DIPHTHERIA..... 1 2
	Chicken pox?	CHICKEN POX..... 1 2	CHICKEN POX..... 1 2	CHICKEN POX..... 1 2
	Rickets?	RICKETS..... 1 2	RICKETS..... 1 2	RICKETS..... 1 2

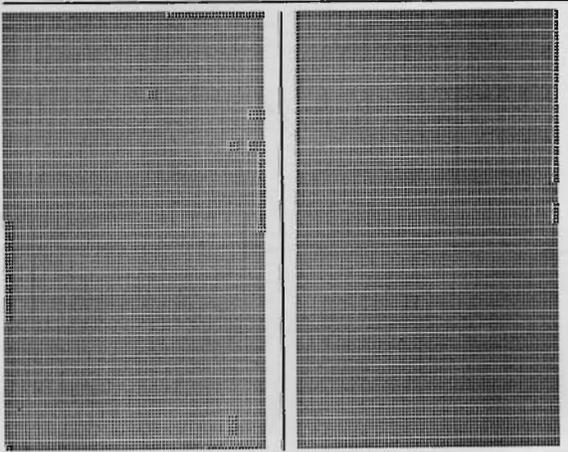
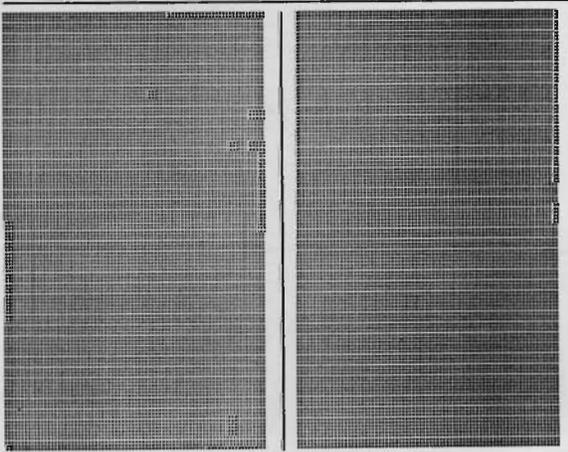
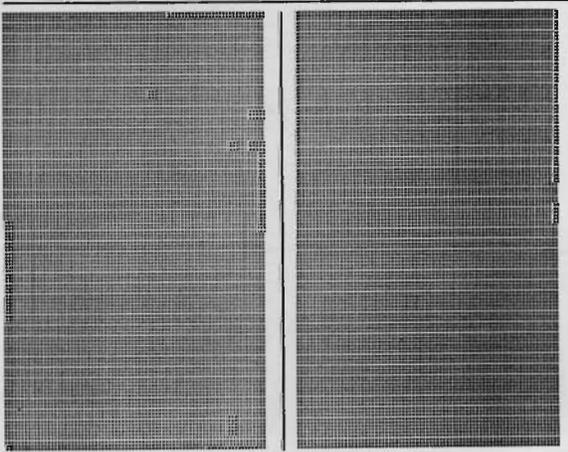
457	CHECK 220: CHILD ALIVE?	ALIVE <input type="checkbox"/> DEAD <input type="checkbox"/> (SKIP TO 459)	ALIVE <input type="checkbox"/> DEAD <input type="checkbox"/> (SKIP TO 459)	ALIVE <input type="checkbox"/> DEAD <input type="checkbox"/> (SKIP TO 459)
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458 → 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
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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) ←
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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
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	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	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	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)? DAYS..... <input type="text"/> <input type="text"/> IF LESS THAN 1 DAY, RECORD '00'	DAYS..... <input type="text"/> <input type="text"/>	DAYS..... <input type="text"/> <input type="text"/>
473	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		

	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____	
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	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)←	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	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)

	NAME	LAST BIRTH	NAME	NEXT-TO-LAST BIRTH	NAME	SECOND-FROM-LAST BIRTH	
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 GIVEN TO ANY CHILD <input type="checkbox"/></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</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

496	<p>CHECK 481 AND 486 (ALL COLUMNS):</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 45%;"> <p>HOME-MADE FLUID GIVEN TO ANY CHILD</p> <p style="text-align: center;"><input type="checkbox"/></p> <p style="text-align: center;">↓</p> </div> <div style="width: 45%;"> <p>HOME-MADE FLUID NOT GIVEN TO ANY CHILD OR 481 AND 486 NOT ASKED</p> <p style="text-align: center;"><input type="checkbox"/></p> </div> </div>	501
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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 DIVORCED SEPARATED <input type="checkbox"/></p> <p style="text-align: center;">↓</p>		514
502	<p>CHECK 313:</p> <p>NEITHER STERILIZED <input type="checkbox"/> HE OR SHE STERILIZED <input type="checkbox"/></p> <p style="text-align: center;">↓</p>		508
503	<p>CHECK 227:</p> <p>NOT PREGNANT OR UNSURE <input type="checkbox"/> PREGNANT <input type="checkbox"/></p> <p style="text-align: center;">↓</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 NO MORE/NONE.....2 SAYS SHE CAN'T GET PREGNANT.....3 UP TO GOD.....4 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 GIRL.....2 DOESN'T MATTER.....3 UP TO GOD.....4</p>	
505	<p>CHECK 227:</p> <p>NOT PREGNANT OR UNSURE <input type="checkbox"/> PREGNANT <input type="checkbox"/></p> <p style="text-align: center;">↓</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 <input type="checkbox"/><input type="checkbox"/></p> <p>YEARS.....2 <input type="checkbox"/><input type="checkbox"/></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

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
506	CHECK 220 AND 227: HAS LIVING CHILD(REN) OR PREGNANT? YES <input type="checkbox"/> NO <input type="checkbox"/>		510
507	CHECK 227: NOT PREGNANT OR UNSURE <input type="checkbox"/> PREGNANT <input type="checkbox"/> How old would you like your youngest child to be when your next child is born? How old would you like the child you are expecting to be when your next child is born?	AGE OF CHILD YEARS..... DK.....98	510
508	Do you regret that (you/your husband) had the operation not to have any (more) children?	YES.....1 NO.....2	514
509	Why do you regret it?	RESPONDENT WANTS ANOTHER CHILD..1 WANTS TO REPLACE CHILD WHO DIED..2 HUSBAND WANTS ANOTHER CHILD....3 SIDE EFFECTS.....4 OTHER5 (SPECIFY)	514
510	Do you think that your husband approves or disapproves of couples using a method to avoid a pregnancy?	APPROVES.....1 DISAPPROVES.....2 DK.....8	
511	How often have you talked to your husband about family planning in the past year?	NEVER.....1 ONCE OR TWICE.....2 MORE OFTEN.....3	
512	Have you and your husband ever discussed the number of children you would like to have?	YES.....1 NO.....2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO						
513	<p>Do you think your husband wants the <u>same</u> number of children that you want, or does he want <u>more</u> or <u>fewer</u> than you want?</p>	<p>SAME NUMBER.....1 MORE CHILDREN.....2 FEWER CHILDREN.....3 DK.....8</p>							
514	<p>How long should a couple wait before starting sexual intercourse after the birth of a baby?</p>	<p>DAYS.....1 <table border="1"><tr><td></td><td></td></tr></table> MONTHS.....2 <table border="1"><tr><td></td><td></td></tr></table> YEARS.....3 <table border="1"><tr><td></td><td></td></tr></table> UP TO COUPLE.....995 OTHER _____ 996 (SPECIFY)</p>							
515	<p>In general, do you approve or disapprove of couples using a method to avoid getting pregnant?</p>	<p>APPROVE.....1 DISAPPROVE.....2</p>							
516	<p>CHECK 220:</p> <p>HAS LIVING CHILD(REN) <input type="checkbox"/> NO LIVING CHILDREN <input type="checkbox"/></p> <p><input type="checkbox"/> <input type="checkbox"/></p> <p>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?</p> <p>If you could choose exactly the number of children to have in your whole life, how many would that be?</p> <p>RECORD SINGLE NUMBER OR OTHER ANSWER.</p>	<p>NUMBER..... <table border="1"><tr><td></td><td></td></tr></table> OTHER ANSWER _____ 96 (SPECIFY)</p>			518				
517	<p>How many of these children would you like to be boys and how many would you like to be girls?</p>	<p>BOYS GIRLS EITHER</p> <p>NUMBER... <table border="1"><tr><td></td><td></td></tr></table> <table border="1"><tr><td></td><td></td></tr></table> <table border="1"><tr><td></td><td></td></tr></table> OTHER _____ 999996 (SPECIFY)</p>							
518	<p>In your opinion, what is the ideal interval between the birth of one child and the birth of the next child?</p>	<p>MONTHS.....1 <table border="1"><tr><td></td><td></td></tr></table> YEARS.....2 <table border="1"><tr><td></td><td></td></tr></table> OTHER _____ 996 (SPECIFY)</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	How old was your husband on his last birthday?	AGE IN COMPLETED YEARS..... <input type="text"/> <input type="text"/>	
603	Did your (last) husband ever attend school?	YES.....1 NO.....2	606
604	What is the highest grade he completed?	GRADE..... <input type="text"/> <input type="text"/>	
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	(Can/Could) he read and write?	YES.....1 NO.....2	608
607	What is the highest degree he 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
608	What kind of work does (did) your (last) husband mainly do?	<div style="text-align: right; margin-bottom: 5px;"><input type="checkbox"/> <input type="checkbox"/></div> <hr/> <hr/> <hr/>	
609	CHECK 608:	WORKS (WORKED) <input type="checkbox"/> IN AGRICULTURE	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="text-align: right; margin-bottom: 5px;"><input type="checkbox"/> <input type="checkbox"/></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	

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>																				
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%; border-collapse: collapse;"> <tr><td> </td><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)

Previous Page Blank

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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:

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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"/> <input type="text"/>
	NO.....2 (GO TO NEXT PROGRAMME) ↙	
National Rural Employment Programme (NREP)	YES.....1	<input type="text"/> <input type="text"/>
	NO.....2 (GO TO NEXT PROGRAMME) ↙	
Training Rural Youth for Self Employment (TRYSEM)	YES.....1	<input type="text"/> <input type="text"/>
	NO.....2 (GO TO NEXT PROGRAMME) ↙	
Employment Guarantee Scheme	YES.....1	<input type="text"/> <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:

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