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

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

Never before in India has such a large population and health survey been undertaken and completed in the stipulated time period. We are, therefore, very happy to present the final NFHS state-level report for Himachal Pradesh. 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 National Family Health Survey could not have been successfully completed without cooperation and support from innumerable sources at various stages of the project. Although it is not possible to individually acknowledge everyone involved in the survey, several persons and organizations deserve special mention.

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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 Le and Dr. Vijay K. Verma for their participation and help in preparing a very thorough sampling design for all the states.

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

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

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

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

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

Thanks are due to all the members of the Steering Committee, Administrative and Financial Management Committee and Technical Advisory Committee for participating in various meetings and providing valuable guidance in conducting 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. The sincere efforts and involvement of Mr. Suhas Narkhede, in data collection in Himachal Pradesh and Mr. R. Karikalan, Mrs. Vaidehi Yelamachalli and Dr. B.S. Singh in the report preparation are gratefully acknowledged.

The arduous task of data collection in Himachal Pradesh was successfully completed because of the efforts put forth by Mr. Rashpal Malhotra, Director, Centre for Research in Rural and Industrial Development (CRRID), Chandigarh, and his team consisting of Dr. Kuldip Kaur, Mr. Sunil Bansal, Mr. Madan Mohan Singh, and Mr. Shah Nawaz Mallik. Special thanks are due to them.

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The complex task of conducting the NFHS in Himachal Pradesh could be completed only with the dedicated and unflinching collaborative efforts put forth by IIPS; the Population Research Centre, Shimla; the Centre for Research in Rural and Industrial Development (CRRID), Chandigarh; USAID, New Delhi; and the East-West Center/Macro International, United States of America.

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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.

The NFHS in Himachal Pradesh, which was conducted between 6 June and 24 October 1992, gathered information on a representative sample of 2,962 ever-married women age 13-49 from 3,119 households. The survey also collected extensive health-related information on 1,560 of these women's children who were born during the four years preceding the survey. In this report, the survey findings are generally shown separately for urban and rural areas as well as for the whole state.

The survey collected a variety of socioeconomic background information about the population of Himachal Pradesh. Only 9 percent of the population of Himachal Pradesh reside in urban areas. Himachal Pradesh has one of the highest literacy rates in India. Seventy-nine percent of males and 57 percent of females are literate. The median number of years of schooling is higher for males (5.8 years) than for females (2.4 years). The school attendance rate at age 6-14 is slightly higher for males (94 percent) than for females (88 percent). Twenty-three percent of household heads belong to scheduled castes and 6 percent to scheduled tribes.

The age distribution of the household population covered in the Himachal Pradesh NFHS is typical of a population that has been experiencing fertility decline in the recent past. At the time of the survey interview, 36 percent of the sample population were below age 15 years, and 9 percent were age 60 or older. Himachal Pradesh is one of only three states with a sex ratio of more than 1,000 (the other two states are Kerala and Goa). The sex ratio is 1,070 usual resident females to 1,000 usual resident males.

Women marry much younger than men, and both men and women marry younger in rural areas than in urban areas. The singulate mean age at marriage is 25.0 years for males and 20.4 years for females. The median age at first marriage for women age 20-49 is 18.2 years. Although marriage is relatively late, it is nearly universal in Himachal Pradesh. Among women age 30-34, only 2 percent have never married. In almost all cases, formal marriage is immediately followed by cohabitation with the husband.

Fertility is declining in Himachal Pradesh. According to the NFHS, at current fertility levels, women will have an average of 3.0 children each during their childbearing years. The crude birth rate in Himachal Pradesh for the period 1990-92 is estimated to be 28.2 per 1,000 population. Fertility differences by urban-rural residence, education, and caste/tribe are quite substantial. In urban areas, the total fertility rate of 2.0 children per woman is below the replacement level of fertility. Most childbearing is concentrated in the age group 20-29. The median age at first birth was 21 years for women age 25-29 at the time of the survey. Eighty-

one percent of women age 40-49 at the time of the survey had their last birth before age 35.

Knowledge of family planning is nearly universal in Himachal Pradesh. Currently married women are most familiar with female sterilization (98 percent), followed by male sterilization (96 percent), the IUD and condom (74 percent, each), and the pill (70 percent). Traditional methods of contraception are known to 61 percent of women, with periodic abstinence and withdrawal known to 49 and 37 percent, respectively. The percentages of urban and rural women with knowledge of sterilization are similar, but rural women are less likely to know about other methods. Knowledge of sources of contraceptives is high, with 98 percent knowing where to obtain at least one method of family planning.

Fifty-eight percent of currently married women age 15-49 years are currently using a contraceptive method, with 54 percent using a modern method and 4 percent using a traditional method. Female sterilization is the most popular method (33 percent), followed by the male sterilization (13 percent). The condom (5 percent) and the IUD (3 percent) are much less popular. Contraceptive prevalence is higher in urban than in rural areas (63 percent compared with 53 percent). Two aspects of contraceptive prevalence deserve special mention. The urban prevalence rate for modern methods is higher than in any other state and the overall male sterilization rate is twice as high as any other state in India.

The use of contraception peaks in the age group 30-39, at around 80 percent. The use of spacing methods increases with the level of education, but sterilization, both male and female, decreases with the level of education. The use of traditional methods also increases with the level of education. The practice of family planning is much lower among scheduled tribes than among others. The data on contraceptive use by the sex composition of living children indicate the existence of son preference; at each parity, the current use of family planning is lowest for women having no sons and highest for women having all sons.

Among current users of contraception, the public sector supplied 91 percent of users of all modern methods, and the private medical sector supplied 3 percent. Other sources supplied 7 percent of users. The public sector is the major source of supply for sterilization and IUDs, and the private sector is the primary source for condoms.

Information on fertility preferences was also collected in the NFHS. Overall, only one-fourth of the currently married women say they want another child sometime in the future, and nearly two-thirds of these women say they would like to wait at least two years before having the next child. Only 9 percent of women expressed a desire to have a child within two years. One-fourth of women report that they want no more children at all in the future, and 46 percent of women (or their husbands) are sterilized and cannot have any more children. These latter two groups together constitute 72 percent of all currently married women in Himachal Pradesh. The ideal number of children among women in Himachal Pradesh falls within the fairly narrow range of 2-3 children. A total of 15 percent of currently married women have an unmet need for family planning, and 80 percent of the total demand for family planning is met by the current family planning programme in the state.

The NFHS also provides information on maternal and child health. In the NFHS, the estimate of the crude death rate for Himachal Pradesh is 8.4 per 1,000 population for 1991-92.

The infant mortality rate for the five-year period immediately preceding the survey (1988-92) is estimated to be 56 per 1,000 live births. Child mortality (age 1-4) is 14 per 1,000, and under-five mortality is 69 per 1,000. Infant and child mortality declined steadily during the last 15 years, but 1 in 14 children still dies before reaching the fifth birthday.

Mothers received antenatal care for three-fourths of their births during the four years preceding the survey. Seventy-two percent received iron and folic acid tablets, but only 47 percent received two doses of tetanus toxoid injections during pregnancy. Although the utilization of antenatal care services is high in Himachal Pradesh, only 16 percent of births in the four-year period preceding the survey occurred in public or private health facilities. In the state as a whole, only 26 percent of births were assisted by a doctor or nurse/midwife and 55 percent were attended by traditional birth attendants. Almost one-fifth of the deliveries were assisted only by relatives, friends and others.

The Universal Immunization Programme in Himachal Pradesh has met with considerable success. Among children 12-23 months of age, 85 percent have received a BCG vaccination, 72 percent a measles vaccination, and slightly more than three-fourths have received all three doses of DPT and polio vaccines. Sixty-three percent have received all of the recommended vaccinations, and 53 percent had all the recommended vaccinations by age 12 months. At the other extreme, 9 percent have received no vaccinations at all.

One in five children under age 4 suffered from fever during the two weeks before the survey. Nearly 82 percent of children with fever were taken to a health facility for treatment. Six percent of children under age 4 were ill with symptoms of acute respiratory infection (cough accompanied by fast breathing - ARI) during the two weeks before the survey. Nearly four-fifths of children who suffered ARI symptoms were taken to a health facility for treatment.

Eight percent of children under age 4 had diarrhoea during the 24 hours before the survey, and 20 percent had it during the two weeks before the survey. Seventy-one percent of children with diarrhoea were taken to a health facility for treatment. However, only 45 percent were treated with either ORS (oral rehydration salt) packets or a recommended home solution (RHS), and 38 percent received increased fluids. ORS is known to 69 percent of mothers, but only 47 percent have ever used ORS packets to treat diarrhoea. During diarrhoea, 17 percent of mothers reduced the frequency of breastfeeding, and 13 percent of the children received a reduced amount of fluids, contrary to treatment guidelines.

Breastfeeding is nearly universal in Himachal Pradesh. Overall, 96 percent of children have been breastfed. Forty-two percent of children are breastfed from the first day of birth. Only 36 percent of the children under four months of age received exclusive breastfeeding, as recommended by international guidelines. The median duration of breastfeeding is 21.7 months. In general, the nutritional status of children in Himachal Pradesh is poor. According to an international weight-for-age measure, 47 percent of children are underweight and 13 percent are severely underweight. Undernutrition is higher for rural children, children born to illiterate mothers, children from scheduled castes and scheduled tribes, children of high birth orders and those born shortly after a previous birth.

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). These areas 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, United States of America. 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), a private research organization in Chandigarh, was selected to be the CO for the NFHS in Himachal Pradesh. The Population Research Centre, situated in the Department of Economics, Himachal Pradesh University, Shimla, collaborated with the CO in the implementation of the survey in Himachal Pradesh.

1.2 Origin of the State

Etymologically, the word *Himachal* means the mountain of snow (*Him* = snow and *Achal* = mountain). Before 15 April 1948, no state or territory bearing that name existed in India. The compact region now known as Himachal Pradesh was in fact earlier divided into 30 odd principalities called the Punjab Hill states.

After India's independence, the erstwhile rulers of these princely states decided to cast their lot with India and in April 1948, by amalgamating these petty states, a Chief Commissioner's province bearing the name of Himachal Pradesh was created. From then onwards, this region politically progressed from a Chief Commissioner's province to a Part-C State on 26 January 1950, to a Union Territory in November 1956. Ten years later the region acquired its present size with the merger of adjoining hilly areas almost equal to its pre-existing size upon reorganization of Punjab in November 1966. In 1971, Himachal Pradesh gained the status of a full-fledged state of the Indian Union.

1.3 Geographic Features

Physical Characteristics

Himachal Pradesh is a hilly state situated between $30^{\circ}22'40''$ and $33^{\circ}12'40''$ north latitude and between $75^{\circ}47'55'$ and $79^{\circ}00'22'$ of east longitude, and its altitude ranges from 350 metres to 6,975 metres above sea level. The total area of Himachal Pradesh is 55,673 km². Himachal Pradesh is bounded by Uttar Pradesh in the southeast, Punjab in the southwest, Jammu and Kashmir in the northwest, and Tibet in the northeast.

There is a great variation in the physical characteristics of this state, a fact which clearly emerges from the physiographical division of the region into distinct zones (Gupta et al., 1975). These zones from south to north are described below:

(1) The Outer Himalayas or the Shiwaliks: The mean elevation of this zone is only about 600 metres. The zone consists of a system of hills and valleys forming the southern part of the state, from where the plains give rise to the general elevations while one moves in the northward direction. The most conspicuous high peak of this region is the Churdhar (3,647 metres). A high rate of soil erosion, quite high pressure of population on land resources and deforestation are some of the problems arising in this zone.

(2) The Lesser Himalayas: This zone is marked by a rise in elevation culminating in the Dhauladhar and Pir Panjal ranges. The topography here also becomes more rugged, with deep valleys and towering mountains. The Dhauladhar range rises almost abruptly in the Kangra valley and the range impinges against the southern flank of the Pir Panjal range at the mountain knot of Bara Banghal. Rohtang Pass (4,880 metres above sea level) provides access to the Lahul valley but remains impassable from late November to April.

(3) The Higher or the Greater Himalayas: This zone, lying to the north of the Pir Panjal and the Dhauladhar ranges, contains majestic snow-clad mountain peaks, with a mean elevation of about 5,500 metres above sea level. This zone has the most rugged terrain of the state. In this zone are some of the highest mountain passes, the better known ones being Parang (5,548 metres), Kangla (5,248 metres), Pin Parbati (4,802 metres), Kanzam (4,551 metres), and Bara Lacha Pass (4,512 metres). The Zaskar range in the eastern extremity of the state separates the state from Tibet. Among the highest peaks in this zone are Shilla (7,026 metres) and Riwo Phargyul (6,791 metres).

Himachal Pradesh has the distinction of being in the catchment area of both the Indus and the Ganga river systems. Almost all the important tributaries of the former originate in this state. The major rivers of the state are: Satluj, Beas, Ravi, Chenab (Chanderbhaga), and Yamuna. All these rivers perennially receive water supplies from the numerous hill streams and especially the snow-laden peaks, slopes and glaciers.

The Himachal rivers, although of little direct economic utility to the people of the state in the form of irrigation and other direct water uses due to the hilly terrain, have proved a boon to other states such as Punjab, Haryana, Uttar Pradesh and Rajasthan which benefit from electricity generation created by projects such as the Bhakra-Nangal, Beas-Satluj Link and Pong Dam. In fact, the rivers of the state are estimated to have one-fifth of the total hydro-electric potential of India. Only a small fraction of the potential has, however, so far been exploited. Neighbouring states in the southern plains mainly depend on irrigation facilities created by dams and impounding of rivers in Himachal Pradesh.

The great diversity in the geographical characteristics of the state naturally makes for a variety in climatic conditions and consequently in flora. The flora vary from green meadows over the high mountains after the thaw sets in to the wild shrubs and bamboo forests in the foothills bordering the plains. The main forest tree species are: (1) dry alpine trees (such as juniper), (2) moist alpine trees (such as salix and lomicera, with herbs like aconite and dhoop growing as undergrowth), (3) Himalayan moist, temperate and mixed tree varieties (such as deodar, fir, spruce, bird cherry, walnut and poplar varieties), (4) sub-tropical trees (with chir-pine as the dominant species), (5) northern tropical dry deciduous species (sal trees being the main one), and (6) tropical thorny bushes abounding in the foothills.

The variation in the climate and altitude also lends variety to fauna. Musk deer and monal (a pheasant species) are found at the high snowy altitudes, while at lower elevations carnivorous wild animals like leopards, panthers, hyenas, foxes and wild dogs are found in abundance. Other wild animals to be found in this region are barking deer, gaur, cheetal and sambar. Large number of hares, peafowl and jungle fowl, partridges, flying foxes and quail are also in the lower and mid hills. Among the domestic animals, besides those which are ubiquitous such as cows and buffaloes, special mention needs to be made of the yak and the churu -- the latter being a cross-breed of yaks and cows -- which are put to a variety of uses in the cold desert region of the Spiti Valley.

Climate, Rainfall and Seasons

Although the climate of a particular place in Himachal Pradesh is broadly determined by its altitude, other factors which also affect it are the aspect of the hill and the proximity to a mountain peak or to the plains. On the basis of altitude (the main determinant of climate in the hills), the climatic zones vary from sub-tropical (below 900 metres) to warm temperate (900-1,800 metres), to cool temperate (1,800-2,400 metres), to cold high mountain (2,400-4,000 metres) and finally to snowy frigid (above 4,000 metres). Mention may also be made of the "semi-arid highland type" of climate of parts of Lahul-Spiti and Kinnaur districts which lie in the rain shadow area where it only snows but hardly ever rains in the real sense of the term.

The average annual rainfall received by Himachal Pradesh is 1,111 mm, but there is a great deal of intraregional variation, with Lahul-Spiti receiving the minimum annual rainfall (434 mm) and Mandi (1,522 mm) receiving the maximum. Except for Lahul-Spiti and Kinnaur districts, the range of variation in annual rainfall among the rest of districts is relatively small. Although the state as a whole receives plenty of rainfall, most of it falls in the months of June to September. With only about one-fifth of the farmland enjoying the benefit of artificial irrigation, rainfall determines the economic prosperity of the state by providing water to its fields, fruit orchards, forests and grasslands. The rain water impounded during the monsoon months in the man-made reservoirs such as the Gobindsagar Lake, Pong Dam and the Pandoh Dam brings prosperity through irrigation facilities to the States of Punjab, Haryana and even part of Rajasthan. Electricity generation also depends a great deal on rainfall in the hills.

Because of the physiographic diversity, the seasons do not synchronize in different areas of Himachal Pradesh. Broadly, three seasons can be identified: the rainy season (June to September), the winter season (October to March), and the summer season (April to mid-June). However, a great deal of seasonal overlap exists with, for example, summer conditions in Bilaspur and Una districts at the beginning of April existing side by side with quite heavy snowfalls in Lahul-Spiti and Kinnaur.

1.4 Area and People

Area and Administrative Divisions

The state is a tiny component of the Indian Union, accounting for only 0.62 percent of the population and 1.82 percent of the area. Shimla, which is situated in the southern part of the state, is the capital of Himachal Pradesh. The state is divided into 12 districts, 67 tahsils and 36 sub-tahsils.

People, Culture, Religion and Language

Like the diversity in the physical characteristics of Himachal Pradesh, there is also a fair amount of variety in its people and culture. While some of the people have inhabited the region since the ancient past, some others in-migrated over the centuries from the plains. Some of them in the tribal belt (the northeastern zone) may have crossed over from the Tibetan plateau. Kinnaur and Lahul-Spiti districts and parts of Chamba district form the tribal belt inhabited by such tribes as the Gaddies, Lahulas, Pangwalas, Gujjars and Kinnauras. While most people lead a settled life, there are also nomads and semi-nomads, more notably the Gaddies (semi-nomadic) and Gujjars (nomadic). According to the 1981 Census, 95.8 percent of the people of the state were Hindus, 1.6 percent Muslims and 1.2 percent each Sikhs and Buddhists (Office of the Registrar General and Census Commissioner, 1984a).

Cultural diversity is reflected in people's folk songs and dances, in rituals, religious beliefs and superstitions, in local fairs, in marriage celebrations and in other customs and traditions. These vary from place to place, depending on proximity to the plains, the tribal linkage or the extent of external influences through means of communication and the current level of education of the people. But the greatest factor that seems to have promoted diversity in culture is the age-old isolation of each erstwhile princely state from the rest which naturally spawned local cultural traditions.

A special feature of the inter-mixture of religious rites and culture of Himachal Pradesh is the institution of village deities (each peculiar to a cluster of hamlets) which on predetermined occasions are taken out in ornate palanquins from the temples or treasure-houses in procession to the beat of drums and led to a level ground where the palanquin carriers dance, with the gathered village folk performing *puja* of the deity. The occasion provides an opportunity for people to sing, dance and celebrate. Whether in such fairs or at the time of marriages, mixed dances with persons of both sexes participating are quite common.

The main languages spoken by educated Himachalis (and also used for administrative purposes) are Hindi and English, although some people also speak Punjabi and Urdu. However, the broad masses of people communicate with each other in their local dialects. Each of the erstwhile principalities had its own dialect, the better known ones being Chambiali, Mandiali, Kehluri, Kullui, Hinduri, Sirmauri, Mahasui, and Kangri. The tribals have their own dialects which have been influenced by the Tibetan language (Gupta et al., 1975; Kaushal, 1988).

1.5 Economy

Himachal Pradesh, like other states of India, has a predominantly agricultural economy, with 40 percent of the state domestic product and 69 percent of main workers being accounted for by the farm sector. The main field crops of the state are maize, wheat, barley and rice. Since the terrain is hilly, the possibility of farm mechanization is limited. Over the years since Independence, the farm economy has diversified into activities outside the traditional production of cereals for subsistence and complementary or independent pastoral form of activities. The main emerging sub-sector within agriculture is fruit culture, which is now firmly established and has earned Himachal Pradesh the name of "The Apple State of India". The fruit juices and jams (mainly apple-based) produced in Himachal Pradesh are available at most important railway stations and bus terminuses all over India. Yet another emerging activity within the farm sector is the production of off-season vegetables which fetch handsome returns for the farmers of the state. Experiments are also afoot to popularize floriculture and tea plantation in some chosen pockets. Even in the production of foodgrains, the state is close to self-sufficiency.

Although efforts have been made for quite some time to attract industrial entrepreneurs and capital from outside the state, industrial activity is yet to register a conspicuous presence. Some industrial activity, mainly through government initiatives, has come to be concentrated on the periphery of the state, mainly at locations such as Paonta Sahib, Kala Amb, Parwanoo, Baddi and Mehatpur. So far, all types of industrial enterprises (both registered and unregistered) contribute merely 7.5 percent to the state's domestic product.

The average per capita income of the state for the period 1985-86 to 1991-92 was Rs. 3,863, with the figure for the latter period (Rs. 5,355) being a little lower than the national average. The proportion of the total population below the poverty line¹ in Himachal Pradesh

¹ 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.

for the year 1987-88 was estimated to be just 9.2 percent (Sharma, 1987; Centre for Monitoring Indian Economy, 1993).

1.6 Basic Demographic Indicators

The basic demographic indicators for the state compared to the whole of India are presented in Table 1.1. Himachal Pradesh is one of the least populous states of the country, with a population of 5.2 million according to the 1991 Census. The decadal population growth rate in the state during 1981-91 (20.8 percent) is lower than that for the country as a whole (23.9 percent). The population density of 93 (persons per km²) for the year 1991, is much lower than the 273 figure for India. Within the state, the population density varies greatly, with Lahul-Spiti district recording the lowest and Hamirpur district the highest population densities.

Himachal Pradesh is also one of the more rural states of the country, with a mere 8.7 percent of the population in urban areas in 1991. This is in sharp contrast to India's urban population of 26.1 percent. The sex ratio of the population (number of females per 1,000 males) for the year 1991 is 976 compared to India's 927. Thus, the sex ratio is somewhat more favourable to females in the state than in India as a whole. According to estimates from the 1991 SRS, the percentage of the child population (0-14 years) to the total population is nearly the same in Himachal Pradesh as in the country as a whole (36-37 percent). Himachal Pradesh had a higher percentage of population age 65 and above than the country as a whole in both 1981 and 1991. Persons from scheduled castes² comprise 25.3 percent of the Population of Himachal Pradesh compared to 16.7 percent of the whole country. Persons from scheduled tribes³ constitute 4.2 percent of population of the state compared to 8.0 percent of the whole country.

Himachal Pradesh is one of the more literate states of the country. The literacy rate for the state according to the 1991 Census is as high as 63.9 percent compared to India's 52.2 percent. The literacy rates for males and females are 75.4 percent and 52.1 percent, respectively, in the state compared to 64.1 percent and 39.3 percent in the country as a whole.

The crude birth rate of 27.9 and the crude death rate of 8.8 are lower in Himachal Pradesh than the all-India rates of 29.0 and 10.0, respectively, as estimated by the Sample Registration System (SRS) in 1992. The exponential growth rate of the population for the decade 1981-91 for Himachal Pradesh is 1.89 percent compared to 2.14 percent for India.

² The Government of India has identified certain castes as socially and economically backward and, recognizing the need to protect them from social injustice and all forms of exploitation, the Constitution of India has conferred on them special protection. Scheduled castes refer to such castes, races or tribes or parts of groups, within such castes, races or tribes as are declared to be scheduled castes by the President of India by public notification (Office of the Registrar General and Census Commissioner, 1984b).

³ Scheduled tribes refer to such tribes or tribal communities or parts of or groups within such tribes or tribal communities as are declared to be scheduled tribes by the President of India by public notification (Office of the Registrar General and Census Commissioner, 1984b).

| Table 1.1 Basic demographic indicators | | |
|--|------------------|-------------|
| Basic demographic indicators for Himachal Pradesh and India, 1981-1992 | | |
| Index | Himachal Pradesh | India |
| Population (1991) | 5,170,877 | 846,302,688 |
| Percent population increase (1981-91) | 20.8 | 23.9 |
| Density (Population/km ²) (1991) | 93 | 273 |
| Percent urban (1991) | 8.7 | 26.1 |
| Sex ratio (1991) | 976 | 927 |
| Percent 0-14 years old (1981) | 39.6 | 39.6 |
| (1991) | 36.9 | 36.3 |
| Percent 65+ years old (1981) | 4.7 | 3.8 |
| (1991) | 4.7 | 3.8 |
| Percent scheduled caste (1991) | 25.3 | 16.7 |
| Percent scheduled tribe (1991) | 4.2 | 8.0 |
| Percent literate (1991) ¹ | | |
| Male | 75.4 | 64.1 |
| Female | 52.1 | 39.3 |
| Total | 63.9 | 52.2 |
| Crude birth rate (1992) ² | 27.9 | 29.0 |
| Crude death rate (1992) ² | 8.8 | 10.0 |
| Exponential growth rate (1981-91) | 1.89 | 2.14 |
| Total fertility rate (1991) | U | 3.6 |
| Infant mortality rate (1992) ² | 67 | 79 |
| Life expectancy (1986-91) | | |
| Male | U | 58.1 |
| Female | U | 59.1 |
| Couple protection rate (1992) | 54.1 | 43.5 |

U: Not available
¹Based on the population age 7 and above
²Provisional
Source: Office of the Registrar General (1992, 1993, 1994), Office of the Registrar General and Census Commissioner (1987, 1992), Ministry of Health and Family Welfare (1991, 1992)

Table 1.1 further indicates that the infant mortality rate at 67 per 1,000 live births in Himachal Pradesh is lower than the figure of 79 for the country as a whole. The couple protection rate (defined as the percentage of eligible couples effectively protected against pregnancy) in Himachal Pradesh is 54.1 compared to India's 43.5, which speaks well of family planning performance in the state. Unfortunately, some of the vital demographic information for this state, such as the total fertility rate and life expectancy are not available from other sources.

A well-known characteristic of the population of Himachal Pradesh, which is not shown in the table, is their inclination to migrate out of the state in search of jobs and due to marriage. Census data in migration suggest that this hilly state ranks fifth and third, respectively, as far as male and female net out migration rates are concerned.

Major demographic trends for the state are shown in Table 1.2. The total population of the state rose from 3.5 million in 1971 to 4.3 million in 1981 and further to 5.2 million in 1991. The decadal growth rate increased slightly from 23.0 percent for the period 1961-71 to 23.7 percent for 1971-81, but decelerated to 20.8 percent for the 1981-91 period. The deceleration

Table 1.2 Trends in basic demographic indicators

Trends in basic demographic indicators, Himachal Pradesh, 1971-91

| Index | 1971 | 1981 | 1991 |
|---|-----------|-----------|-------------------|
| Population | 3,460,434 | 4,280,818 | 5,170,877 |
| Percent population increase (previous decade) | 23.0 | 23.7 | 20.8 |
| Density (Population/km ²) | 62 | 77 | 93 |
| Percent urban | 7.0 | 7.6 | 8.7 |
| Sex ratio | 958 | 973 | 976 |
| Percent 0-14 years old | 41.2 | 39.6 | 36.9 |
| Percent 65+ years old | 4.3 | 4.7 | 4.7 |
| Percent scheduled caste | 22.2 | 24.6 | 25.3 |
| Percent scheduled tribe | 4.1 | 4.6 | 4.2 |
| Percent literate ^a | | | |
| Male | 43.2 | 53.2 | 75.4 |
| Female | 20.2 | 31.5 | 52.1 |
| Total | 32.0 | 42.5 | 63.9 |
| Crude birth rate | 37.3 | 31.5 | 27.9 ^b |
| Crude death rate | 15.6 | 11.1 | 8.8 ^b |
| Exponential growth rate | 2.07 | 2.13 | 1.89 |
| Total fertility rate | U | 3.8 | U |
| Infant mortality rate | 113 | 71 | 67 ^b |
| Life expectancy | | | |
| Male | U | U | U |
| Female | U | U | U |
| Couple protection rate | 8.2 | 25.6 | 54.1 ^c |

U: Not available

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

^b1992, provisional

^c1992

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

of the decadal growth rate, as shown by the latest census, is encouraging. But family planning performance has to further improve, because despite a fall in the population growth rate, the absolute number of persons added to the state's population during the 1981-91 period was larger than that added during 1971-81. The density of population per km² increased from 62 in 1971 to 77 in 1981 and further to 93 in 1991.

The percentage of the population living in urban areas rose slightly from 7.0 percent in 1971 to 7.6 percent in 1981 and to 8.7 percent in 1991.¹ The sex ratio increased from 958 in 1971 to 973 in 1981 but only marginally to 976 in 1991. The child population (age 0-14 years) as a percentage of the total population has consistently fallen from 41.2 percent in 1971 to 39.6 percent in 1981 and further to 36.9 percent in 1991. This is one indication of the falling birth rate in Himachal Pradesh. At the other end of the age scale, the proportion of old persons (age 65 years and above) rose from 4.3 percent in 1971 to 4.7 percent in both 1981 and 1991.

The percentage of population belonging to scheduled castes increased between 1971 and 1991, but the percentage of scheduled tribes remained almost the same. Literacy rates improved considerably from 1971 to 1991. Male and female literacy rates rose consistently from 43.2

percent and 20.2 percent in 1971 to 53.2 percent and 31.5 percent in 1981 and further to 75.4 percent and 52.1 percent, respectively, in 1991. The relative difference between male and female literacy rates, although still large, narrowed over the period.

Another welcome feature of the demographic scene in Himachal Pradesh is the continued decline in both the crude birth rate (from 37.3 per 1,000 population in 1971 to 31.5 in 1981 and 27.9 in 1992) and the crude death rate (from 15.6 per 1,000 population in 1971 to 11.1 in 1981 and 8.8 in 1992). Due to differential rates of decline in the birth and death rates in the two periods, the exponential growth rate increased from 2.07 percent in 1971 to 2.13 percent in 1981, but declined to 1.89 percent in 1991.

The infant mortality rate in Himachal Pradesh has also declined precipitously from 113 per 1,000 live births in 1971 to 71 in 1981 but less impressively to 67 in 1992. The family planning performance of the state has also been quite impressive, with the couple protection rate rising from a low figure of 8.2 percent in 1971 to 25.6 percent in 1981 and finally to 54.1 percent in 1992.

1.7 Population and Family Welfare Policies and Programmes

The family welfare programme in India promotes responsible parenthood, with a two-child family norm (regardless of the sex of the children) through the voluntary use of contraceptive methods best suited to each couple (Ministry of Health and Family Welfare, 1991). Health and family planning services in Himachal Pradesh, as in other states, are provided through a network of sub-centres, Primary Health Centres (PHCs), 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 was 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, sub-centres and referral centres called Community Health Centres.

In Himachal Pradesh, as in other states, the family welfare programme is voluntary, leaving the choice of the method to the individual couple. The programme in this state had relied on sterilization earlier, but (according to the government family planning statistics) lately IUD insertions have overtaken the former. Mass media and interpersonal communications are utilized to remove sociocultural barriers among the people. The government's long-term national goal is to reach a net reproduction rate of 1.0 by 2011-2016.

1.8 Health Priorities and Programmes

Health conditions are somewhat better in Himachal Pradesh than in India as a whole as reflected in the lower death and infant mortality rates. There is, however, room for further improvement in the quality of life through the better delivery of health care services.

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. As of March 1993, there were 768 hospitals and dispensaries (both Allopathic and Ayurvedic) and 2,080 Primary Health Centres, sub-centres and community health centres in the state providing health and family welfare services to its population (Health and Family Welfare Department, Himachal Pradesh, 1993). In 1991-92, the state government spent Rs. 145 per capita on public health and the state ranked fifth in this respect among the 25 states of the country (Centre for Monitoring Indian Economy, 1993).

CHAPTER 2

SURVEY DESIGN AND IMPLEMENTATION

2.1 Objectives of the NFHS

The primary objective of the NFHS is to provide national 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 sociocultural milieu and the objectives of the NFHS, additions and modifications were made to the model questionnaire after extensive deliberations at the workshop. In addition to a standard set of questions in all the states of the NFHS, it was decided at the workshop that individual states could recommend a number of state-specific questions which would be formulated after considering the issues of importance in each state. Based on the recommendations of this workshop, the questionnaires were finalized at IIPS, Bombay. The questionnaires are largely precoded, with fixed response categories.

A pretest of the questionnaires was carried out by IIPS with the help of the PRC, Bhopal, in October, 1991. A 10-day training session for 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 Himachal Pradesh used the standard Household Questionnaire, Woman's Questionnaire and Village Questionnaire which had been pretested. No state-specific questions

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 added to the questionnaires in Himachal Pradesh. Questionnaires used in the Himachal Pradesh NFHS were bilingual, consisting of questions in both Hindi and English.

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 toward 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. Weight: The anthropometric measurements taken in the NFHS in most of the states included both height and weight of children under age 4. However, in first phase states, including Himachal Pradesh, children were weighed but their height/length was not measured due to the nonavailability of measuring boards. All living children born since 1 January 1988 to the eligible women interviewed were weighed. 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 weight was a separate operation that was conducted after the individual interview was completed. All interviewers, editors and supervisors were trained in weighing the children. Standard spring balance weighing machines (Salter Scales) were used.

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 Himachal Pradesh survey was designed to provide statistical estimates for the state as a whole and for urban and rural areas of the state. The universe consists of all urban and rural areas of the state.

Sample Size and Allocation

The overall target sample size for Himachal Pradesh was 3,000 completed interviews with eligible women (ever-married women age 13-49 years). The target sample size was set considering the size of the state, the time and resources available for the survey, and the need for separate estimates for urban and rural areas of the state. In order to allow for nonresponse at the household and individual respondent levels, the target sample of women was increased to a total of 3,300 women to be selected. The sampling rates were determined separately for urban and rural areas. Urban areas were oversampled to ensure that there would be an adequate number of interviews to produce separate urban estimates, and hence the sample is not self-weighted for the state as a whole. However, within the urban and rural areas, the sample is self-weighted. The overall sampling fractions (the probability, f , of selecting a woman) for urban and rural areas were 0.11166 and 0.00257, respectively. The overall sampling fractions for any area (either urban or rural area) of the state was computed as:

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

where n = number of women to be interviewed in urban/rural areas of the state adjusted upward to account for nonresponse and other loss; and
 N = projected urban/rural population of eligible women in Himachal Pradesh in March, 1992.

All the districts in Himachal Pradesh were subdivided into three contiguous regions according to their geophysical characteristics, each representing one or more of the 1981 Census regions. The district composition of the regions is as follows:

Region I: Chamba, Lahul and Spiti, Kinnaur;
 Region II: Kangra, Hamirpur, Una, Mandi, Kullu;
 Region III: Bilaspur, Shimla, Solan, Sirmaur

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 selection of villages in the first stage and households in selected villages in the next stage. There were three levels of stratification. The first level of stratification was geographic, with districts subdivided into three regions according to their geophysical characteristics as described above. In the second level of explicit stratification, villages within each of these three regions were identified as small, medium, or large, according to their population size. Villages with a population size less than 200, between 200 and 800, and greater than 800, constituted three different strata within each region. For villages with less than 200 persons and villages with a population of more than 800, no other explicit stratification was done. But for villages with a population between 200 and 800, two other strata were formed on the basis of their distance from the nearest town (less than or equal to 10 km and greater than 10 km). The next level of stratification was implicit, and consisted of ordering the villages within each stratum by the level of female literacy in the village. After the frame of villages was thus arranged, 80 Primary Sampling Units (PSUs) consisting of 102 villages were selected systematically, with probability proportional to size (PPS). On average, 30 households were selected for interviewing from each selected PSU. The probability of selecting a PSU (f_1) from rural Himachal Pradesh was computed as:

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

where a = number of PSUs to be selected from rural Himachal Pradesh
 s_i = the population size of the selected PSU
 $\sum s_i$ = total rural population of the state

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. A complete household listing was done in PSUs with fewer than 300 households. In PSUs with 300 or more households,

segmentation of the PSU was done on the basis of existing wards in the PSU, and the segments were selected using either systematic sampling or PPS sampling. The household listing in such PSUs was carried out in the selected segments. Three household listing teams, each team consisting of a lister and a mapper, were trained during 5-6 May 1992. A coordinator was appointed to provide guidance and supervision for the household listing teams. Special efforts were made not to miss any household in the selected PSU during the listing operation. 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:

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

All the selected households were approached during data collection. In instances where all members of a household were absent, the household was not replaced with another household.

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 subdivided each of the cities/towns into blocks consisting of approximately 150-200 households. In the first level of stratification, all cities and towns were subdivided 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 1991 population larger than the sampling interval. Within each stratum, the cities/towns were arranged according to the same kind of geographic stratification used in the rural areas. 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.

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.

In Himachal Pradesh, a total of 18 cities/towns and 46 blocks within these cities/towns was selected. 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 computation of various probabilities for the selection of the urban sample was done as follows:

The probability of selecting a city/town (f_1) was computed as:

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

where a = number of cities/towns selected from the state
 s_i = the population size of the selected city/town
 $\sum s_i$ = total urban population of the state

The probability of selecting a block from a selected city/town (f_2) was computed as:

$$f_2 = \frac{b}{P}$$

where b = number of blocks to be selected from the city
 P = total number of blocks in the city

The probability of selecting a household from a selected block (f_3) was computed as:

$$f_3 = \frac{f}{f_1 \times f_2}$$

Sample Weights

In Himachal Pradesh, the sample was weighted at the level of sampling areas (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} area. 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 the state) and f_i is the area 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

The villages were selected using probability proportional to size. This introduces a bias because bigger villages have a greater chance of being selected than smaller villages. Village weights are therefore used to adjust for this bias. Let f_{1hi} be the selection probability of the i^{th} village in the h^{th} stratum². Then the village weights are calculated as follows:

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

² The villages in the state were ordered according to a specified stratification scheme prior to selection.

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:

$$w_{hi} = w_{hi}' \times \frac{A}{\sum_{h,i} w_{hi}'}$$

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

2.4 Recruitment, Training and Fieldwork

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

For the purpose of data collection, the selection of field teams was done at the regional levels in order to ensure that interviewers were acquainted with localities in adjacent areas. All the field interviewers were females who had received either a bachelor's or a master's degree.

Classroom training of field staff for the main survey was conducted during 1-12 May 1992 by staff from the PRC, CRRID and IIPS. Field practice was arranged during 12-15 May 1992 in three villages of Kangra District, namely, Breh, Rasan and Kaned. A total of 48 persons (38 females and 10 males) were trained.

The training course consisted of instructions in interviewing techniques and field procedures for the survey, a detailed review of items on the questionnaires, instruction and practice in weighing children, mock interviews between participants in the classroom and practice interviews in the field. Trainees who performed satisfactorily in the training programme

were selected as interviewers while those whose performance was better were selected as field supervisors or editors. 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 Himachal Pradesh was carried out by four interviewing teams, each team consisting of one field supervisor, one field editor and four female interviewers. Due to the dropout of some of the field staff, only two teams remained at the end of the data collection. The main field work was carried out between 6 June and 24 October 1992. The monitoring and supervision of the data collection operations were carried out by the coordinators and senior staff of the PRC and CRRID. During this period, IIPS assigned one Research Officer to the survey for ensuring correct survey procedures and maintaining the quality of data.

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 the correct response from other information on the questionnaire, with the interviewer's assistance. If neither of these options was 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 work 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 Himachal Pradesh NFHS are highlighted below.

Transportation

All the teams were provided with vehicles in the field to visit selected PSUs. However, some of the teams experienced difficulty in reaching PSUs due to the hilly terrain and the absence of proper approachable roads. Rural areas are sparsely populated and village houses are scattered as the settlement is on the farmstead pattern. The generally scattered location of hamlets in the mountainous terrain and the location of hamlets at hill tops as well as low valleys involves a lot of legwork for the field teams. Hence, effective working hours per day were much lower than anticipated and the speed of work was understandably slow.

Security of Teams

Since field interviewers were mainly females, due care had to be taken for their security in remote areas. Fieldwork after dark and in the late evenings was avoided and safe stay arrangements were made.

Season-Related Problems

In the northwest hilly region of India where rains and winters are severe, the most appropriate season for conducting field surveys is the summer season. The NFHS fieldwork in Himachal Pradesh (June-October 1992) coincided with the rainy season during which mobility of the field teams was drastically reduced due to frequent landslides and road blocks and washing away of village pathways. For these reasons, the fieldwork took longer to complete than had been originally anticipated.

Funds

Fieldwork in some parts of Himachal Pradesh was delayed because funds did not reach the field in time. This delay also tended to make the field interviewers and supervisors somewhat lax in their work and some field staff left the teams prematurely.

2.6 Data Processing

All completed questionnaires for the Himachal Pradesh 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 comprised the assignment of appropriate codes for the information on occupation, caste and cause of death, and the addition of commonly mentioned "other"

responses to the coding scheme. One supervisor and eight 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 17 November 1992. 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 Himachal Pradesh was prepared in February 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 15 tables 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, 1992. The final tables for Himachal Pradesh were produced at IIPS based on this tabulation plan.

2.7 Areas for Reporting Survey Results

In this report, survey results are reported for all of Himachal Pradesh, as well as separately for the urban and rural areas.

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 3,328 households selected in Himachal Pradesh, interviews were completed in 94 percent of the cases. In 4 percent of the cases, the selected households were found to be absent and in 1 percent of the cases, houses were vacant. The household response rate (the number of households interviewed per 100 occupied households) was 95 percent. A slightly higher response rate for the household interview was recorded in rural areas of the state (97 percent) than in urban areas (92 percent).

In the interviewed households, 3,152 women were identified as eligible for the individual interview. Interviews were successfully completed with 94 percent of the eligible women. The individual response rate was almost the same in all three study areas. The number of completed interviews with eligible women (2,962) was very close to the target of 3,000.

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 0.2 percent).

Table 2.1 Sample results

Sample results for households and eligible women (unweighted), Himachal Pradesh, 1992

| Result | Urban | | Rural | | Total | |
|--|--------|---------|--------|---------|--------|---------|
| | Number | Percent | Number | Percent | Number | Percent |
| Households selected | 1139 | 100.0 | 2189 | 100.0 | 3328 | 100.0 |
| Households completed (C) | 1036 | 91.0 | 2083 | 95.2 | 3119 | 93.7 |
| Households with no competent respondent (HP) | 5 | 0.4 | 9 | 0.4 | 14 | 0.4 |
| Households absent (HA) | 86 | 7.6 | 55 | 2.5 | 141 | 4.2 |
| Households refused (R) | 2 | 0.2 | 4 | 0.2 | 6 | 0.2 |
| Households vacant/no dwelling (DV) | 6 | 0.5 | 24 | 1.1 | 30 | 0.9 |
| Dwellings not found (DNF) | 1 | 0.1 | 1 | -- | 2 | 0.1 |
| Other (O) | 3 | 0.3 | 13 | 0.6 | 16 | 0.5 |
| Households occupied | 1130 | 100.0 | 2152 | 100.0 | 3282 | 100.0 |
| Households interviewed | 1036 | 91.7 | 2083 | 96.8 | 3119 | 95.0 |
| Households not interviewed | 94 | 8.3 | 69 | 3.2 | 163 | 5.0 |
| Household response rate (HHR)¹ | NA | 91.7 | NA | 96.8 | NA | 95.0 |
| Eligible women | 968 | 100.0 | 2184 | 100.0 | 3152 | 100.0 |
| Women interviewed (EWC) | 930 | 96.1 | 2032 | 93.0 | 2962 | 94.0 |
| Women not at home (EWNH) | 32 | 3.3 | 106 | 4.9 | 138 | 4.4 |
| Women postponed (EWP) | 0 | -- | 1 | -- | 1 | -- |
| Women refused (EWR) | 1 | 0.1 | 4 | 0.2 | 5 | 0.2 |
| Women partly interviewed (EWPC) | 0 | -- | 1 | -- | 1 | -- |
| Other (EWO) | 5 | 0.5 | 40 | 1.8 | 45 | 1.4 |
| Individual response rate (EWRR)² | NA | 96.6 | NA | 94.8 | NA | 95.3 |
| Overall response rate (ORR)³ | NA | 88.5 | NA | 91.7 | NA | 90.6 |

NA: Not applicable

-- Less than 0.05 percent

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

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

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

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

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

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

CHAPTER 3

HOUSEHOLD AND RESPONDENT BACKGROUND CHARACTERISTICS

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

The NFHS household population can be tabulated in two ways: *de facto* (the place 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 Himachal Pradesh may differ because of temporary population movements. Most tables in this and the following chapters are based on the *de facto* sample, unless they are otherwise specified. It is expected that the *de facto* sample will be more representative of women in the state as a whole because all women are interviewed where they are staying at the time of the survey. A *de jure* sample, on the other hand, would miss usual residents who are temporarily elsewhere at the time of the survey.

3.1 Age-Sex Distribution of the Household Population

Table 3.1 shows the *de facto* population in the NFHS household sample, classified by age, sex and residence. The total *de facto* sample population is 16,638, which is 9 percent urban, and 91 percent rural.

The age distribution is typical of a population that has been experiencing fertility decline in the recent past. Thirty-six percent of the population is below 15 years of age and 9 percent is age 60 or more. The child population (below age 15) is higher in rural areas (37 percent) than in urban areas (32 percent).

Data on age in developing countries are typically prone to errors due to age misstatements and preferences for ages ending in particular digits. Examination of the single-year age distributions from the NFHS (see Appendix Table B.1 and Figure 3.1) indicates distortions of the data due to misreporting of age and preference for particular digits. One of the most commonly used measures of digit preference in age reporting is the Myers' Index (United Nations, 1955). This index provides an overall summary measure of preferences for, or avoidance of, each of the ten digits, from 0 to 9. Myers' Indices computed from the survey for males and females are 47.3 and 14.2, respectively. The corresponding indices for males and females in Himachal Pradesh, computed on the basis of the 1981 Census data, are 42.4 and 50.0, respectively (Office of the Registrar General and Census Commissioner, 1984c), which shows a much greater digit preference among females in the census. The Myers' Indices for males and females also indicate that age reporting is relatively better among males in the Census, whereas in the NFHS it is much better among females. More particularly, Figure 3.1 indicates that in the NFHS the age distribution for females in the 13-49 age group is much smoother than for other females or for males. The primary reason for the better age reporting for females than males in the age group 13-49 in the NFHS is the difference between the Census and the NFHS in obtaining data on age. In the NFHS Household Questionnaire, as in the Census, the ages of

Table 3.1 Household population by age and sex
Percent distribution of the *de facto* household population by age, according to sex and residence, Himachal Pradesh, 1992

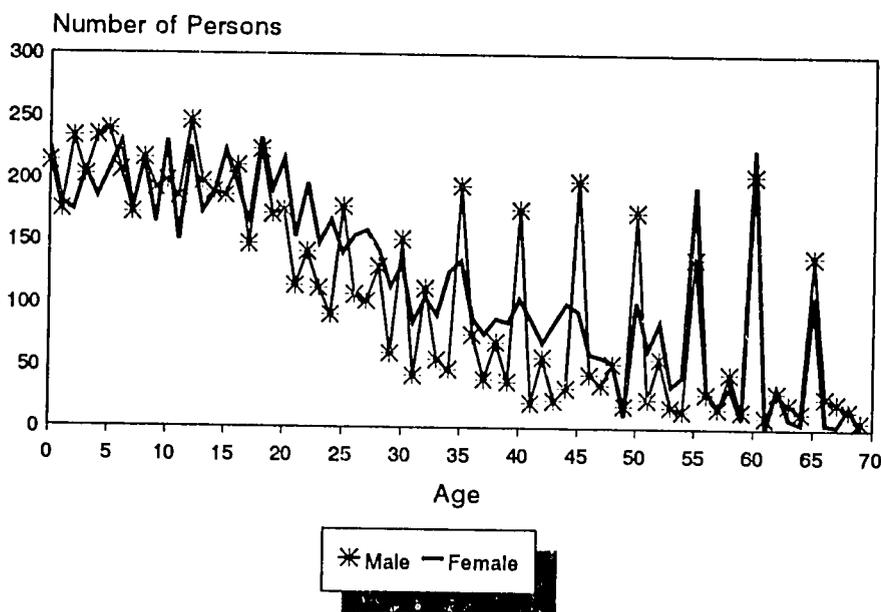
| Age | Urban | | | Rural | | | Total | | |
|---------------|-------|--------|-------|-------|--------|-------|-------|--------|-------|
| | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| < 1 | 1.9 | 2.5 | 2.2 | 2.7 | 2.6 | 2.7 | 2.6 | 2.6 | 2.6 |
| 1 - 4 | 8.4 | 7.2 | 7.8 | 10.7 | 8.8 | 9.7 | 10.5 | 8.7 | 9.5 |
| 5 - 9 | 12.5 | 10.8 | 11.7 | 12.7 | 11.6 | 12.1 | 12.7 | 11.5 | 12.1 |
| 10-14 | 9.6 | 10.6 | 10.1 | 12.9 | 11.3 | 12.1 | 12.6 | 11.3 | 11.9 |
| 15-19 | 11.9 | 10.0 | 11.0 | 11.6 | 11.9 | 11.7 | 11.6 | 11.7 | 11.7 |
| 20-24 | 7.8 | 10.9 | 9.3 | 7.8 | 10.2 | 9.0 | 7.8 | 10.2 | 9.1 |
| 25-29 | 8.0 | 10.0 | 9.0 | 7.0 | 8.1 | 7.6 | 7.1 | 8.2 | 7.7 |
| 30-34 | 7.6 | 9.5 | 8.5 | 4.8 | 6.0 | 5.4 | 5.0 | 6.3 | 5.7 |
| 35-39 | 8.3 | 6.6 | 7.5 | 4.8 | 5.4 | 5.1 | 5.1 | 5.5 | 5.3 |
| 40-44 | 4.9 | 5.5 | 5.2 | 3.7 | 5.2 | 4.4 | 3.8 | 5.2 | 4.5 |
| 45-49 | 5.9 | 4.4 | 5.2 | 4.1 | 3.1 | 3.6 | 4.3 | 3.2 | 3.7 |
| 50-54 | 4.3 | 3.6 | 3.9 | 3.4 | 3.8 | 3.6 | 3.5 | 3.8 | 3.7 |
| 55-59 | 2.9 | 2.4 | 2.7 | 2.9 | 3.4 | 3.2 | 2.9 | 3.3 | 3.1 |
| 60-64 | 2.0 | 2.5 | 2.2 | 3.5 | 3.2 | 3.4 | 3.4 | 3.2 | 3.3 |
| 65-69 | 1.5 | 1.9 | 1.7 | 2.7 | 1.5 | 2.1 | 2.5 | 1.5 | 2.0 |
| 70-74 | 1.1 | 0.9 | 1.0 | 2.1 | 1.5 | 1.8 | 2.0 | 1.4 | 1.7 |
| 75-79 | 0.5 | 0.5 | 0.5 | 0.8 | 0.7 | 0.8 | 0.8 | 0.7 | 0.8 |
| 80+ | 0.7 | 0.3 | 0.5 | 1.7 | 1.8 | 1.7 | 1.6 | 1.6 | 1.6 |
| Total percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number | 794 | 754 | 1548 | 7269 | 7821 | 15090 | 8063 | 8575 | 16638 |
| Sex ratio | NA | NA | 949 | NA | NA | 1076 | NA | NA | 1063 |

NA: Not applicable

all male and female members were reported by the head of the household or any adult member. No extensive probing was done to obtain age information in the Household Questionnaire. For eligible women who were later interviewed using the Woman's Questionnaire, however, the age reported by the woman herself replaced the age reported in the Household Questionnaire if there was a discrepancy. Her age as obtained from the Woman's Questionnaire is based on the month and year of her birth, if known, or otherwise on her reported age. A variety of probing techniques were used to elicit accurate age information from respondents 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 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 for 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 try to locate the woman's birth in relation to the dates of major national

Figure 3.1
Number of Persons Reported at Each Age
by Sex



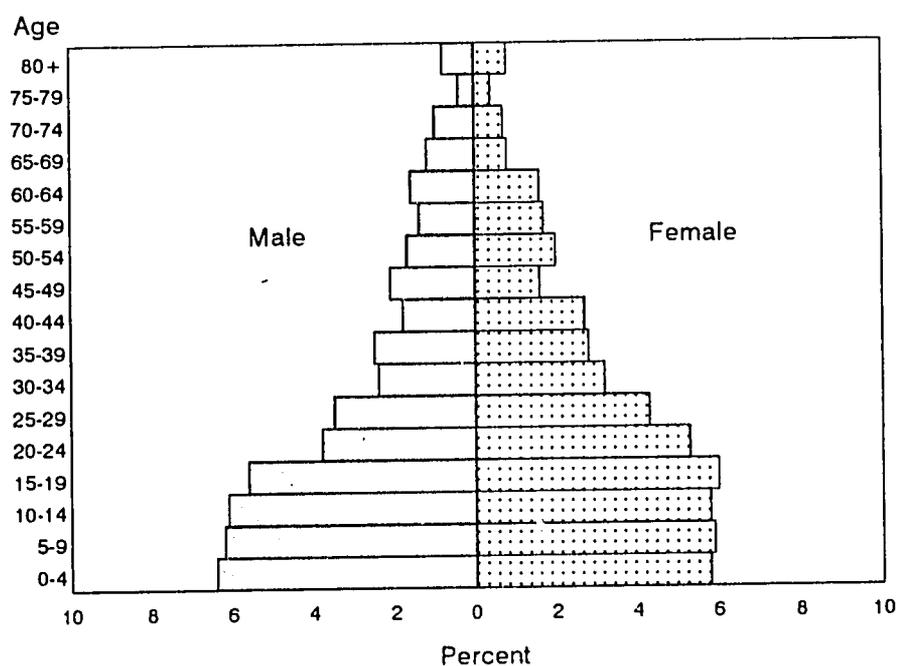
NFHS, Himachal Pradesh, 1992

events. Although age errors cannot be totally eliminated, the comparisons with the Census suggest that probing techniques and other elaborate measures used for arriving at the correct age of the eligible women have helped in reducing the biases in age reporting due to digit preference.

The distribution by five-year age groups is shown in the population pyramid in Figure 3.2. The irregular dip in the proportion of women at age 45-49 is indicative of a possible shifting of the age of women from age 45-49 to age 50-54. This is consistent with the pattern found in Demographic and Health Surveys, which generally show a slight tendency to displace the age of women from age group 45-49 to 50-54, presumably to reduce the work load of the interviewer (Rutstein and Bicego, 1990). However, the impact of this apparent shifting of age on the quality of data on fertility and contraception is minimal because of the small number of older women involved.

Table 3.2 compares the age distributions by sex from the NFHS *de jure* sample with the 1991 Sample Registration System (SRS). The SRS baseline survey counts all usual residents of the sample area (Office of the Registrar General, 1993). By and large, the age distributions by sex are similar for the 1991 SRS and the NFHS. Table 3.2 also provides information on sex ratios by age for the NFHS. The Sample Registration System (SRS) publishes percentage age distributions for the sample registration areas but not absolute numbers of population, so no population sex ratios can be computed from the SRS publication.

Figure 3.2
Population Pyramid of Himachal Pradesh, 1992



NFHS, Himachal Pradesh, 1992

The sex ratio (number of females per 1,000 males) is an important measure that indicates the balance of the sexes in the population. Himachal Pradesh is one of only three states in India with a sex ratio of more than 1,000 (the other two states are Kerala and Goa). The *de facto* population sex ratio, as shown in Table 3.1, is 949 in urban areas, 1,076 in rural areas and 1,063 for the state as a whole. The population sex ratio in the NFHS *de jure* sample is 1,070 (see Table 3.2). Roughly comparable figures from the 1991 Census are 831 for urban areas, 990 for rural areas and 976 for the state as a whole (Director of Census Operations, Himachal Pradesh, 1992). The sex ratio is lower in urban areas than in rural areas whether one examines the NFHS or the 1991 Census data. This disparity in the urban-rural sex ratio is probably explained by the disproportionate migration of males to the towns. The discrepancy between the NFHS (*de facto* value) and the census is 118 per 1,000 in urban areas and 86 per 1,000 in rural areas, with the sex ratio consistently higher in the NFHS. The NFHS *de jure* value is only 7 per 1,000 higher than the NFHS *de facto* value. But the latter is about 9 percent higher than the 1991 Census estimate. Since the 1991 Census and the NFHS were conducted about a year apart, one would expect the sex ratios from the two sources to be about the same.

One difference between the two sources of data is the population coverage. The Census includes the institutional population, which is overwhelmingly male, whereas the NFHS excludes the institutional population. Aside from the difference in the coverage, the discrepancies in population sex ratios between the NFHS and the 1991 Census in Himachal Pradesh could occur if the NFHS missed more males than females, or if the Census missed more females than males, or if both of these errors occurred. Sampling error in the NFHS does not account for such a

| Table 3.2 Population by age and sex from SRS and NFHS | | | | | |
|---|------------|--------|-------------|--------|-----------|
| Percent distribution of the <i>de jure</i> population by age and sex from SRS and NFHS, Himachal Pradesh, 1991-92 | | | | | |
| Age | SRS (1991) | | NFHS (1992) | | Sex ratio |
| | Male | Female | Male | Female | |
| 0 - 4 | 13.9 | 12.3 | 13.1 | 11.5 | 934 |
| 5 -14 | 24.8 | 22.8 | 25.0 | 22.6 | 968 |
| 15-29 | 26.7 | 29.1 | 27.1 | 30.0 | 1185 |
| 30-49 | 19.6 | 22.1 | 18.0 | 20.2 | 1198 |
| 50-64 | 9.9 | 9.3 | 9.8 | 10.4 | 1138 |
| 65+ | 5.1 | 4.4 | 6.9 | 5.3 | 821 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 1070 |
| Median age | U | U | 20.0 | 22.0 | NA |

NA: Not applicable
U: Not available
Source for SRS: Office of the Registrar General (1993)

large difference. The standard error for the *de facto* NFHS sex ratio is 16 yielding a confidence interval of 1,032-1,095 (see Table A.2 in Appendix A). Even the lower value in this range is considerably higher than the census value. Moreover, both urban and rural sex ratios are higher in the NFHS than in the 1991 Census, suggesting a systematic rather than a random pattern of differences.

The training and supervision of interviewers was much more thorough in the NFHS than in the Census. Therefore, in addition to sampling error, the most likely source of the discrepancy in the estimated sex ratio is relative underenumeration of females in the 1991 Census, a possibility that has been mentioned by Premi (1991), among others. In general, according to post-enumeration checks, Indian censuses have consistently underenumerated females more than males although the gap has been decreasing with each successive census. Not yet published findings from the 1991 Census post-enumeration check for Himachal Pradesh may shed some light on the discrepancy in sex ratios between the NFHS and the 1991 Census. Because of possible relative underenumeration of females in the 1991 Census, the differences in sex ratio estimates should not be taken as evidence that the NFHS is unrepresentative of the underlying population, especially since other comparisons generally indicate close agreement between the 1991 Census and the NFHS.

3.2 Marital Status

The NFHS gathered information on the marital status of all household members age 6 and over. Table 3.3 shows the marital status distribution of the *de facto* household population by age, sex and residence. Among females age 6 or more years, 52 percent are currently married and 38 percent have never been married. The percentage never married is higher for males (51 percent) than females (38 percent). The proportion of females never married is slightly lower in rural areas (38 percent) than in urban areas (39 percent). Divorce and

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, Himachal Pradesh, 1992

| Age | Marital status | | | | | | Total percent |
|---------------|----------------|-------------------|---------|----------|-----------|------------|---------------|
| | Never married | Currently married | Widowed | Divorced | Separated | DK/missing | |
| URBAN | | | | | | | |
| Male | | | | | | | |
| 6 -12 | 99.5 | 0.5 | -- | -- | -- | -- | 100.0 |
| 13-14 | 98.9 | 1.1 | -- | -- | -- | -- | 100.0 |
| 15-19 | 99.3 | 0.7 | -- | -- | -- | -- | 100.0 |
| 20-24 | 88.5 | 11.0 | 0.5 | -- | -- | -- | 100.0 |
| 25-29 | 32.7 | 67.3 | -- | -- | -- | -- | 100.0 |
| 30-34 | 3.2 | 96.8 | -- | -- | -- | -- | 100.0 |
| 35-39 | 2.5 | 97.1 | -- | -- | 0.5 | -- | 100.0 |
| 40-44 | 1.7 | 98.3 | -- | -- | -- | -- | 100.0 |
| 45-49 | 2.1 | 96.6 | 1.4 | -- | -- | -- | 100.0 |
| 50-54 | 1.9 | 95.2 | 1.9 | -- | 1.0 | -- | 100.0 |
| 55-59 | -- | 97.2 | 2.8 | -- | -- | -- | 100.0 |
| 60+ | 1.4 | 84.3 | 14.3 | -- | -- | -- | 100.0 |
| Total | 47.6 | 51.1 | 1.3 | -- | 0.1 | -- | 100.0 |
| Female | | | | | | | |
| 6 -12 | 99.4 | 0.3 | -- | -- | -- | 0.3 | 100.0 |
| 13-14 | 100.0 | -- | -- | -- | -- | -- | 100.0 |
| 15-19 | 91.8 | 7.7 | -- | 0.4 | -- | -- | 100.0 |
| 20-24 | 41.1 | 57.7 | 0.8 | -- | 0.4 | -- | 100.0 |
| 25-29 | 8.2 | 91.4 | 0.4 | -- | -- | -- | 100.0 |
| 30-34 | 2.3 | 95.0 | 1.8 | -- | 0.9 | -- | 100.0 |
| 35-39 | 3.9 | 92.2 | 3.9 | -- | -- | -- | 100.0 |
| 40-44 | 3.9 | 91.3 | 4.7 | -- | -- | -- | 100.0 |
| 45-49 | -- | 84.2 | 13.9 | -- | 2.0 | -- | 100.0 |
| 50-54 | 3.6 | 77.1 | 16.9 | -- | 2.4 | -- | 100.0 |
| 55-59 | 3.6 | 70.9 | 25.5 | -- | -- | -- | 100.0 |
| 60+ | 0.7 | 39.7 | 58.2 | -- | 1.4 | -- | 100.0 |
| Total | 39.3 | 53.1 | 7.0 | -- | 0.4 | -- | 100.0 |
| RURAL | | | | | | | |
| Male | | | | | | | |
| 6 -12 | 99.5 | 0.2 | 0.2 | -- | 0.1 | -- | 100.0 |
| 13-14 | 100.0 | -- | -- | -- | -- | -- | 100.0 |
| 15-19 | 98.6 | 1.4 | -- | -- | -- | -- | 100.0 |
| 20-24 | 74.2 | 25.6 | -- | 0.2 | -- | -- | 100.0 |
| 25-29 | 24.3 | 73.9 | 0.3 | 0.3 | 1.3 | -- | 100.0 |
| 30-34 | 6.6 | 93.4 | -- | -- | -- | -- | 100.0 |
| 35-39 | 3.1 | 96.2 | 0.4 | -- | 0.4 | -- | 100.0 |
| 40-44 | 1.0 | 97.0 | 1.5 | -- | 0.5 | -- | 100.0 |
| 45-49 | 2.2 | 92.4 | 4.0 | 0.4 | 0.9 | -- | 100.0 |
| 50-54 | 3.8 | 88.2 | 5.9 | 0.5 | 1.6 | -- | 100.0 |
| 55-59 | 2.5 | 83.8 | 12.5 | -- | 1.3 | -- | 100.0 |
| 60+ | 2.0 | 79.9 | 17.0 | 0.3 | 0.7 | -- | 100.0 |
| Total | 50.9 | 45.3 | 3.2 | 0.1 | 0.4 | -- | 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, Himachal Pradesh, 1992

| Age | Marital status | | | | | | Total percent |
|---------------|----------------|-------------------|---------|----------|-----------|------------|---------------|
| | Never married | Currently married | Widowed | Divorced | Separated | DK/missing | |
| RURAL | | | | | | | |
| Female | | | | | | | |
| 6 -12 | 99.7 | 0.1 | -- | 0.1 | 0.1 | -- | 100.0 |
| 13-14 | 99.2 | 0.4 | -- | -- | 0.4 | -- | 100.0 |
| 15-19 | 82.0 | 17.7 | -- | -- | 0.3 | -- | 100.0 |
| 20-24 | 22.0 | 76.3 | 0.3 | 0.5 | 0.8 | -- | 100.0 |
| 25-29 | 3.0 | 94.5 | 1.3 | 0.6 | 0.6 | -- | 100.0 |
| 30-34 | 2.3 | 92.3 | 3.4 | 1.1 | 0.9 | -- | 100.0 |
| 35-39 | 0.6 | 94.9 | 3.2 | -- | 1.3 | -- | 100.0 |
| 40-44 | 0.3 | 89.7 | 9.3 | 0.3 | 0.3 | -- | 100.0 |
| 45-49 | 1.1 | 87.8 | 10.0 | 0.6 | 0.6 | -- | 100.0 |
| 50-54 | 1.3 | 79.6 | 18.2 | -- | 0.9 | -- | 100.0 |
| 55-59 | 0.5 | 74.0 | 23.0 | 0.5 | 2.0 | -- | 100.0 |
| 60+ | 0.4 | 39.8 | 58.9 | 0.4 | 0.6 | -- | 100.0 |
| Total | 38.2 | 51.7 | 9.2 | 0.3 | 0.6 | -- | 100.0 |
| TOTAL | | | | | | | |
| Male | | | | | | | |
| 6 -12 | 99.5 | 0.2 | 0.2 | -- | 0.1 | -- | 100.0 |
| 13-14 | 99.9 | 0.1 | -- | -- | -- | -- | 100.0 |
| 15-19 | 98.6 | 1.4 | -- | -- | -- | -- | 100.0 |
| 20-24 | 75.6 | 24.2 | 0.1 | 0.2 | -- | -- | 100.0 |
| 25-29 | 25.2 | 73.2 | 0.2 | 0.2 | 1.2 | -- | 100.0 |
| 30-34 | 6.1 | 93.9 | -- | -- | -- | -- | 100.0 |
| 35-39 | 3.0 | 96.3 | 0.3 | -- | 0.4 | -- | 100.0 |
| 40-44 | 1.1 | 97.2 | 1.3 | -- | 0.4 | -- | 100.0 |
| 45-49 | 2.2 | 93.0 | 3.7 | 0.4 | 0.8 | -- | 100.0 |
| 50-54 | 3.5 | 89.0 | 5.4 | 0.5 | 1.5 | -- | 100.0 |
| 55-59 | 2.3 | 85.1 | 11.5 | -- | 1.1 | -- | 100.0 |
| 60+ | 2.0 | 80.2 | 16.9 | 0.3 | 0.6 | -- | 100.0 |
| Total | 50.6 | 45.9 | 3.0 | 0.1 | 0.4 | -- | 100.0 |
| Female | | | | | | | |
| 6 -12 | 99.7 | 0.1 | -- | 0.1 | 0.1 | -- | 100.0 |
| 13-14 | 99.3 | 0.4 | -- | -- | 0.4 | -- | 100.0 |
| 15-19 | 82.7 | 17.0 | -- | -- | 0.3 | -- | 100.0 |
| 20-24 | 23.8 | 74.6 | 0.4 | 0.5 | 0.8 | -- | 100.0 |
| 25-29 | 3.5 | 94.2 | 1.2 | 0.6 | 0.6 | -- | 100.0 |
| 30-34 | 2.3 | 92.6 | 3.2 | 1.0 | 0.9 | -- | 100.0 |
| 35-39 | 1.0 | 94.6 | 3.3 | -- | 1.1 | -- | 100.0 |
| 40-44 | 0.7 | 89.9 | 8.8 | 0.3 | 0.3 | -- | 100.0 |
| 45-49 | 1.0 | 87.3 | 10.5 | 0.5 | 0.7 | -- | 100.0 |
| 50-54 | 1.5 | 79.4 | 18.1 | -- | 1.0 | -- | 100.0 |
| 55-59 | 0.7 | 73.8 | 23.2 | 0.5 | 1.9 | -- | 100.0 |
| 60+ | 0.4 | 39.8 | 58.8 | 0.4 | 0.6 | -- | 100.0 |
| Total | 38.3 | 51.8 | 9.0 | 0.3 | 0.6 | -- | 100.0 |

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

separation, although not very common in Himachal Pradesh, still account for 3 and 6 per 1,000 women, and surprisingly this is more a rural than an urban phenomenon. The percentage widowed is quite small except in the older ages. Almost 60 percent of women age 60 and above are widows. Among males age 60 or over, only one-sixth are widowers. The higher percentage of older women than men who are widowed reflects sex differentials in age at marriage, longevity, and remarriage rates.

Of more interest in Table 3.3 are the data on the proportion of persons who marry young. A few child marriages at ages 6-12 did occur in the state. At age 15-19, the proportions ever married are 1 percent of males and 8 percent of females in urban areas, 1 percent of males and 18 percent of females in rural areas, and 1 percent of males and 17 percent of females in the state as a whole. Three-fourths of females in the state are married by the time they attain age 20-24, but less than a quarter of males are married at a comparable age. By ages 25-29, marriage is nearly universal for females, especially in rural areas. Overall, the table shows that women marry at much younger ages than men, and that both men and women marry at much younger ages in rural areas 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 (sex, age, marital status, religion and caste/tribe), as well as the number of usual household members. Eighty-six percent and 77 percent of urban and rural household heads, respectively, are male. The median age of household heads is between 44 and 48 years. Household heads are mainly concentrated in the middle age groups of 30-44 and 45-59. Overall, 97 percent of household heads are Hindu and a negligible proportion belong to other religions. Twenty-three percent of household heads are classified as belonging to scheduled castes and 6 percent are members of scheduled tribes. Both of these groups live proportionately more in rural areas than in urban areas. A vast majority of household heads are currently married, a small proportion are widowed and only a negligible number have never been married.

Although the mean size of households overall is 5, the average rural household has one more member than the average urban household. The number of usual household members exceeds seven persons in only one-quarter of households and the proportion of such larger households is much lower in urban than in rural areas.

Table 3.5 shows the percent distribution of the *de facto* household population by age, residence status (usual resident or visitor), and sex. Overall, 7 percent of the *de facto* population listed in the sample households at the time of the interview were visitors who did not usually live in the household. Visiting was common among males and females of nearly all age groups but especially among young men and women and their infant children. This pattern results partly from the common practice of women returning to their parents' house to have their children (particularly the first one or two children) and staying there during the postpartum period. Visits occur at approximately the same rate in urban and rural areas.

Table 3.4 Household composition

Percent distribution of households by selected characteristics of household head and size, according to residence, Himachal Pradesh, 1992

| Characteristic | Residence | | |
|---|-----------|-------|-------|
| | Urban | Rural | Total |
| Sex of household head | | | |
| Male | 85.8 | 76.8 | 77.8 |
| Female | 14.2 | 23.2 | 22.2 |
| Age of household head | | | |
| < 30 | 9.3 | 9.1 | 9.1 |
| 30-44 | 41.9 | 31.6 | 32.7 |
| 45-59 | 33.9 | 28.9 | 29.4 |
| 60+ | 15.0 | 30.5 | 28.8 |
| Median age | 44.4 | 46.4 | 47.4 |
| Marital status of household head | | | |
| Never married | 2.9 | 1.3 | 1.5 |
| Currently married | 87.5 | 82.5 | 83.1 |
| Widowed | 9.2 | 15.4 | 14.7 |
| Divorced | -- | 0.2 | 0.2 |
| Separated | 0.5 | 0.6 | 0.6 |
| Religion of household head | | | |
| Hindu | 93.0 | 97.3 | 96.8 |
| Muslim | 2.5 | 1.2 | 1.3 |
| Sikh | 3.7 | 0.4 | 0.8 |
| Other | 0.9 | 1.2 | 1.1 |
| Caste/tribe of household head | | | |
| Scheduled caste | 14.9 | 24.5 | 23.4 |
| Scheduled tribe | 1.0 | 6.3 | 5.7 |
| Other | 84.2 | 69.2 | 70.8 |
| Number of usual members | | | |
| 1 | 7.0 | 4.3 | 4.6 |
| 2 | 10.0 | 6.5 | 6.9 |
| 3 | 15.2 | 10.4 | 10.9 |
| 4 | 23.4 | 16.9 | 17.6 |
| 5 | 18.9 | 18.6 | 18.7 |
| 6 | 12.6 | 17.1 | 16.6 |
| 7 | 5.5 | 9.6 | 9.1 |
| 8 | 3.1 | 6.1 | 5.8 |
| 9+ | 4.2 | 10.4 | 9.7 |
| Mean size | 4.5 | 5.4 | 5.3 |
| Total percent | 100.0 | 100.0 | 100.0 |
| Number of households | 337 | 2782 | 3119 |

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, Himachal Pradesh, 1992

| Characteristic | Resident status | | Total percent | Number |
|------------------|-----------------|------------|---------------|--------------|
| | Usual resident | Visitor | | |
| MALE | | | | |
| Age | | | | |
| < 1 | 89.0 | 11.0 | 100.0 | 213 |
| 1 - 4 | 92.9 | 7.1 | 100.0 | 843 |
| 5 -14 | 94.4 | 5.6 | 100.0 | 2041 |
| 15-19 | 95.7 | 4.3 | 100.0 | 937 |
| 20-24 | 90.8 | 9.2 | 100.0 | 631 |
| 25-29 | 89.0 | 11.0 | 100.0 | 575 |
| 30-34 | 90.7 | 9.3 | 100.0 | 406 |
| 35-39 | 88.1 | 11.9 | 100.0 | 414 |
| 40-44 | 91.5 | 8.5 | 100.0 | 305 |
| 45-49 | 91.5 | 8.5 | 100.0 | 346 |
| 50+ | 94.8 | 5.2 | 100.0 | 1350 |
| Residence | | | | |
| Urban | 92.8 | 7.2 | 100.0 | 794 |
| Rural | 92.9 | 7.1 | 100.0 | 7269 |
| Total | 92.9 | 7.1 | 100.0 | 8063 |
| FEMALE | | | | |
| Age | | | | |
| < 1 | 87.4 | 12.6 | 100.0 | 224 |
| 1 - 4 | 93.1 | 6.9 | 100.0 | 745 |
| 5 -14 | 94.9 | 5.1 | 100.0 | 1954 |
| 15-19 | 93.9 | 6.1 | 100.0 | 1003 |
| 20-24 | 88.9 | 11.1 | 100.0 | 878 |
| 25-29 | 91.4 | 8.6 | 100.0 | 707 |
| 30-34 | 93.6 | 6.4 | 100.0 | 538 |
| 35-39 | 96.5 | 3.5 | 100.0 | 471 |
| 40-44 | 98.7 | 1.3 | 100.0 | 445 |
| 45-49 | 96.7 | 3.3 | 100.0 | 273 |
| 50+ | 96.2 | 3.8 | 100.0 | 1337 |
| Residence | | | | |
| Urban | 92.3 | 7.7 | 100.0 | 754 |
| Rural | 94.1 | 5.9 | 100.0 | 7821 |
| Total | 94.0 | 6.0 | 100.0 | 8575 |
| TOTAL | | | | |
| Age | | | | |
| < 1 | 88.2 | 11.8 | 100.0 | 437 |
| 1 - 4 | 93.0 | 7.0 | 100.0 | 1588 |
| 5 -14 | 94.6 | 5.4 | 100.0 | 3994 |
| 15-19 | 94.8 | 5.2 | 100.0 | 1940 |
| 20-24 | 89.7 | 10.3 | 100.0 | 1509 |
| 25-29 | 90.3 | 9.7 | 100.0 | 1282 |
| 30-34 | 92.4 | 7.6 | 100.0 | 944 |
| 35-39 | 92.6 | 7.4 | 100.0 | 884 |
| 40-44 | 95.7 | 4.3 | 100.0 | 749 |
| 45-49 | 93.8 | 6.2 | 100.0 | 620 |
| 50+ | 95.5 | 4.5 | 100.0 | 2687 |
| Residence | | | | |
| Urban | 92.5 | 7.5 | 100.0 | 1548 |
| Rural | 93.6 | 6.4 | 100.0 | 15090 |
| Total | 93.5 | 6.5 | 100.0 | 16638 |

Note: Total includes 2 males with missing information on age, who are not shown separately.

3.4 Educational Attainment

The educational level of household members is an important characteristic because educational attainment often affects reproductive behaviour, the use of contraceptives, the health of children and proper hygienic practices. Table 3.6 shows the extent of literacy and level of education of the *de facto* male and female household population age 6 and above by age and

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, Himachal Pradesh, 1992

| Age | Educational level | | | | | | | Total percent | Number | Median number of years of schooling |
|---------------|-------------------|-----------------------------|-------------------------|------------------------|----------------------|-------------------|-----------|---------------|--------|-------------------------------------|
| | Illiterate | Literate, <primary complete | Primary school complete | Middle school complete | High school complete | Above high school | Miss- ing | | | |
| URBAN | | | | | | | | | | |
| Male | | | | | | | | | | |
| 6 - 9 | 3.0 | 96.6 | 0.4 | -- | -- | -- | -- | 100.0 | 76 | 1.8 |
| 10-14 | 2.1 | 32.3 | 48.1 | 16.6 | 0.4 | -- | 0.4 | 100.0 | 76 | 6.0 |
| 15-19 | 1.4 | 3.8 | 19.6 | 28.9 | 41.2 | 5.2 | -- | 100.0 | 95 | 9.8 |
| 20-24 | 3.7 | 2.6 | 8.9 | 12.6 | 39.8 | 32.5 | -- | 100.0 | 62 | 11.3 |
| 25-29 | 0.5 | 2.6 | 8.2 | 12.2 | 43.4 | 33.2 | -- | 100.0 | 64 | 10.9 |
| 30-34 | 2.7 | 2.7 | 9.7 | 9.1 | 38.2 | 37.6 | -- | 100.0 | 60 | 10.9 |
| 35-39 | 7.4 | 4.4 | 9.8 | 8.8 | 33.3 | 36.3 | -- | 100.0 | 66 | 10.8 |
| 40-44 | 7.5 | 6.7 | 9.2 | 10.8 | 35.0 | 30.8 | -- | 100.0 | 39 | 10.7 |
| 45-49 | 6.9 | 4.8 | 10.3 | 11.0 | 39.3 | 27.6 | -- | 100.0 | 47 | 10.6 |
| 50+ | 19.3 | 7.3 | 13.0 | 13.0 | 26.6 | 20.9 | -- | 100.0 | 103 | 9.0 |
| Total | 5.9 | 17.7 | 14.6 | 13.0 | 28.5 | 20.3 | -- | 100.0 | 688 | 9.8 |
| Female | | | | | | | | | | |
| 6 - 9 | 4.4 | 94.6 | 1.0 | -- | -- | -- | -- | 100.0 | 66 | 2.0 |
| 10-14 | 5.7 | 25.2 | 53.7 | 15.0 | 0.4 | -- | -- | 100.0 | 80 | 6.0 |
| 15-19 | 3.4 | 2.1 | 9.4 | 30.0 | 45.1 | 9.9 | -- | 100.0 | 76 | 10.3 |
| 20-24 | 12.3 | 3.6 | 9.1 | 12.3 | 32.4 | 30.4 | -- | 100.0 | 82 | 10.6 |
| 25-29 | 11.2 | 3.9 | 12.9 | 9.9 | 34.1 | 28.0 | -- | 100.0 | 75 | 10.6 |
| 30-34 | 14.5 | 4.1 | 18.6 | 12.2 | 27.6 | 23.1 | -- | 100.0 | 72 | 10.0 |
| 35-39 | 19.5 | 9.1 | 15.6 | 11.7 | 27.9 | 16.2 | -- | 100.0 | 50 | 8.6 |
| 40-44 | 21.3 | 3.1 | 13.4 | 7.1 | 34.6 | 20.5 | -- | 100.0 | 41 | 10.2 |
| 45-49 | 28.7 | 9.9 | 15.8 | 12.9 | 23.8 | 8.9 | -- | 100.0 | 33 | 5.8 |
| 50+ | 52.3 | 9.0 | 12.9 | 10.8 | 10.8 | 4.3 | -- | 100.0 | 91 | 0.0 |
| Total | 17.2 | 16.5 | 16.7 | 12.6 | 22.9 | 14.1 | -- | 100.0 | 666 | 7.9 |
| Total | | | | | | | | | | |
| 6 - 9 | 3.7 | 95.6 | 0.7 | -- | -- | -- | -- | 100.0 | 142 | 1.9 |
| 10-14 | 4.0 | 28.7 | 50.9 | 15.8 | 0.4 | -- | 0.2 | 100.0 | 156 | 6.0 |
| 15-19 | 2.3 | 3.1 | 15.1 | 29.4 | 42.9 | 7.3 | -- | 100.0 | 170 | 10.0 |
| 20-24 | 8.6 | 3.2 | 9.0 | 12.4 | 35.6 | 31.3 | -- | 100.0 | 144 | 10.8 |
| 25-29 | 6.3 | 3.3 | 10.7 | 11.0 | 38.3 | 30.4 | -- | 100.0 | 139 | 10.8 |
| 30-34 | 9.1 | 3.4 | 14.5 | 10.8 | 32.4 | 29.7 | -- | 100.0 | 132 | 10.5 |
| 35-39 | 12.6 | 6.4 | 12.3 | 10.1 | 31.0 | 27.7 | -- | 100.0 | 116 | 10.4 |
| 40-44 | 14.6 | 4.9 | 11.3 | 8.9 | 34.8 | 25.5 | -- | 100.0 | 80 | 10.5 |
| 45-49 | 15.9 | 6.9 | 12.6 | 11.8 | 32.9 | 19.9 | -- | 100.0 | 80 | 10.1 |
| 50+ | 34.8 | 8.1 | 12.9 | 11.9 | 19.2 | 13.1 | -- | 100.0 | 193 | 5.8 |
| Total | 11.4 | 17.1 | 15.7 | 12.8 | 25.8 | 17.2 | -- | 100.0 | 1354 | 8.8 |

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, Himachal Pradesh, 1992

| 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 | Missing | | | |
| RURAL | | | | | | | | | | |
| Male | | | | | | | | | | |
| 6 - 9 | 9.0 | 89.7 | 1.1 | -- | -- | -- | 0.2 | 100.0 | 711 | 1.7 |
| 10-14 | 3.4 | 35.4 | 51.9 | 8.8 | 0.3 | -- | 0.1 | 100.0 | 939 | 5.5 |
| 15-19 | 4.9 | 5.1 | 28.8 | 36.9 | 22.7 | 1.4 | 0.2 | 100.0 | 843 | 8.8 |
| 20-24 | 12.0 | 3.3 | 20.9 | 14.8 | 42.7 | 6.3 | -- | 100.0 | 569 | 9.9 |
| 25-29 | 18.5 | 7.8 | 21.1 | 16.7 | 27.9 | 7.8 | -- | 100.0 | 512 | 8.2 |
| 30-34 | 20.8 | 9.7 | 22.4 | 15.1 | 27.0 | 5.0 | -- | 100.0 | 346 | 7.6 |
| 35-39 | 19.2 | 7.7 | 25.4 | 17.3 | 23.1 | 6.9 | 0.4 | 100.0 | 347 | 7.5 |
| 40-44 | 25.1 | 11.1 | 24.1 | 12.1 | 20.6 | 7.0 | -- | 100.0 | 266 | 6.6 |
| 45-49 | 35.3 | 14.7 | 15.6 | 12.1 | 17.9 | 4.5 | -- | 100.0 | 299 | 5.0 |
| 50+ | 60.1 | 13.2 | 9.9 | 7.6 | 6.9 | 2.2 | 0.2 | 100.0 | 1248 | 0.0 |
| Total | 22.4 | 22.5 | 22.5 | 13.8 | 15.6 | 3.1 | 0.1 | 100.0 | 6079 | 5.5 |
| Female | | | | | | | | | | |
| 6 - 9 | 13.2 | 85.8 | 0.7 | -- | 0.2 | -- | -- | 100.0 | 716 | 1.5 |
| 10-14 | 9.0 | 35.9 | 48.3 | 6.6 | 0.2 | -- | -- | 100.0 | 886 | 5.3 |
| 15-19 | 21.3 | 3.3 | 28.7 | 28.1 | 18.2 | 0.3 | 0.1 | 100.0 | 927 | 7.7 |
| 20-24 | 35.1 | 4.4 | 26.0 | 13.4 | 18.8 | 2.3 | -- | 100.0 | 796 | 5.6 |
| 25-29 | 41.4 | 8.9 | 24.5 | 10.6 | 12.3 | 2.1 | 0.2 | 100.0 | 632 | 4.9 |
| 30-34 | 48.4 | 7.7 | 26.4 | 8.0 | 7.7 | 1.7 | -- | 100.0 | 466 | 2.1 |
| 35-39 | 60.6 | 5.1 | 23.5 | 4.1 | 6.0 | 0.6 | -- | 100.0 | 421 | 0.0 |
| 40-44 | 69.5 | 8.6 | 14.9 | 3.3 | 3.6 | -- | -- | 100.0 | 403 | 0.0 |
| 45-49 | 81.1 | 9.4 | 7.2 | 0.6 | 1.7 | -- | -- | 100.0 | 240 | 0.0 |
| 50+ | 93.6 | 2.9 | 2.6 | 0.6 | 0.3 | -- | -- | 100.0 | 1246 | 0.0 |
| Total | 45.1 | 17.9 | 20.7 | 8.5 | 7.2 | 0.7 | -- | 100.0 | 6734 | 1.6 |
| Total | | | | | | | | | | |
| 6 - 9 | 11.1 | 87.7 | 0.9 | -- | 0.1 | -- | 0.1 | 100.0 | 1427 | 1.6 |
| 10-14 | 6.1 | 35.7 | 50.1 | 7.8 | 0.2 | -- | 0.1 | 100.0 | 1825 | 5.4 |
| 15-19 | 13.5 | 4.2 | 28.8 | 32.3 | 20.3 | 0.8 | 0.2 | 100.0 | 1770 | 8.3 |
| 20-24 | 25.4 | 3.9 | 23.9 | 14.0 | 28.8 | 4.0 | -- | 100.0 | 1365 | 7.5 |
| 25-29 | 31.2 | 8.4 | 23.0 | 13.3 | 19.3 | 4.7 | 0.1 | 100.0 | 1143 | 5.6 |
| 30-34 | 36.7 | 8.6 | 24.7 | 11.0 | 16.0 | 3.1 | -- | 100.0 | 812 | 5.3 |
| 35-39 | 41.9 | 6.3 | 24.3 | 10.1 | 13.7 | 3.5 | 0.2 | 100.0 | 768 | 5.1 |
| 40-44 | 51.9 | 9.6 | 18.6 | 6.8 | 10.4 | 2.8 | -- | 100.0 | 669 | 0.0 |
| 45-49 | 55.7 | 12.4 | 11.9 | 6.9 | 10.6 | 2.5 | -- | 100.0 | 540 | 0.0 |
| 50+ | 76.8 | 8.0 | 6.2 | 4.1 | 3.6 | 1.1 | 0.1 | 100.0 | 2494 | 0.0 |
| Total | 34.3 | 20.1 | 21.5 | 11.0 | 11.2 | 1.8 | 0.1 | 100.0 | 12813 | 4.1 |

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, Himachal Pradesh, 1992

| Age | Educational level | | | | | | | Total percent | Number | Median number of years of schooling |
|---------------|-------------------|-----------------------------|-------------------------|------------------------|----------------------|-------------------|-----------|---------------|--------|-------------------------------------|
| | Illiterate | Literate, <primary complete | Primary school complete | Middle school complete | High school complete | Above high school | Miss- ing | | | |
| TOTAL | | | | | | | | | | |
| Male | | | | | | | | | | |
| 6 - 9 | 8.4 | 90.3 | 1.1 | -- | -- | -- | 0.2 | 100.0 | 786 | 1.7 |
| 10-14 | 3.3 | 35.2 | 51.6 | 9.4 | 0.3 | -- | 0.1 | 100.0 | 1015 | 5.6 |
| 15-19 | 4.6 | 4.9 | 27.9 | 36.1 | 24.5 | 1.8 | 0.1 | 100.0 | 937 | 9.0 |
| 20-24 | 11.2 | 3.2 | 19.7 | 14.6 | 42.4 | 8.9 | -- | 100.0 | 631 | 10.1 |
| 25-29 | 16.5 | 7.2 | 19.7 | 16.2 | 29.6 | 10.6 | -- | 100.0 | 575 | 8.6 |
| 30-34 | 18.1 | 8.6 | 20.5 | 14.2 | 28.7 | 9.9 | -- | 100.0 | 406 | 8.3 |
| 35-39 | 17.3 | 7.2 | 22.9 | 15.9 | 24.7 | 11.6 | 0.3 | 100.0 | 414 | 8.2 |
| 40-44 | 22.9 | 10.5 | 22.2 | 11.9 | 22.4 | 10.1 | -- | 100.0 | 305 | 7.3 |
| 45-49 | 31.4 | 13.4 | 14.9 | 11.9 | 20.8 | 7.6 | -- | 100.0 | 346 | 5.6 |
| 50+ | 57.0 | 12.7 | 10.1 | 8.0 | 8.4 | 3.7 | 0.2 | 100.0 | 1350 | 0.0 |
| Total | 20.7 | 22.0 | 21.7 | 13.7 | 16.9 | 4.9 | 0.1 | 100.0 | 6767 | 5.8 |
| Female | | | | | | | | | | |
| 6 - 9 | 12.5 | 86.6 | 0.8 | -- | 0.2 | -- | -- | 100.0 | 782 | 1.6 |
| 10-14 | 8.8 | 35.0 | 48.7 | 7.3 | 0.2 | -- | -- | 100.0 | 966 | 5.3 |
| 15-19 | 20.0 | 3.2 | 27.2 | 28.2 | 20.2 | 1.0 | 0.1 | 100.0 | 1003 | 8.0 |
| 20-24 | 32.9 | 4.3 | 24.4 | 13.3 | 20.1 | 5.0 | -- | 100.0 | 878 | 5.8 |
| 25-29 | 38.2 | 8.3 | 23.3 | 10.5 | 14.6 | 4.9 | 0.2 | 100.0 | 707 | 5.2 |
| 30-34 | 43.9 | 7.2 | 25.3 | 8.6 | 10.4 | 4.6 | -- | 100.0 | 538 | 4.7 |
| 35-39 | 56.3 | 5.5 | 22.7 | 4.9 | 8.4 | 2.3 | -- | 100.0 | 471 | 0.0 |
| 40-44 | 65.1 | 8.1 | 14.8 | 3.7 | 6.5 | 1.9 | -- | 100.0 | 445 | 0.0 |
| 45-49 | 74.8 | 9.5 | 8.3 | 2.0 | 4.3 | 1.1 | -- | 100.0 | 273 | 0.0 |
| 50+ | 90.8 | 3.3 | 3.3 | 1.3 | 1.0 | 0.3 | -- | 100.0 | 1337 | 0.0 |
| Total | 42.6 | 17.8 | 20.3 | 8.8 | 8.6 | 1.9 | -- | 100.0 | 7399 | 2.4 |
| Total | | | | | | | | | | |
| 6 - 9 | 10.5 | 88.4 | 0.9 | -- | 0.1 | -- | 0.1 | 100.0 | 1563 | 1.6 |
| 10-14 | 6.0 | 35.1 | 50.2 | 8.4 | 0.2 | -- | 0.1 | 100.0 | 1981 | 5.5 |
| 15-19 | 12.5 | 4.1 | 27.6 | 32.0 | 22.3 | 1.4 | 0.1 | 100.0 | 1940 | 8.5 |
| 20-24 | 23.8 | 3.8 | 22.5 | 13.8 | 29.4 | 6.6 | -- | 100.0 | 1509 | 8.0 |
| 25-29 | 28.5 | 7.9 | 21.7 | 13.1 | 21.3 | 7.5 | 0.1 | 100.0 | 1282 | 5.9 |
| 30-34 | 32.8 | 7.8 | 23.2 | 11.0 | 18.3 | 6.9 | -- | 100.0 | 944 | 5.6 |
| 35-39 | 38.1 | 6.3 | 22.8 | 10.1 | 16.0 | 6.7 | 0.2 | 100.0 | 884 | 5.3 |
| 40-44 | 47.9 | 9.1 | 17.8 | 7.0 | 13.0 | 5.2 | -- | 100.0 | 749 | 2.2 |
| 45-49 | 50.6 | 11.7 | 12.0 | 7.6 | 13.5 | 4.7 | -- | 100.0 | 620 | 0.0 |
| 50+ | 73.8 | 8.0 | 6.7 | 4.7 | 4.7 | 2.0 | 0.1 | 100.0 | 2687 | 0.0 |
| Total | 32.1 | 19.8 | 21.0 | 11.2 | 12.6 | 3.3 | 0.1 | 100.0 | 14166 | 4.6 |

-- Less than 0.05 percent

residence. Himachal Pradesh has one of the highest literacy rates in India, especially for females. Forty-three percent of females age 6 and above and 21 percent of males in that age range are illiterate. The NFHS levels of illiteracy are somewhat lower than the 1991 Census rates of 48 percent for females and 25 percent for males age 7 and above (Table 1.1). With respect to educational attainment, a higher percentage of males than females have completed each level of schooling. The median number of years of schooling is higher for males (5.8) than for females (2.4).

Urban areas have a wide lead over rural areas in both literacy and the level of education achieved. Urban women are 1.5 times as likely to be literate as rural women (83 percent compared to 55 percent). The difference in literacy rates by residence is much less pronounced for males (94 percent in urban areas compared to 78 percent in rural areas).

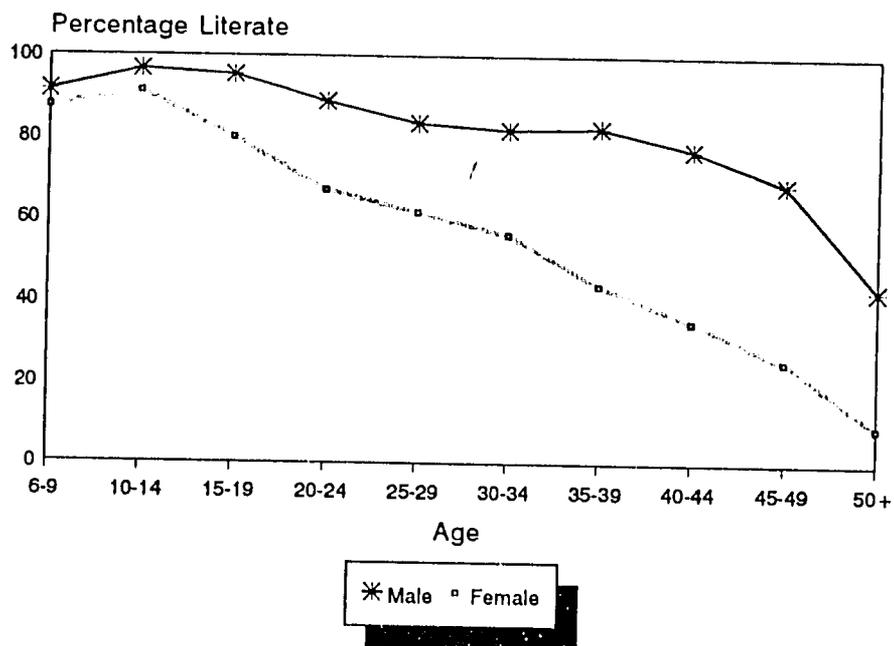
Differences in literacy rates by age suggest that there has been steady improvement in literacy over time (Figure 3.3). For example, while only 9 percent of women age 50 and over are literate, the literacy rate for females increases to 35 percent for those age 40-44, 67 percent for those age 20-24, and over 91 percent for those age 10-14. The literacy gap between males and females has narrowed over time, but even at age 10-14, males are more likely to be literate (97 percent) than females (91 percent).

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 the state as a whole, 91 percent of children age 6-14 (who are going to determine the educational profile of the state in the years to come) are attending school. It is significant to note that the gap in attendance, whether urban-rural or male-female is not very high. The school attendance rates in urban and rural areas are 95 percent and 90 percent, and the rates for males and females are 94 percent and 88 percent, respectively.

The comparison of school attendance at age 6-10 and 11-14 is significant in determining the drop-out rate. Table 3.7 shows that the school attendance rate at age 11-14 is slightly lower than at age 6-10, indicating that in Himachal Pradesh, the drop-out rate at this stage of schooling is relatively insignificant. Nevertheless, the difference is somewhat higher in the case of female children than male children.

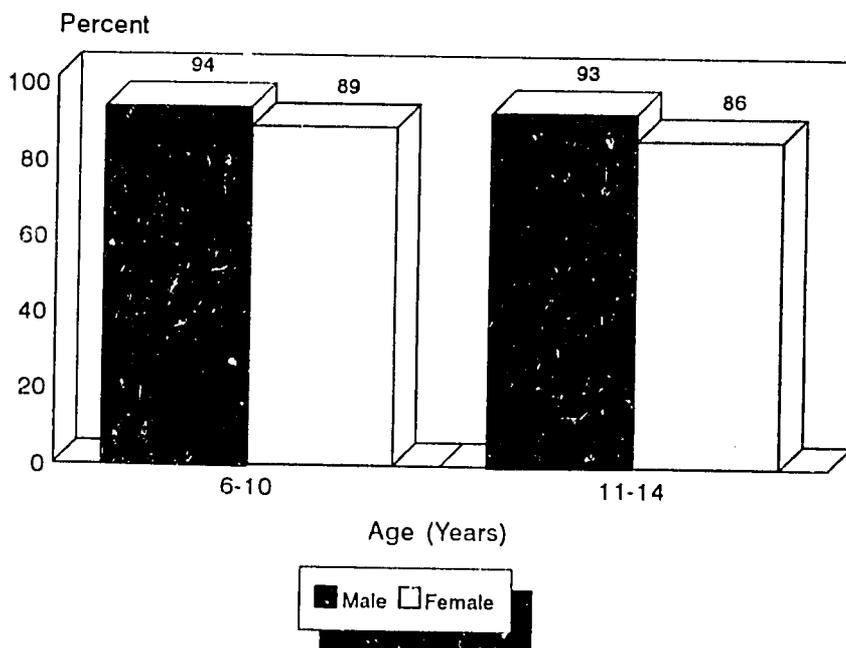
| Age | Male | | | Female | | | Total | | |
|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|
| | Urban | Rural | Total | Urban | Rural | Total | Urban | Rural | Total |
| 6-10 | 97.9 | 94.0 | 94.4 | 95.2 | 88.5 | 89.1 | 96.6 | 91.2 | 91.7 |
| 11-14 | 94.0 | 92.1 | 93.2 | 92.0 | 85.1 | 85.7 | 93.0 | 89.3 | 89.6 |
| 6-14 | 96.4 | 93.6 | 93.8 | 93.8 | 87.1 | 87.6 | 95.1 | 90.4 | 90.8 |

Figure 3.3
Percentage Literate by Age and Sex



NFHS, Himachal Pradesh, 1992

Figure 3.4
School Attendance by Age and Sex



NFHS, Himachal Pradesh, 1992

3.5 Housing Characteristics

The NFHS gathered information on the following housing characteristics: electricity, source of bathing/washing water and drinking water, sanitation facility, type of cooking fuel, place where livestock is kept, number of rooms in the house and the materials used for the construction of walls, roof and floor. The data on housing is summarized by residence in Table 3.8. Nearly all households in urban areas have electricity (98 percent), although the proportion for rural areas is lower (89 percent). In the state as a whole, 90 percent of households have electricity.

The source of water and availability of sanitary facilities are important determinants of the health status of household members, particularly of children. Regarding the source of drinking water, 56 percent of households have piped water, 33 percent use surface water (including *bawri*) and 9 percent use well water. Unlike in the case of electricity, there are large urban-rural differences in the source of drinking water. The proportion of households with piped drinking water is 93 percent in urban areas but only 52 percent in rural areas. The sources of water used for bathing and washing are very similar to the sources of drinking water.

Availability of sanitary facilities in households is poor in Himachal Pradesh. Only 10 percent of households have a flush toilet (using either piped water or bucket water for flushing), 2 percent have a pit toilet or latrine, and 87 percent have no facility. Again there are large urban-rural differences; 71 percent of households in urban areas but only 3 percent in rural areas have a flush toilet, and 22 percent of households in urban areas and 95 percent in rural areas have no toilet facility.

Several types of fuel are used for cooking in Himachal Pradesh, but wood is the most common fuel. In the state as a whole, 85 percent of households rely on wood and 15 percent on other fuels (primarily kerosene and liquid petroleum gas). A negligible proportion use cow dung cakes. Again, there are large urban-rural differences, with the majority of urban households (80 percent) relying on liquid petroleum gas and kerosene, while a vast majority of rural households use wood for cooking.

Based on the materials used for the construction of walls, roof and floor, a house in the NFHS is classified as either *kachcha* (made from mud, thatch, or other low-quality materials), semi-*pucca* (partly low-quality and partly high-quality materials), or *pucca* (high-quality materials throughout, including roof, walls, and floor). In Himachal Pradesh, a negligible proportion (3 percent) of houses are *kachcha*, 74 percent are semi-*pucca* and 23 percent are *pucca*. *Pucca* houses predominate in urban areas and semi-*pucca* houses are most common in rural areas.

The NFHS also collected information on whether households own any livestock. Four-fifths of the households in Himachal Pradesh own livestock, 87 percent in rural areas and 17 percent in urban areas. A follow-up question was asked on where the livestock are kept at night, since keeping them inside the house may adversely affect the health of the residents. One-fifth of all households and 23 percent of rural households have livestock that are kept inside the house at night.

Table 3.8 Housing characteristics

Percent distribution of households by housing characteristics, according to residence, Himachal Pradesh, 1992

| Housing characteristic | Residence | | |
|--|-----------|-------|-------|
| | Urban | Rural | Total |
| Electricity | | | |
| Yes | 98.2 | 89.2 | 90.2 |
| No | 1.8 | 10.8 | 9.8 |
| Source of bathing/washing water | | | |
| Piped | 93.6 | 54.6 | 58.8 |
| Handpump | 1.0 | 1.3 | 1.3 |
| Well water | 1.2 | 8.5 | 7.7 |
| Surface water | 4.1 | 35.2 | 31.9 |
| Other | 0.2 | 0.3 | 0.3 |
| Source of drinking water | | | |
| Piped | 92.6 | 51.8 | 56.2 |
| Handpump | 1.3 | 1.3 | 1.3 |
| Well water | 1.3 | 10.2 | 9.2 |
| Surface water | 4.7 | 36.3 | 32.9 |
| Other | 0.2 | 0.3 | 0.3 |
| Sanitation facility | | | |
| Flush | 70.6 | 3.0 | 10.3 |
| Pit toilet/latrine | 7.8 | 1.5 | 2.2 |
| Other | -- | 0.1 | 0.1 |
| No facility | 21.6 | 95.4 | 87.4 |
| Type of fuel for cooking | | | |
| Wood | 16.3 | 93.1 | 84.8 |
| Cow dung cakes | 0.1 | -- | 0.1 |
| Coal/coke/lignite/charcoal | 0.2 | 0.2 | 0.2 |
| Kerosene | 25.7 | 3.6 | 6.0 |
| Electricity | 1.2 | -- | 0.1 |
| Liquid petroleum gas | 53.9 | 2.2 | 7.7 |
| Other | 2.7 | 0.8 | 1.0 |
| Type of house | | | |
| Kachcha | 3.0 | 3.2 | 3.1 |
| Semi-pucca | 30.5 | 79.4 | 74.1 |
| Pucca | 66.5 | 17.4 | 22.7 |
| Place where livestock is kept | | | |
| Inside the house | 2.3 | 23.3 | 21.1 |
| Outside the house | 14.3 | 63.9 | 58.5 |
| No livestock | 83.4 | 12.8 | 20.4 |
| Persons per room | | | |
| < 3.0 | 83.5 | 74.4 | 75.4 |
| 3.0-4.9 | 13.1 | 18.1 | 17.6 |
| 5.0-6.9 | 2.9 | 5.7 | 5.4 |
| 7.0+ | 0.5 | 1.8 | 1.6 |
| Mean | 1.8 | 2.2 | 2.1 |
| Total percent | 100.0 | 100.0 | 100.0 |
| Number of households | 337 | 2782 | 3119 |

-- Less than 0.05 percent

Crowded conditions may affect health as well as the quality of life. The number of persons per room in the household is used as a measure of crowding. In the household, occupancy is virtually the same in both urban and rural areas with mean values of 1.8-2.2 persons per room. A large majority of households have fewer than three persons per room. Only 5 percent of households have between 5.0 and 6.9 persons per room and a negligible proportion of households is very crowded with 7.0 or more persons per room.

Table 3.9 contains a number of measures related to the socioeconomic status of the household, for example, household ownership of land, livestock by type, and durable goods by type. Overall, a little more than one-fifth of households are landless; urban households are four times as likely to be landless as rural households. In rural areas, among those who have land,

| Item owned | Residence | | |
|---|-----------|-------|-------|
| | Urban | Rural | Total |
| Agricultural land | | | |
| No land | 67.5 | 16.4 | 21.9 |
| Irrigated land only | | | |
| < 1 Acre | 1.5 | 3.0 | 2.9 |
| 1-5 Acres | 2.4 | 2.5 | 2.5 |
| 6+ Acres | 0.6 | 0.6 | 0.6 |
| Non-irrigated land only | | | |
| < 1 Acre | 5.2 | 18.9 | 17.4 |
| 1-5 Acres | 11.9 | 31.8 | 29.6 |
| 6+ Acres | 3.7 | 5.2 | 5.1 |
| Irrigated and non-irrigated land | | | |
| < 1 Acre | 1.8 | 9.3 | 8.5 |
| 1-5 Acres | 3.3 | 9.0 | 8.4 |
| 6+ Acres | 2.1 | 3.2 | 3.1 |
| Total percent | 100.0 | 100.0 | 100.0 |
| Livestock | | | |
| Bullock | 6.8 | 52.9 | 47.9 |
| Cow | 9.1 | 55.4 | 50.4 |
| Buffalo | 8.9 | 44.5 | 40.7 |
| Goat | 3.1 | 24.1 | 21.8 |
| Sheep | 3.0 | 20.9 | 19.0 |
| Camel | -- | 0.1 | 0.1 |
| Other | 0.3 | 2.1 | 1.9 |
| No livestock | 83.4 | 12.8 | 20.4 |
| Consumer durable goods | | | |
| Sewing machine | 73.5 | 57.9 | 59.6 |
| Clock/watch | 91.1 | 60.4 | 63.7 |
| Radio | 74.6 | 47.4 | 50.4 |
| Television | 76.7 | 26.8 | 32.2 |
| Refrigerator | 32.7 | 3.9 | 7.0 |
| Bicycle | 16.1 | 15.1 | 15.2 |
| Motorcycle/scooter | 20.4 | 2.9 | 4.8 |
| Car | 5.6 | 0.3 | 0.9 |
| Number of households | 337 | 2782 | 3119 |
| -- Less than 0.05 percent | | | |

one-third irrigate their land partly or wholly. Eighty percent of all households have livestock, and rural households are much more likely to own livestock than urban households. Forty-five percent of rural households have one or more head of buffalo, 53 percent have bullocks, 55 percent have cows, 24 percent have goats, and 21 percent have sheep.

The possession of durable goods is another indicator of a household's socioeconomic level, although these goods may also have other benefits. For example, having access to a radio or television may expose household members to innovative ideas; a refrigerator prolongs the wholesomeness of food; and a means of transportation allows greater access to many services outside the local area.

Table 3.9 shows that in the state as a whole, a relatively small proportion of households have a bicycle or motorcycle/scooter (because of the hilly terrain). Sixty-four percent have a clock/watch. Other durable goods often found in households are sewing machines (60 percent), radios (50 percent), and television sets (32 percent), with smaller percentages owning refrigerators (7 percent) and cars (1 percent). Urban households are much more likely to have each of these durable goods than are rural households, except for bicycles, where the urban and rural percentages are nearly the same.

3.6 Background Characteristics of Respondents

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

Table 3.10 shows several important background characteristics of respondents: age, marital status, education, religion, caste/tribe, work status, and husband's education. The table also provides the total number of women interviewed, weighted and unweighted. The data shown in this, and in all subsequent tables, are based on the weighted sample. The weighted numbers may not add up to the total 2,962 women due to rounding.

The percentage in each age group increases through age 25-29, 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. The age pattern is different in urban and rural areas (Figure 3.5). In the case of urban respondents, the increase in the proportion in each successive age group continues through age 30-34. The percentages in the younger age groups are smaller in urban areas through age 20-24, reflecting the somewhat later age at marriage in urban areas (see the earlier discussion of Table 3.3). Ninety-five percent of respondents (ever-married women) are currently married, and among the remainder most are widowed. About 1 percent are divorced or separated. The pattern of distribution of respondents by religion and caste and tribe categories is similar to the pattern of distribution of households by these same characteristics, as discussed in Section 3.3.

Table 3.10 also shows the distribution of respondents by respondent's work status and husband's education. In the NFHS, work includes any kind of job for which the woman is paid in cash or in kind as well as unpaid work on a family farm or business. Fifty-two percent of

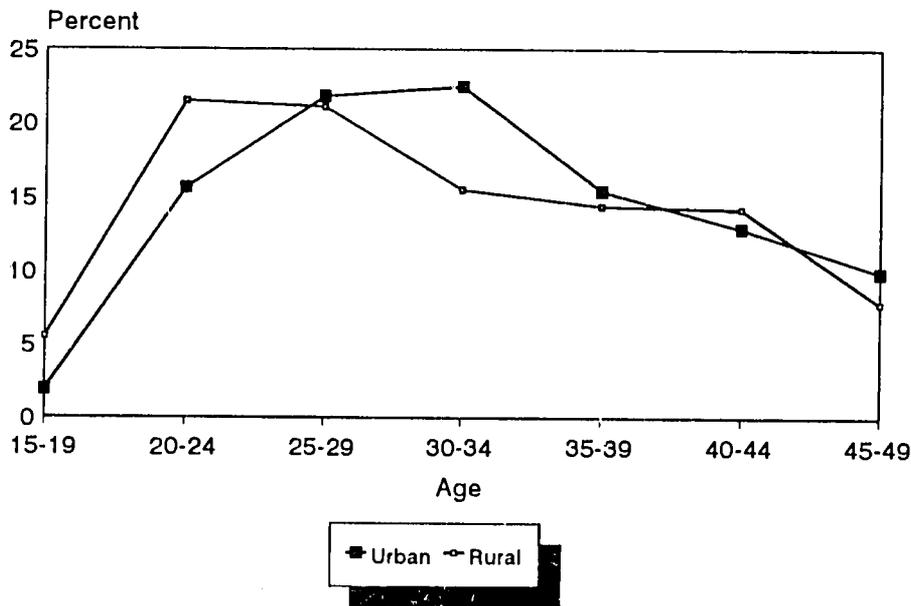
Table 3.10 Background characteristics of respondents

Percent distribution of ever-married women age 13-49, by selected background characteristics, according to residence, Himachal Pradesh, 1992

| Background characteristic | Residence | | | Total number of women | |
|---------------------------------|-----------|-------|-------|-----------------------|------------|
| | Urban | Rural | Total | Weighted | Unweighted |
| Age | | | | | |
| 13-14 | -- | -- | -- | 1 | 1 |
| 15-19 | 1.9 | 5.5 | 5.1 | 152 | 129 |
| 20-24 | 15.6 | 21.5 | 20.9 | 619 | 581 |
| 25-29 | 21.8 | 21.1 | 21.1 | 626 | 631 |
| 30-34 | 22.5 | 15.5 | 16.2 | 479 | 524 |
| 35-39 | 15.4 | 14.4 | 14.5 | 430 | 436 |
| 40-44 | 12.9 | 14.2 | 14.1 | 417 | 409 |
| 45-49 | 9.9 | 7.8 | 8.0 | 238 | 251 |
| Marital status | | | | | |
| Currently married | 95.7 | 95.1 | 95.2 | 2819 | 2823 |
| Widowed | 3.5 | 3.7 | 3.7 | 109 | 108 |
| Divorced | 0.2 | 0.4 | 0.4 | 12 | 11 |
| Separated | 0.5 | 0.7 | 0.7 | 21 | 20 |
| Education | | | | | |
| Illiterate | 17.7 | 53.1 | 49.7 | 1471 | 1244 |
| Literate, < primary complete | 6.0 | 7.3 | 7.2 | 212 | 204 |
| Primary school complete | 15.4 | 21.6 | 21.0 | 622 | 582 |
| Middle school complete | 11.2 | 8.5 | 8.7 | 259 | 276 |
| High school complete | 30.9 | 8.5 | 10.6 | 315 | 459 |
| Above high school | 18.8 | 1.1 | 2.8 | 83 | 197 |
| Religion | | | | | |
| Hindu | 93.0 | 97.6 | 97.2 | 2879 | 2849 |
| Muslim | 2.9 | 1.0 | 1.2 | 36 | 48 |
| Sikh | 3.3 | 0.4 | 0.7 | 21 | 40 |
| Buddhist | 0.1 | 0.1 | 0.1 | 3 | 3 |
| Christian | 0.4 | -- | 0.1 | 3 | 5 |
| Other | 0.2 | 0.7 | 0.7 | 20 | 17 |
| Caste/tribe | | | | | |
| Scheduled caste | 16.3 | 24.5 | 23.7 | 702 | 650 |
| Scheduled tribe | 0.8 | 4.9 | 4.5 | 134 | 107 |
| Other | 82.9 | 70.6 | 71.8 | 2126 | 2205 |
| Work status | | | | | |
| Not working | 70.5 | 50.3 | 52.3 | 1549 | 1679 |
| Working in family farm/business | 7.2 | 44.5 | 40.9 | 1210 | 971 |
| Employed by someone else | 20.4 | 4.4 | 5.9 | 176 | 279 |
| Self-employed | 1.8 | 0.8 | 0.9 | 26 | 33 |
| Husband's education | | | | | |
| Illiterate | 4.5 | 22.0 | 20.3 | 603 | 490 |
| Literate, < primary complete | 3.4 | 8.9 | 8.4 | 248 | 213 |
| Primary school complete | 10.0 | 18.9 | 18.0 | 534 | 477 |
| Middle school complete | 10.9 | 15.1 | 14.7 | 434 | 407 |
| High school complete | 38.8 | 29.7 | 30.6 | 905 | 964 |
| Above high school | 32.4 | 5.4 | 8.0 | 238 | 411 |
| Total percent | 100.0 | 100.0 | 100.0 | NA | NA |
| Number of women | | | | | |
| Weighted | 288 | 2674 | 2962 | 2962 | NA |
| Unweighted | 930 | 2032 | 2962 | NA | 2962 |

NA: Not applicable
 -- Less than 0.05 percent

Figure 3.5
Age Distribution of Ever-Married
Women by Residence



NFHS, Himachal Pradesh, 1992

respondents report that they are not working, and this percentage is higher for urban females. In rural areas, 45 percent of ever-married women report that they are working on a family farm or in some other family business, 4 percent are employed by someone else, and 1 percent are self-employed. Among urban women, one-fifth are employed by others and 2 percent are self-employed.

One-fifth of husbands are illiterate (5 percent in urban areas and 22 percent in rural areas). The percentage of husbands with at least a high school education is twice as high in urban areas (71 percent) as in rural areas (35 percent).

One-half of all respondents are illiterate and only 13 percent have completed high school. The education distribution among ever-married women has a form similar to the educational distribution among all females in the *de facto* household population, but as a group, the primary respondents are less literate than the female household population (Table 3.6). This may reflect advances in schooling in recent years (advances that have benefitted girls but not adult women past the age of school attendance); it may also reflect a tendency for the youngest-marrying women to be uneducated.

Table 3.11 shows further details on the respondents' education. After age 15-19, the proportion illiterate increases steadily with age, reflecting improvements in levels of education over time. A somewhat high proportion of women age 15-19 (41 percent) are illiterate because only 17 percent of those age 15-19 are married (Table 3.3) and women who marry young tend

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, Himachal Pradesh, 1992

| Background characteristic | Respondent's level of education | | | | | | Total percent | Number |
|----------------------------|---------------------------------|-----------------------------------|-------------------------------|------------------------------|----------------------------|-------------------------|---------------|--------|
| | Illit- erate | Literate, <primary complete | Primary school complete | Middle school complete | High school complete | Above high school | | |
| URBAN | | | | | | | | |
| Age | | | | | | | | |
| 20-24 | 20.7 | 6.2 | 11.7 | 13.8 | 35.9 | 11.7 | 100.0 | 45 |
| 25-29 | 11.8 | 4.9 | 12.8 | 9.4 | 32.0 | 29.1 | 100.0 | 63 |
| 30-34 | 14.4 | 4.8 | 19.6 | 11.0 | 27.3 | 23.0 | 100.0 | 65 |
| 35-39 | 21.7 | 7.0 | 18.2 | 11.9 | 27.3 | 14.0 | 100.0 | 44 |
| 40-44 | 19.2 | 4.2 | 12.5 | 7.5 | 38.3 | 18.3 | 100.0 | 37 |
| 45-49 | 27.2 | 13.0 | 15.2 | 12.0 | 22.8 | 9.8 | 100.0 | 29 |
| Religion | | | | | | | | |
| Hindu | 17.6 | 6.0 | 15.6 | 11.2 | 30.3 | 19.3 | 100.0 | 268 |
| Muslim | (33.3) | (14.8) | (18.5) | (18.5) | (14.8) | (--) | 100.0 | 8 |
| Other | (10.5) | (--) | (7.9) | (5.3) | (55.3) | (21.1) | 100.0 | 12 |
| Caste/tribe | | | | | | | | |
| Scheduled caste | 39.5 | 10.5 | 21.7 | 9.2 | 15.8 | 3.3 | 100.0 | 47 |
| Other (Non-SC/ST) | 13.2 | 5.1 | 14.3 | 11.7 | 33.7 | 22.0 | 100.0 | 239 |
| Husband's education | | | | | | | | |
| Illiterate | (83.3) | (2.4) | (11.9) | (2.4) | (--) | (--) | 100.0 | 13 |
| Lit., < primary complete | (50.0) | (25.0) | (9.4) | (3.1) | (12.5) | (--) | 100.0 | 10 |
| Primary school complete | 48.4 | 16.1 | 28.0 | 2.2 | 4.3 | 1.1 | 100.0 | 29 |
| Middle school complete | 26.7 | 10.9 | 26.7 | 19.8 | 13.9 | 2.0 | 100.0 | 31 |
| High school complete | 9.7 | 5.5 | 19.1 | 16.1 | 44.0 | 5.5 | 100.0 | 112 |
| Above high school | 2.3 | 0.3 | 4.3 | 7.3 | 35.2 | 50.5 | 100.0 | 93 |
| Total | 17.7 | 6.0 | 15.4 | 11.2 | 30.9 | 18.8 | 100.0 | 288 |
| RURAL | | | | | | | | |
| Age | | | | | | | | |
| 15-19 | 42.3 | 5.4 | 25.2 | 21.6 | 5.4 | -- | 100.0 | 146 |
| 20-24 | 40.6 | 6.2 | 25.7 | 11.7 | 14.2 | 1.6 | 100.0 | 574 |
| 25-29 | 45.1 | 7.2 | 23.8 | 10.3 | 11.7 | 1.9 | 100.0 | 563 |
| 30-34 | 49.5 | 6.0 | 26.7 | 8.9 | 7.3 | 1.6 | 100.0 | 414 |
| 35-39 | 59.4 | 7.5 | 21.5 | 4.4 | 6.5 | 0.7 | 100.0 | 386 |
| 40-44 | 69.9 | 8.3 | 14.5 | 3.8 | 3.5 | -- | 100.0 | 380 |
| 45-49 | 81.1 | 11.9 | 5.0 | 0.6 | 1.3 | -- | 100.0 | 209 |
| Religion | | | | | | | | |
| Hindu | 52.7 | 7.3 | 21.9 | 8.6 | 8.5 | 1.1 | 100.0 | 2611 |
| Caste/tribe | | | | | | | | |
| Scheduled caste | 65.5 | 7.0 | 17.5 | 5.2 | 4.6 | 0.2 | 100.0 | 655 |
| Scheduled tribe | 80.0 | 7.0 | 8.0 | 3.0 | 2.0 | -- | 100.0 | 132 |
| Other | 46.9 | 7.4 | 24.0 | 10.0 | 10.3 | 1.5 | 100.0 | 1887 |
| Husband's education | | | | | | | | |
| Illiterate | 92.6 | 3.6 | 3.6 | 0.2 | -- | -- | 100.0 | 589 |
| Lit., < primary complete | 83.4 | 7.2 | 7.2 | 1.7 | 0.6 | -- | 100.0 | 238 |
| Primary school complete | 61.7 | 9.6 | 26.3 | 2.3 | -- | -- | 100.0 | 505 |
| Middle school complete | 45.4 | 10.8 | 32.4 | 8.2 | 3.3 | -- | 100.0 | 403 |
| High school complete | 21.6 | 7.5 | 30.8 | 19.9 | 19.6 | 0.7 | 100.0 | 793 |
| Above high school | 6.4 | 3.6 | 21.8 | 12.7 | 39.1 | 16.4 | 100.0 | 145 |
| Total | 53.1 | 7.3 | 21.6 | 8.5 | 8.5 | 1.1 | 100.0 | 2674 |

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, Himachal Pradesh, 1992

| 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 | 41.2 | 5.2 | 25.1 | 21.8 | 6.6 | -- | 100.0 | 152 |
| 20-24 | 39.2 | 6.2 | 24.7 | 11.8 | 15.8 | 2.3 | 100.0 | 619 |
| 25-29 | 41.7 | 7.0 | 22.7 | 10.2 | 13.7 | 4.6 | 100.0 | 626 |
| 30-34 | 44.8 | 5.9 | 25.7 | 9.2 | 10.0 | 4.5 | 100.0 | 479 |
| 35-39 | 55.5 | 7.5 | 21.2 | 5.2 | 8.6 | 2.1 | 100.0 | 430 |
| 40-44 | 65.4 | 7.9 | 14.4 | 4.1 | 6.6 | 1.6 | 100.0 | 417 |
| 45-49 | 74.7 | 12.1 | 6.3 | 2.0 | 3.8 | 1.2 | 100.0 | 238 |
| Religion | | | | | | | | |
| Hindu | 49.4 | 7.1 | 21.3 | 8.9 | 10.5 | 2.8 | 100.0 | 2879 |
| Muslim | (77.2) | (7.1) | (8.0) | (4.3) | (3.4) | (--) | 100.0 | 36 |
| Other | 44.3 | 8.3 | 13.1 | 4.1 | 22.1 | 8.0 | 100.0 | 47 |
| Caste/tribe | | | | | | | | |
| Scheduled caste | 63.7 | 7.3 | 17.8 | 5.5 | 5.4 | 0.4 | 100.0 | 702 |
| Scheduled tribe | 79.4 | 7.1 | 7.9 | 3.0 | 2.7 | -- | 100.0 | 134 |
| Other | 43.1 | 7.1 | 22.9 | 10.2 | 12.9 | 3.8 | 100.0 | 2126 |
| Husband's education | | | | | | | | |
| Illiterate | 92.4 | 3.5 | 3.8 | 0.3 | -- | -- | 100.0 | 603 |
| Lit., < primary complete | 82.1 | 7.9 | 7.3 | 1.7 | 1.0 | -- | 100.0 | 248 |
| Primary school complete | 61.0 | 10.0 | 26.4 | 2.3 | 0.2 | 0.1 | 100.0 | 534 |
| Middle school complete | 44.1 | 10.8 | 31.9 | 9.0 | 4.0 | 0.1 | 100.0 | 434 |
| High school complete | 20.1 | 7.2 | 29.4 | 19.4 | 22.6 | 1.3 | 100.0 | 905 |
| Above high school | 4.8 | 2.3 | 15.0 | 10.6 | 37.6 | 29.7 | 100.0 | 238 |
| Total | 49.7 | 7.2 | 21.0 | 8.7 | 10.6 | 2.8 | 100.0 | 2962 |

Note: Total includes 6 urban women age 15-19, 2 urban scheduled tribe women, 1 rural woman age 13-14 and 64 non-Hindu rural women, who are not shown separately.

() Based on 25-49 unweighted cases

-- Less than 0.05 percent

to be drawn selectively from the less educated. Sixty-four percent among the scheduled castes and 79 percent among the scheduled tribes are illiterate, compared with 43 percent in the non-SC/ST group (those who do not belong to either the scheduled castes or scheduled tribes). A higher percentage of women in the non-SC/ST category compared to those belonging to scheduled caste or scheduled tribe groups have completed each level of schooling, except the lowest level. With respect to husband's literacy, 92 percent of women with illiterate husbands are illiterate themselves. Even among men who have completed high school (or a higher level of education), 17 percent have married illiterate women, reflecting the general tendency of men to marry women with less education than themselves. Only 4 percent of women married husbands with lower educational qualifications than the respondents themselves.

Table 3.12 provides information on the exposure of respondents to mass media. Only one-third of women are not regularly exposed to any kind of mass media (television, radio or cinema). The high rate of exposure in Himachal Pradesh is related to the fact that one-half of

households own a radio and 32 percent own a television (Table 3.9). This fact highlights the scope for diffusing information on family planning, health and other topics through the mass media. Fifty-five percent of women normally listen to the radio at least once a week and 47 percent watch television at least once a week, but only 3 percent go to a cinema hall or theatre to see a movie at least once a month. Exposure to mass media varies sharply according to some of the background characteristics of the woman. The proportion not exposed to any media is rather constant by age at about 35 percent. But exposure to mass media, whether television, radio or cinema, is positively related to the level of education.

Media exposure is much greater in urban areas than in rural areas. Women from scheduled tribes are less likely than other women to be exposed to mass media, particularly to television broadcasts. Women belonging to scheduled castes are also less exposed to mass media than non-SC/ST 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, Himachal Pradesh, 1992 | | | | | |
| 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 | 35.4 | 56.7 | 4.1 | 35.1 | 152 |
| 20-24 | 46.6 | 58.8 | 4.9 | 30.4 | 619 |
| 25-29 | 47.5 | 51.3 | 3.9 | 34.8 | 626 |
| 30-34 | 51.1 | 53.6 | 1.4 | 32.2 | 479 |
| 35-39 | 46.6 | 53.2 | 1.7 | 34.5 | 430 |
| 40-44 | 44.0 | 52.4 | 1.8 | 36.5 | 417 |
| 45-49 | 53.0 | 59.2 | 1.6 | 28.5 | 238 |
| Residence | | | | | |
| Urban | 90.6 | 78.6 | 8.4 | 5.4 | 288 |
| Rural | 42.4 | 52.0 | 2.3 | 36.2 | 2674 |
| Education | | | | | |
| Illiterate | 26.9 | 41.5 | 0.4 | 49.9 | 1471 |
| Lit., < middle complete | 54.4 | 59.9 | 3.1 | 23.6 | 834 |
| Middle school complete | 72.4 | 66.9 | 4.1 | 14.5 | 259 |
| High school and above | 89.6 | 83.5 | 10.9 | 3.5 | 398 |
| Religion | | | | | |
| Hindu | 47.3 | 54.8 | 2.9 | 32.9 | 2879 |
| Muslim | (30.8) | (27.5) | (2.6) | (61.9) | 36 |
| Other | 48.0 | 62.4 | 2.0 | 25.7 | 47 |
| Caste/tribe | | | | | |
| Scheduled caste | 36.0 | 49.9 | 1.9 | 39.6 | 702 |
| Scheduled tribe | 17.4 | 35.6 | 1.0 | 61.0 | 134 |
| Other | 52.6 | 57.3 | 3.4 | 29.3 | 2126 |
| Total | 47.1 | 54.6 | 2.9 | 33.2 | 2962 |

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

CHAPTER 4

NUPTIALITY

This chapter presents findings on marriage patterns from the National Family Health Survey. Marriage is of particular interest, not only because of its importance in its own right, but also because of its influence on fertility and population growth. Marriage patterns are also important from a sociological point of view and they are inextricably linked to the status of women in a society. After examining current marital status distributions, the chapter considers age at first marriage, age at first effective marriage, and marriage between relatives.

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 Himachal Pradesh but marriages generally do not take place at young ages. At age 15-19, only 19 percent of women in Himachal Pradesh are currently married. The proportion ever married at age 15-19 is much lower in urban areas (8 percent) than in rural areas (21 percent). The proportion divorced and the proportion separated, among women age 15-49, together account for 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). Table 4.2 presents SMAMs computed from the 1961, 1971 and 1981 Census, and from the NFHS for both males and females. Female values of SMAM from the NFHS are 21.8 years in urban areas, 20.3 in rural areas and 20.4 overall. On average, males marry 4.6 years later than females. Marriage ages are consistently higher in urban areas, with both men and women marrying one year later than in rural areas. Marriage patterns over time are also evident from an examination of changes in the SMAM. The SMAM for females has risen by five years during the last three decades (from 15.6 years in 1961 to 20.4 years in 1992). The SMAM for males rose by three years over the same period.

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

Table 4.1 Current marital status

Percent distribution of women age 15-49 by current marital status according to age and residence, Himachal Pradesh, 1992

| Age | Marital status | | | | | Total percent |
|--------------|----------------|-------------------|---------|----------|-----------|---------------|
| | Never married | Currently married | Widowed | Divorced | Separated | |
| URBAN | | | | | | |
| 15-19 | 92.0 | 7.6 | -- | 0.4 | -- | 100.0 |
| 20-24 | 41.0 | 57.8 | 0.8 | -- | 0.4 | 100.0 |
| 25-29 | 8.2 | 91.4 | 0.5 | -- | -- | 100.0 |
| 30-34 | 2.2 | 95.0 | 1.9 | -- | 0.9 | 100.0 |
| 35-39 | 3.8 | 91.5 | 4.7 | -- | -- | 100.0 |
| 40-44 | 4.0 | 90.4 | 4.8 | 0.8 | -- | 100.0 |
| 45-49 | -- | 83.7 | 14.1 | -- | 2.2 | 100.0 |
| Total | 26.8 | 70.0 | 2.6 | 0.2 | 0.4 | 100.0 |
| RURAL | | | | | | |
| 15-19 | 79.4 | 20.2 | -- | -- | 0.4 | 100.0 |
| 20-24 | 22.0 | 76.6 | 0.4 | 0.5 | 0.5 | 100.0 |
| 25-29 | 2.9 | 94.8 | 1.6 | 0.2 | 0.5 | 100.0 |
| 30-34 | 2.1 | 92.3 | 3.4 | 1.2 | 0.9 | 100.0 |
| 35-39 | 0.5 | 95.7 | 3.1 | -- | 0.7 | 100.0 |
| 40-44 | 0.2 | 89.4 | 9.7 | 0.3 | 0.3 | 100.0 |
| 45-49 | 0.9 | 87.2 | 11.2 | -- | 0.6 | 100.0 |
| Total | 22.1 | 74.2 | 2.9 | 0.3 | 0.5 | 100.0 |
| TOTAL | | | | | | |
| 15-19 | 80.4 | 19.3 | -- | -- | 0.3 | 100.0 |
| 20-24 | 23.7 | 74.9 | 0.4 | 0.5 | 0.5 | 100.0 |
| 25-29 | 3.6 | 94.3 | 1.5 | 0.2 | 0.4 | 100.0 |
| 30-34 | 2.2 | 92.6 | 3.2 | 1.1 | 0.9 | 100.0 |
| 35-39 | 0.9 | 95.3 | 3.2 | -- | 0.6 | 100.0 |
| 40-44 | 0.6 | 89.5 | 9.2 | 0.4 | 0.3 | 100.0 |
| 45-49 | 0.9 | 86.7 | 11.6 | -- | 0.8 | 100.0 |
| Total | 22.4 | 73.9 | 2.9 | 0.3 | 0.5 | 100.0 |

-- Less than 0.05 percent

at first marriage¹ by current age and residence. The median age at first marriage for a cohort of women is the age by which 50 percent of them marry.

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

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 the 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 4.2 Singulate mean age at marriage

Singulate mean age at marriage from selected sources, Himachal Pradesh, 1961-1992

| Source | Singulate mean age at marriage | | |
|-------------|--------------------------------|--------|------------|
| | Male | Female | Difference |
| 1961 Census | 22.2 | 15.6 | 6.6 |
| 1971 Census | 23.5 | 17.7 | 5.8 |
| 1981 Census | 24.2 | 19.1 | 5.1 |
| 1992 NFHS | | | |
| Urban | 25.9 | 21.8 | 4.1 |
| Rural | 24.7 | 20.3 | 4.6 |
| Total | 25.0 | 20.4 | 4.6 |

not biased by age truncation. (The survey interview marks the point of age truncation.) For example, in the 20-24 age cohort in Table 4.3, women's ages are truncated somewhere between 20 and 25. The mean age at first marriage for this age cohort will ultimately be influenced by marriages that occur in this cohort after the survey. But the median age at first marriage for the cohort will not be so affected, because more than 50 percent of the women in the cohort married before age 20, implying that the median is also less than 20 and therefore determined before the survey occurred. In other words, the mean is affected by age truncation between ages 20 and 25, but the median is not. It follows that the variation in median age at first marriage by age cohort, from oldest to youngest, reflects a trend over time that is not biased by age truncation.

Table 4.3 shows some dramatic trends, especially for marriages at very young ages. The proportion marrying by age 13 declined from 17 percent in the 45-49 age cohort to almost zero in the 13-14 age cohort, and the proportion marrying by age 15 declined from 29 percent in the 45-49 age cohort to 1 percent in the 15-19 age cohort. Marriages below age 15 have been virtually eliminated in both urban and rural areas. The declines are also large at higher exact age cutoffs. The median age at first marriage correspondingly increased from 16.2 years in the 45-49 cohort to 19.7 years in the 20-24 age cohort, a rise of 3.5 years. Moreover, although the median cannot be calculated for the 15-19 age group, it is almost certain to be well above the 19.7 year median observed for the 20-24 age group. The median age at marriage has been rising in both urban and rural areas, but the rate of increase has been slightly faster in rural areas. At age 25-29, urban women now marry two years later than rural women. The percentage of never-married women is also higher in urban than in rural areas.

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. It is also considerably higher among more educated women. In fact, within each age group, the median age at first marriage is four years higher among women who have completed high school than among illiterate women. Differences by religion are notable, with Hindus marrying about one and a half years later than Muslims. The highest median age at marriage is exhibited by the Sikhs (19.5 years). The median age at first marriage is one year lower for scheduled caste women than for women in other caste/tribe groups. The median age at marriage is beginning to rise in all of the groups.

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, Himachal Pradesh, 1992

| Current age ¹ | Percentage ever married by exact age: | | | | | | Percent never married | Median age at first marriage |
|--------------------------|---------------------------------------|------|------|------|------|------|-----------------------|------------------------------|
| | 13 | 15 | 18 | 20 | 22 | 25 | | |
| URBAN | | | | | | | | |
| 15-19 | -- | -- | NA | NA | NA | NA | 92.0 | NC |
| 20-24 | 0.4 | 1.2 | 12.2 | 36.6 | NA | NA | 41.0 | NC |
| 25-29 | 0.5 | 2.7 | 24.9 | 42.5 | 62.4 | 80.5 | 8.2 | 20.7 |
| 30-34 | 3.3 | 9.4 | 32.3 | 55.7 | 71.6 | 85.2 | 2.2 | 19.4 |
| 35-39 | 4.0 | 8.7 | 40.4 | 59.9 | 72.6 | 88.8 | 3.8 | 19.0 |
| 40-44 | 4.0 | 14.4 | 40.0 | 56.8 | 68.8 | 87.2 | 4.0 | 19.2 |
| 45-49 | 7.6 | 15.2 | 46.7 | 65.2 | 82.6 | 94.6 | -- | 18.3 |
| 20-49 | 2.6 | 7.1 | 29.3 | 50.0 | 66.0 | 79.6 | 12.8 | 20.0 |
| 25-49 | 3.2 | 8.9 | 34.6 | 54.1 | 70.1 | 85.9 | 4.2 | 19.5 |
| RURAL | | | | | | | | |
| 15-19 | 0.2 | 1.5 | NA | NA | NA | NA | 79.4 | NC |
| 20-24 | 1.3 | 4.7 | 25.4 | 54.7 | NA | NA | 22.0 | 19.5 |
| 25-29 | 2.3 | 8.8 | 40.1 | 70.1 | 88.4 | 95.7 | 2.9 | 18.5 |
| 30-34 | 3.7 | 14.0 | 54.1 | 81.7 | 93.2 | 96.3 | 2.1 | 17.7 |
| 35-39 | 5.4 | 16.3 | 63.2 | 84.2 | 94.4 | 98.1 | 0.5 | 17.1 |
| 40-44 | 9.7 | 23.8 | 66.3 | 90.5 | 97.7 | 99.1 | 0.2 | 16.7 |
| 45-49 | 18.1 | 31.2 | 71.7 | 91.0 | 97.2 | 99.1 | 0.9 | 16.1 |
| 20-49 | 4.9 | 13.4 | 47.7 | 74.2 | 88.3 | 92.1 | 7.1 | 18.1 |
| 25-49 | 6.3 | 16.6 | 56.0 | 81.5 | 93.3 | 97.3 | 1.6 | 17.5 |
| TOTAL | | | | | | | | |
| 15-19 | 0.2 | 1.4 | NA | NA | NA | NA | 80.4 | NC |
| 20-24 | 1.2 | 4.3 | 24.2 | 53.1 | NA | NA | 23.7 | 19.7 |
| 25-29 | 2.1 | 8.2 | 38.5 | 67.1 | 85.6 | 94.0 | 3.6 | 18.6 |
| 30-34 | 3.7 | 13.3 | 51.1 | 78.1 | 90.2 | 94.7 | 2.2 | 17.9 |
| 35-39 | 5.3 | 15.5 | 60.7 | 81.6 | 92.1 | 97.1 | 0.9 | 17.2 |
| 40-44 | 9.1 | 22.9 | 63.9 | 87.3 | 95.0 | 98.0 | 0.6 | 16.8 |
| 45-49 | 16.8 | 29.2 | 68.6 | 87.8 | 95.4 | 98.4 | 0.9 | 16.2 |
| 20-49 | 4.7 | 12.7 | 45.8 | 71.6 | 85.9 | 90.7 | 7.7 | 18.2 |
| 25-49 | 6.0 | 15.8 | 53.6 | 78.4 | 90.7 | 96.0 | 1.9 | 17.7 |

NA: Not applicable

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

-- Less than 0.05 percent

¹The current age groups include both never-married and ever-married 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, Himachal Pradesh, 1992

| Background characteristic | Current age | | | | | | 20-49 | 25-49 |
|---------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------|
| | 20-24 | 25-29 | 30-34 | 35-39 | 40-49 | | | |
| Residence | | | | | | | | |
| Urban | NC | 20.7 | 19.4 | 19.0 | 18.7 | 20.0 | 19.5 | |
| Rural | 19.5 | 18.5 | 17.7 | 17.1 | 16.5 | 18.1 | 17.5 | |
| Education | | | | | | | | |
| Illiterate | 18.0 | 17.5 | 16.8 | 16.7 | 16.3 | 17.0 | 16.7 | |
| Lit., < middle complete | 19.4 | 18.3 | 17.7 | 17.0 | 16.6 | 18.2 | 17.5 | |
| Middle school complete | NC | 19.3 | 18.7 | (17.7) | (18.3) | 19.4 | 18.8 | |
| High school and above | NC | 21.7 | 20.9 | 20.9 | 20.9 | NC | 21.3 | |
| Religion | | | | | | | | |
| Hindu | 19.7 | 18.6 | 17.9 | 17.2 | 16.6 | 18.2 | 17.7 | |
| Muslim | * | * | * | * | * | 16.7 | (16.1) | |
| Sikh | NC | * | * | * | * | 19.8 | (19.5) | |
| Other | * | * | * | * | * | (17.1) | * | |
| Caste/tribe | | | | | | | | |
| Scheduled caste | 18.6 | 17.9 | 17.2 | 16.5 | 15.8 | 17.4 | 16.7 | |
| Scheduled tribe | (18.8) | (18.0) | * | * | * | 18.0 | 17.6 | |
| Other | NC | 18.8 | 18.0 | 17.6 | 16.8 | 18.4 | 18.0 | |
| Total | 19.7 | 18.6 | 17.9 | 17.2 | 16.6 | 18.2 | 17.7 | |

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

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

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 Himachal Pradesh, it is clear that many marriages take place below the legal minimum age. Nearly one-quarter of women age 20-24 married below the legal minimum age at marriage (see Table 4.3). Perhaps because of its weak enforcement, the legal minimum age at marriage is not widely known among women in Himachal Pradesh. In the NFHS, respondents were asked about the legal minimum age at marriage for males and females in India. Table 4.5 presents the percentage of women who reported correctly the minimum legal age at marriage in India, according to selected background characteristics.

Many women are not even aware of the legal minimum age at marriage. Overall, only 56 percent of respondents could correctly identify age 18 as the legal minimum age at marriage for females and only 29 percent could correctly identify age 21 as the legal minimum age at marriage for males. The provisions of the law are better known in urban areas, where over 80 percent of women can correctly identify the legal minimum age at marriage for females. Accurate knowledge of the legal minimum age requirements is also closely tied to literacy and educational attainment. Sixty-five and 86 percent of women with a high school education know the legal minimum age at marriage for males and females, but only 14 and 39 percent of

| Table 4.5 Knowledge of minimum legal age at marriage | | | |
|---|--|-------------|-----------------|
| Percent distribution of ever-married women age 13-49 who correctly know the minimum legal age at marriage for males and females, by selected background characteristics, Himachal Pradesh, 1992 | | | |
| Background characteristic | Percentage who correctly know legal minimum age at marriage: | | Number of women |
| | For males | For females | |
| Age | | | |
| 13-19 | 43.3 | 64.1 | 153 |
| 20-29 | 33.0 | 57.9 | 1245 |
| 30-39 | 25.9 | 54.6 | 909 |
| 40-49 | 21.9 | 53.6 | 655 |
| Residence | | | |
| Urban | 60.5 | 81.9 | 288 |
| Rural | 25.5 | 53.5 | 2674 |
| Education | | | |
| Illiterate | 14.3 | 38.5 | 1471 |
| Literate, < middle complete | 31.1 | 66.9 | 834 |
| Middle school complete | 48.5 | 77.7 | 259 |
| High school and above | 65.4 | 85.6 | 398 |
| Religion | | | |
| Hindu | 29.0 | 56.7 | 2879 |
| Muslim | (12.1) | (32.7) | 36 |
| Sikh | (53.4) | (57.8) | 21 |
| Other | (20.1) | (42.8) | 26 |
| Caste/tribe | | | |
| Scheduled caste | 24.1 | 52.3 | 702 |
| Scheduled tribe | 15.0 | 37.3 | 134 |
| Other | 31.4 | 58.7 | 2126 |
| Total | 28.9 | 56.3 | 2962 |

() Based on 25-49 unweighted cases

illiterate women can correctly specify the legal minimum age at marriage for males and females, respectively. The legal minimum age at marriage for males is less well-known than the legal minimum age at marriage for females by every group of women shown in Table 4.5.

4.3 Age at First Cohabitation

Table 4.6 shows median ages at first cohabitation with the husband (effective marriage). 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 some parts of India. The *gauna* ceremony is not prevalent in Himachal Pradesh. Therefore, the median age at first marriage is only about one month earlier, on the average, than the median age at first cohabitation with the husband. As the median age at marriage has risen and early marriages have become less popular, the difference between the age at marriage and the age at first cohabitation has been reduced. In urban areas, the difference is negligible.

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, Himachal Pradesh, 1992

| Current age ¹ | Percentage who started living with husband by exact age | | | | | | Percent never cohabited | Median age at first cohabitation with husband |
|--------------------------|---|------|------|------|------|------|-------------------------|---|
| | 13 | 15 | 18 | 20 | 22 | 25 | | |
| URBAN | | | | | | | | |
| 15-19 | -- | -- | NA | NA | NA | NA | 92.0 | NC |
| 20-24 | 0.4 | 1.2 | 12.2 | 36.6 | NA | NA | 41.0 | NC |
| 25-29 | 0.5 | 2.3 | 24.0 | 42.5 | 62.4 | 80.5 | 8.2 | 20.7 |
| 30-34 | 0.5 | 8.0 | 31.3 | 55.7 | 71.6 | 85.2 | 2.2 | 19.4 |
| 35-39 | 1.3 | 6.1 | 40.4 | 59.9 | 72.6 | 88.8 | 3.8 | 19.0 |
| 40-44 | 1.6 | 12.0 | 39.2 | 56.8 | 68.8 | 87.2 | 4.0 | 19.2 |
| 45-49 | 5.4 | 12.0 | 46.7 | 65.2 | 82.6 | 94.6 | -- | 18.3 |
| 20-49 | 1.1 | 5.7 | 28.9 | 50.0 | 66.0 | 79.6 | 12.8 | 20.0 |
| 25-49 | 1.4 | 7.1 | 34.0 | 54.1 | 70.1 | 85.9 | 4.2 | 19.5 |
| RURAL | | | | | | | | |
| 15-19 | -- | 1.3 | NA | NA | NA | NA | 79.4 | NC |
| 20-24 | 0.7 | 4.1 | 25.2 | 54.7 | NA | NA | 22.0 | 19.5 |
| 25-29 | 1.4 | 7.5 | 39.7 | 69.8 | 88.4 | 95.7 | 2.9 | 18.5 |
| 30-34 | 1.2 | 11.5 | 53.1 | 81.4 | 93.2 | 96.3 | 2.1 | 17.8 |
| 35-39 | 3.1 | 14.3 | 61.8 | 83.2 | 94.4 | 98.1 | 0.5 | 17.2 |
| 40-44 | 5.2 | 18.6 | 65.6 | 90.5 | 97.7 | 99.1 | 0.2 | 16.8 |
| 45-49 | 7.5 | 22.4 | 66.7 | 89.7 | 96.6 | 99.1 | 0.9 | 16.5 |
| 20-49 | 2.4 | 10.9 | 46.7 | 73.9 | 88.2 | 92.1 | 7.1 | 18.2 |
| 25-49 | 3.1 | 13.4 | 54.7 | 81.0 | 93.3 | 97.3 | 1.6 | 17.6 |
| TOTAL | | | | | | | | |
| 15-19 | -- | 1.2 | NA | NA | NA | NA | 80.4 | NC |
| 20-24 | 0.7 | 3.8 | 24.0 | 53.1 | NA | NA | 23.7 | 19.7 |
| 25-29 | 1.3 | 6.9 | 38.0 | 66.9 | 85.6 | 94.0 | 3.6 | 18.6 |
| 30-34 | 1.1 | 11.0 | 50.1 | 77.9 | 90.2 | 94.7 | 2.2 | 18.0 |
| 35-39 | 2.9 | 13.4 | 59.5 | 80.7 | 92.1 | 97.1 | 0.9 | 17.4 |
| 40-44 | 4.8 | 18.0 | 63.2 | 87.3 | 95.0 | 98.0 | 0.6 | 16.9 |
| 45-49 | 7.2 | 21.2 | 64.2 | 86.7 | 94.8 | 98.4 | 0.9 | 16.7 |
| 20-49 | 2.3 | 10.3 | 44.8 | 71.3 | 85.8 | 90.7 | 7.7 | 18.3 |
| 25-49 | 2.9 | 12.7 | 52.4 | 77.9 | 90.6 | 96.0 | 1.9 | 17.8 |

NA: Not applicable
 NC: Not calculated because less than 50 percent of women in the age group x to x+5 have started living with husband by age x
 -- Less than 0.05 percent
¹The current age groups include both never-married and ever-married women.

4.4 Marriage Between Relatives

Table 4.7 provides information on marriage between relatives. Marriage between relatives is a form of inbreeding that has implications for mortality and morbidity as well as fertility. For example, Bittles et al. (1992) found a positive association between consanguinity and fertility in 19 out of 22 populations. They also found that mortality is significantly higher among children of marriages between blood relatives. In Pakistan, Bittles (1993) found that children of marriages between relatives had consistently higher mortality than children of marriages between nonrelatives, in line with expectations based on genetic theory, and that

Table 4.7 Marriage between relatives

Percent distribution of ever-married women by relationship to current (last) husband, according to selected background characteristics, Himachal Pradesh, 1992

| Background characteristic | First cousin | | Second cousin | Other blood relation | Brother in-law | Other non-blood relation | Not related | Missing | Total per-cent | Number |
|---------------------------|---------------|---------------|---------------|----------------------|----------------|--------------------------|-------------|-----------|----------------|-------------|
| | Father's side | Mother's side | | | | | | | | |
| Age | | | | | | | | | | |
| 15-19 | 0.9 | -- | 0.9 | 0.9 | -- | 2.6 | 94.8 | -- | 100.0 | 152 |
| 20-24 | 0.3 | 0.6 | 0.5 | 1.1 | 0.3 | 1.1 | 96.1 | -- | 100.0 | 619 |
| 25-29 | -- | 0.6 | 0.3 | 0.8 | 0.7 | 0.8 | 96.7 | -- | 100.0 | 626 |
| 30-34 | -- | -- | 0.3 | 0.3 | 0.7 | 0.7 | 98.0 | -- | 100.0 | 479 |
| 35-39 | 0.9 | -- | -- | -- | 0.3 | 1.5 | 97.2 | -- | 100.0 | 430 |
| 40-44 | -- | 0.3 | 0.3 | 0.1 | 1.3 | 0.4 | 97.6 | -- | 100.0 | 417 |
| 45-49 | -- | -- | -- | 0.6 | 1.1 | 0.7 | 97.7 | -- | 100.0 | 238 |
| Residence | | | | | | | | | | |
| Urban | 0.2 | 0.4 | 0.2 | 0.5 | 0.6 | 1.1 | 96.8 | 0.1 | 100.0 | 288 |
| Rural | 0.2 | 0.3 | 0.3 | 0.5 | 0.6 | 1.0 | 97.0 | -- | 100.0 | 2674 |
| Education | | | | | | | | | | |
| Illiterate | 0.4 | 0.3 | 0.4 | 0.4 | 1.0 | 1.0 | 96.5 | -- | 100.0 | 1471 |
| Lit., < middle complete | 0.2 | 0.2 | 0.2 | 1.0 | 0.4 | 0.5 | 97.6 | -- | 100.0 | 834 |
| Middle school complete | -- | 0.5 | -- | 0.5 | -- | 1.3 | 97.6 | 0.1 | 100.0 | 259 |
| High school and above | 0.1 | 0.6 | 0.1 | 0.2 | 0.2 | 1.8 | 97.1 | -- | 100.0 | 398 |
| Religion | | | | | | | | | | |
| Hindu | 0.2 | 0.3 | 0.2 | 0.5 | 0.7 | 1.0 | 97.0 | -- | 100.0 | 2879 |
| Muslim | (0.9) | (--) | (4.5) | (4.5) | (--) | (--) | (90.1) | (--) | 100.0 | 36 |
| Sikh | (--) | (--) | (--) | (--) | (--) | (1.4) | (98.6) | (--) | 100.0 | 21 |
| Other | (--) | (--) | (--) | (--) | (--) | (--) | (100.0) | (--) | 100.0 | 26 |
| Caste/tribe | | | | | | | | | | |
| Scheduled caste | 0.4 | 0.2 | 0.7 | 0.9 | 0.8 | 1.4 | 95.5 | -- | 100.0 | 702 |
| Scheduled tribe | -- | -- | -- | -- | -- | 1.0 | 99.0 | -- | 100.0 | 134 |
| Other | 0.2 | 0.4 | 0.2 | 0.4 | 0.6 | 0.9 | 97.3 | -- | 100.0 | 2126 |
| Total | 0.2 | 0.3 | 0.3 | 0.5 | 0.6 | 1.0 | 97.0 | -- | 100.0 | 2962 |

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

() Based on 25-49 unweighted cases

-- Less than 0.05 percent

consanguineous couples had higher fertility than nonconsanguineous couples. In analyzing the relationship between inbreeding and mortality, it is important to control for socioeconomic variables because of a tendency for marriage between relatives to be more common in lower socioeconomic groups whose mortality is higher primarily for socioeconomic reasons. Such a refined analysis is, however, not feasible in this report and will have to await further studies.

Table 4.7 indicates that 0.5 percent of ever-married women married a first cousin (on either their father's side or their mother's side). Less than 1 percent married a second cousin or other blood relative, and less than 2 percent married a brother-in-law or other non-blood relative. Thus, consanguineous marriages are negligible in Himachal Pradesh. The findings are consistent with previous findings of considerably lower levels of consanguinity in North India than in South India (Sanghvi, 1966; Bittles et al., 1993). In Himachal Pradesh, the percentages marrying a close relative do not vary much by age, indicating that the propensity to marry a

relative has not changed much over time. Interestingly, there is no difference by place of residence or education, contrary to the general pattern observed elsewhere (Rao et al., 1972; Khlal and Khoury, 1991; Rao and Inbaraj, 1977). Muslim women are much more likely to have entered into consanguineous marriages than non-Muslim women. Nearly 10 percent of Muslim women have married a blood relative whereas only 1 percent of Hindu women have done so. Consanguineous marriages are slightly more common in the scheduled castes than in other groups. The differences by selected background characteristics noted above are in most cases insignificant.

CHAPTER 5

FERTILITY

A major objective of the Himachal Pradesh NFHS is to provide detailed information on fertility levels, differentials and trends in the state. This chapter presents a description of the current and past fertility levels, cumulative fertility and family size, fertility levels by sociodemographic characteristics, pregnancy outcomes, birth intervals and durations of postpartum amenorrhoea, abstinence and nonsusceptibility. Information on age at first and last births, teenage childbearing and age at menopause is also discussed.

Most of the fertility estimates presented in this chapter are based on the complete birth histories of ever-married women age 15-49. Several measures and procedures were undertaken to secure complete and accurate reporting of births, including their timing. First, women were asked about the number of sons and daughters presently living at home and elsewhere and those who had died. Second, for each live birth in the birth history, information was collected on sex, age, and survival status of the child. For dead children, age at death was noted. Interviewers were given extensive training in probing techniques to help respondents report accurately. Interviewers were instructed to check any documents (such as horoscopes, school certificates or vaccination cards) that might provide information on date of birth, and to probe for the reason for any birth interval of four or more years in order to prevent omission of births, especially births of children who died soon after birth. This additional probing also helped to obtain more accurate information on stillbirths and abortions.

Despite all the measures to improve data quality, 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 births of children who died at a very young age) and the difficulty of determining the date of birth accurately. These problems may be particularly common among illiterate women in Himachal Pradesh.

5.1 Current Fertility Levels, Differentials and Trends

Fertility levels, trends and differentials are discussed using both summary and age-specific measures of fertility. Summary measures include the crude birth rate (CBR), the general fertility rate (GFR) and the total fertility rate (TFR). The crude birth rate is calculated both from births recorded in the Household Questionnaire and from births recorded in the birth history in the Woman's Questionnaire. All other fertility measures are computed from the birth history information in the Woman's Questionnaire. The crude birth rate calculated from births recorded in the Household Questionnaire pertains to the two-year period immediately preceding the survey. All other measures are calculated for the three-year period preceding the survey. Since the NFHS fieldwork in Himachal Pradesh was conducted from June to October 1992, the three years prior to the survey correspond roughly to the years 1990-92. The three-year period is chosen for NFHS rates instead of the usual five-year period as a compromise among 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 years to earlier years.

The NFHS fertility estimates can be compared with estimates from the Sample Registration System (SRS) maintained by the Office of the Registrar General, India. The most recent report with estimates for Himachal Pradesh is for 1991. Estimates of various fertility measures from the NFHS and the SRS are shown by area of residence in Table 5.1 and discussed in the following sections.

Crude Birth Rate

The two sets of NFHS crude birth rates shown in Table 5.1 are calculated alternatively from the household birth record (i.e., from births recorded in the Household Questionnaire) and from births recorded in the woman's birth history in the Woman's Questionnaire. The CBR from the household birth record 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 the survey. The denominator of this CBR estimate is adjusted by projecting the population backward to the mid-point of the time period using the intercensal population growth rate in the state. This is done separately for urban and rural areas. The CBR estimated from the birth histories refers to a three-year period before the interview. This CBR estimate is calculated as a sum of products, where each product is an age-specific fertility rate multiplied by the proportion of women in the specified age group, out of the total *de facto* population, both male and female.

| Age | NFHS (1990-92) ¹ | | | SRS (1991) | | |
|------------------------|-----------------------------|-------|-------|------------|-------|-------|
| | Urban | Rural | Total | Urban | Rural | Total |
| 15-19 | 0.023 | 0.080 | 0.075 | 0.019 | 0.073 | 0.069 |
| 20-24 | 0.184 | 0.267 | 0.259 | 0.168 | 0.279 | 0.272 |
| 25-29 | 0.124 | 0.179 | 0.172 | 0.135 | 0.172 | 0.169 |
| 30-34 | 0.059 | 0.044 | 0.046 | 0.066 | 0.070 | 0.070 |
| 35-39 | 0.015 | 0.036 | 0.034 | 0.015 | 0.036 | 0.035 |
| 40-44 | 0.000 | 0.008 | 0.007 | 0.005 | 0.009 | 0.009 |
| 45-49 | 0.000 | 0.000 | 0.000 | 0.000 | 0.002 | 0.002 |
| TFR 15-44 | 2.03 | 3.07 | 2.97 | 2.04 | 3.20 | 3.12 |
| TFR 15-49 | 2.03 | 3.07 | 2.97 | 2.04 | 3.21 | 3.13 |
| GFR | 74 | 114 | 110 | 71 | 114 | 111 |
| MFHS CBR based on | | | | | | |
| Household birth record | 20.8 | 27.0 | 26.4 | NA | NA | NA |
| Woman's birth history | 20.2 | 29.0 | 28.2 | NA | NA | NA |
| SRS CBR | NA | NA | NA | 18.6 | 29.2 | 28.5 |

Note: Rates from NFHS are for the period 1-36 months before the interview except for the CBR from the household birth record which is based on the period 1-24 months before the interview. The 36 months before the interview extend approximately from 16 August 1989 to 16 August 1992 and are labelled 1990-92 in the table. (The survey was conducted between June 6 and October 24 1992.) 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 15-49 divided by woman-years lived between age 15 and 49), expressed per 1,000 women
 CBR: Crude Birth Rate, expressed per 1,000 population
 NA: Not applicable
¹Three years preceding the survey
 Source of SRS data: Office of the Registrar General (1993)

Although the NFHS estimates are based on information from two different parts of the interview (often with different respondents), the two estimates agree quite closely with one another. The three-year CBR is slightly higher than the two-year rate, as would be expected when fertility is declining. The SRS crude birth rate for 1991 (28.5) is virtually identical to the NFHS crude birth rate for 1990-92 (28.2). The birth rates for urban and rural areas also agree fairly closely with the corresponding rates from the SRS. CBRs by residence indicate that fertility is considerably 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 15-49 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 Himachal Pradesh to be 110 births per 1,000 women for the state as a whole, almost identical to the SRS general fertility rate for 1991 (111). The observed GFR is considerably higher in rural areas (114) than in urban areas (74).

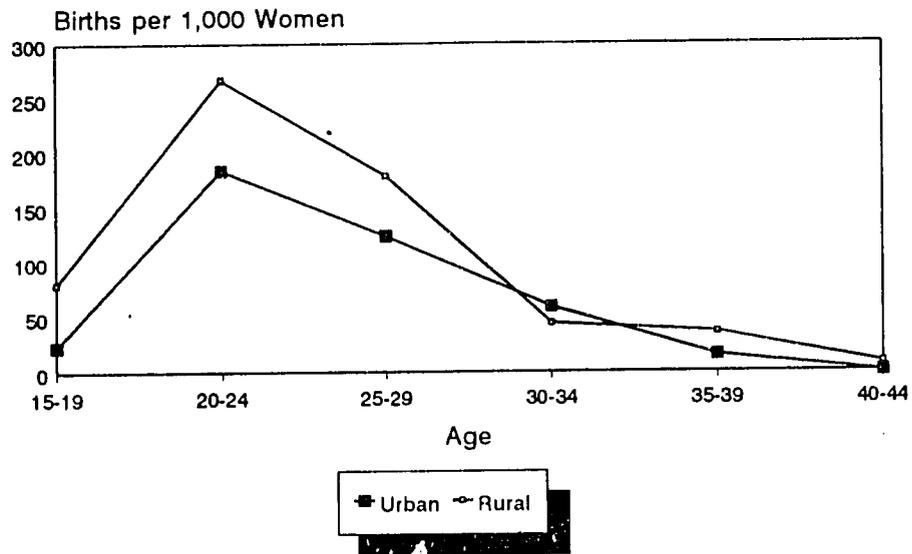
Age-Specific and Total Fertility Rates

The age-specific fertility rates (ASFRs) and total fertility rates shown in Table 5:1 are more refined fertility measures than the CBR or GFR, insofar as they are not affected by the age structure of the population. Both the ASFRs and the TFR are based on births during the three-year period preceding the survey. The numerator of an age-specific fertility rate is live births in a five-year age group, and the denominator is the number of woman-years lived in the same five-year age interval during the three-year time period. The TFR is a summary measure that is calculated as five times the sum (over five-year age groups) of the age-specific fertility rates. The TFR is interpreted as the number of children a woman would bear during her reproductive years (alternatively 15-44 or 15-49) if she were to experience the age-specific fertility rates prevailing during the three-year period preceding the survey.

The NFHS total fertility rate (TFR) for women in the age group 15-49 for the state as a whole for 1990-92 is 3.0 children per woman. As expected, the urban TFR (2.0 children per woman) is much lower than the rural TFR (3.1 children per woman). In fact the urban TFR is below the replacement level of fertility. Under the present schedule of fertility, a woman in the rural areas would have, on an average, 1.1 more children in her childbearing years (that is, 51 percent more children) than a woman in the urban areas.

The age-specific fertility rates follow the expected pattern. The age pattern of fertility reveals a peak in the 20-24 age group. This pattern is the same for the urban and rural areas (see Figure 5.1). Fertility rates decline sharply after age 25-29, reaching very low levels for women in their forties. There is a more rapid decline in fertility in urban areas than in rural areas after age 30-34. The age-specific fertility rates are generally higher in rural areas than in urban areas. The contribution toward fertility of women age 35 years and above is only 4 percent in the urban areas and 7 percent in the rural areas. The contribution of women in the age group 40-49 years to total fertility is negligible in both urban and rural areas.

Figure 5.1
Age-Specific Fertility Rates
by Residence



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

NFHS, Himachal Pradesh, 1992

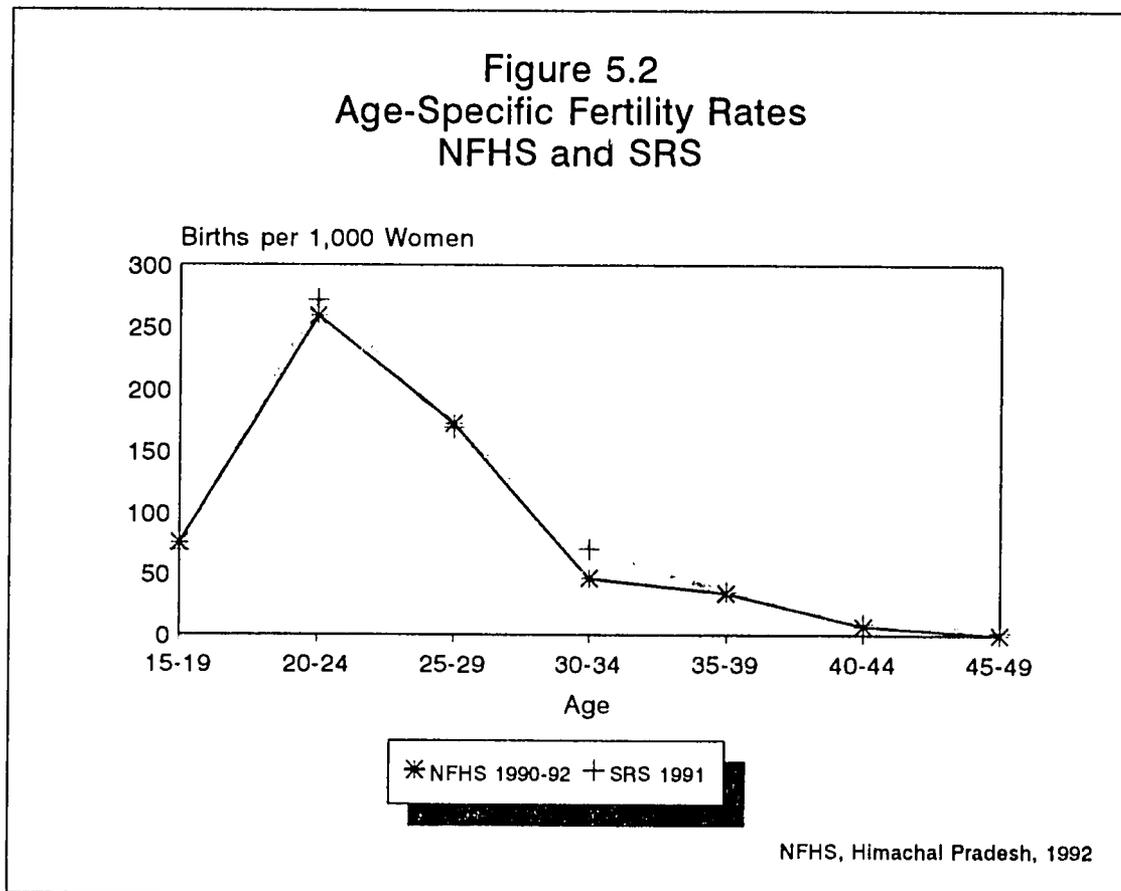
The TFRs from the NFHS in Table 5.1 are virtually identical to the SRS estimates in urban areas and 4 percent lower than the SRS estimates in rural areas. The age-specific fertility rates from the two sources are similar in all age groups and the age patterns are similar (see Figure 5.2). The small differences that do exist may be partly due to the fact that the SRS rates are *de jure* while the NFHS rates are *de facto*.

Fertility Differentials and Trends

Table 5.2 and Figure 5.3 show current and cohort fertility by selected background characteristics. Current fertility is measured by the total fertility rate for the three years prior to the survey. Cohort fertility is measured by the mean number of children ever born to women age 40-49 at the time of the survey. Both measures are calculated from the birth history information in the Woman's Questionnaire.

If there had been no change in fertility during the decades prior to the survey, the current and cohort indicators would be nearly identical, differences being due solely to the slightly incomplete fertility of women age 40-49. If fertility has declined, current fertility will be lower than cohort fertility, with larger differences generally indicating more rapid decline. The gap between the TFR of 3.0 and the mean number of children ever born of 4.4 suggests that a substantial fertility decline has taken place in Himachal Pradesh. Fertility has been declining more rapidly in urban areas.

Figure 5.2
Age-Specific Fertility Rates
NFHS and SRS



Fertility differentials by level of education are substantial, with current fertility declining steadily from 3.6 children per woman for illiterate women to 2.0 children per woman for women with at least a high school education. The cohort fertility differential by education is similar.

Differences by religion are quite pronounced, with current fertility figures being the highest for Muslims, followed by Sikhs and then Hindus. It must be noted, however, that the estimates for Muslims and Sikhs are based on a small number of women. Scheduled tribes have the highest current as well as cohort fertility but scheduled castes and others have nearly the same cohort fertility, although the former have higher current fertility than the latter.

Age-specific fertility rates are more refined measures for studying fertility transition. The age-specific fertility rates for the four five-year time periods preceding the survey are presented in Table 5.3. Because the birth histories from which ASFRs are calculated were obtained for women below age 50 at the time of the survey, some rates for prior time periods are subject to a degree of truncation (i.e., censoring), and some cannot be calculated at all. In almost every age group, fertility fell steadily from the period 15-19 years before the survey to the period 0-4 years before the survey. There was a general tendency for the fertility decline to accelerate during the most recent period in both urban and rural areas. For the state as a whole, cumulative fertility at age 40 (calculated like the TFR but truncated at age 40) for the period 0-4 years preceding the survey is 3.0 children per woman. Corresponding values for the periods 5-9 and 10-14 years before the survey are 3.7 and 4.3 respectively.

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, Himachal Pradesh, 1992

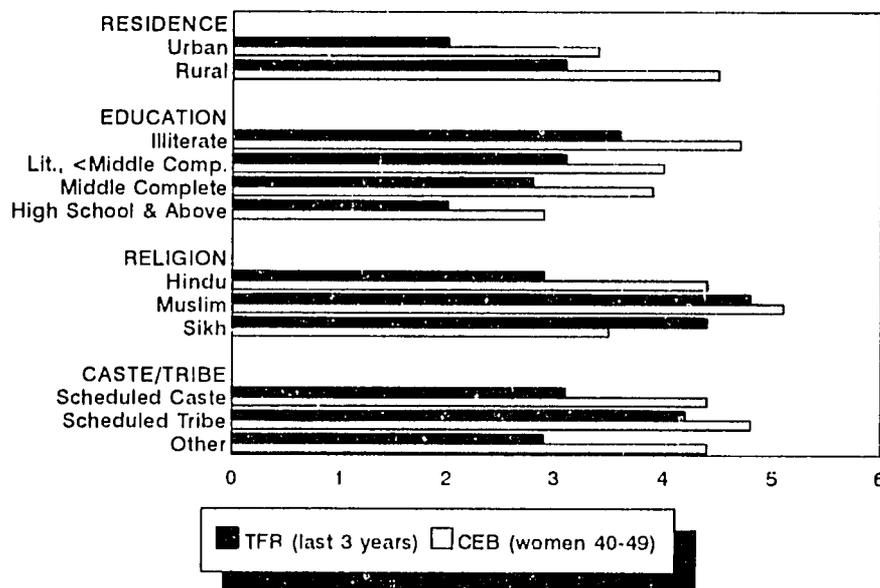
| Background characteristic | Total fertility rate ¹ | Mean number of children ever born to women age 40-49 years |
|---------------------------|-----------------------------------|--|
| Residence | | |
| Urban | 2.03 | 3.41 |
| Rural | 3.07 | 4.54 |
| Education | | |
| Illiterate | 3.63 | 4.74 |
| Lit., < middle complete | 3.12 | 4.03 |
| Middle school complete | 2.77 | 3.87 |
| High school and above | 2.02 | 2.87 |
| Religion | | |
| Hindu | 2.90 | 4.43 |
| Muslim | (4.78) | (5.11) |
| Sikh | (4.38) | (3.50) |
| Caste/tribe | | |
| Scheduled caste | 3.10 | 4.37 |
| Scheduled tribe | 4.22 | 4.79 |
| Other | 2.86 | 4.42 |
| Total | 2.97 | 4.42 |

Note: Total rate and mean are based on all women including women belonging to other religions, the rate and mean for whom are not shown separately.
 () Based on 125-249 person-years of exposure
¹Rate for women age 15-49 years

Further evidence of a decline in fertility over time is shown in Table 5.4, which gives fertility rates over the last 20 years by the number of years since women started living with their husbands. This measure controls to some extent for changing age at marriage and may help to elucidate the trends in Table 5.3. In almost every marital duration group, fertility has fallen steadily over time. The rapidity of the fertility decline increases with marital duration, being most pronounced for women married 20 or more years. The general absence of any marked fertility decline in the group married for 0-4 years is typical of populations in which contraception is initiated only after the first birth or later (as is the case in Himachal Pradesh; see Chapter 6). The rise in fertility in this duration group, from 0.317 at 15-19 years before the survey to 0.365 at 0-4 years before the survey, probably reflects women's rising age at marriage and a consequent increase in their fecundability at the time they marry. Consistent with the trend in age-specific fertility rates shown in Table 5.3, the fertility decline has accelerated in the most recent period.

Since information was collected only on a woman's age at effective marriage, and not the year and month of her effective marriage (which would be difficult to determine accurately in most cases), the duration since first effective marriage is calculated as the woman's current age minus the age at which she started living with her (first) husband. For those whose current

Figure 5.3
Total Fertility Rate (TFR) and Mean
Number of Children Ever Born (CEB)



NFHS, Himachal Pradesh, 1992

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.

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, in which urban women have slightly higher fertility than rural women in three of the four periods. 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 case in Himachal Pradesh (see Chapter 4). Women who marry at later ages often have their first birth sooner after marriage and concentrate their births relatively earlier in their marriages (Basu, 1993).

5.2 Outcome of Pregnancies

The percent distribution of all-time pregnancies reported by ever-married women by their outcome (spontaneous abortion, induced abortion, stillbirth, or live birth), specified by place of residence and age, is shown in Table 5.5. 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, and therefore, should not be subject to very rigorous interpretations.

| Table 5.3 Fertility trends | | | | |
|--|------------------------|---------|---------|---------|
| Age-specific fertility rates for five-year periods preceding the survey by residence, Himachal Pradesh, 1992 | | | | |
| Maternal age at birth | Years preceding survey | | | |
| | 0-4 | 5-9 | 10-14 | 15-19 |
| URBAN | | | | |
| 15-19 | 0.031 | 0.076 | 0.091 | 0.112 |
| 20-24 | 0.199 | 0.234 | 0.225 | 0.222 |
| 25-29 | 0.136 | 0.190 | 0.193 | 0.208 |
| 30-34 | 0.051 | 0.057 | 0.091 | [0.127] |
| 35-39 | 0.012 | 0.025 | [0.029] | U |
| 40-44 | 0.000 | [0.006] | U | U |
| 45-49 | [0.000] | U | U | U |
| RURAL | | | | |
| 15-19 | 0.079 | 0.115 | 0.132 | 0.159 |
| 20-24 | 0.275 | 0.293 | 0.321 | 0.305 |
| 25-29 | 0.184 | 0.211 | 0.221 | 0.281 |
| 30-34 | 0.053 | 0.101 | 0.128 | [0.198] |
| 35-39 | 0.032 | 0.047 | [0.082] | U |
| 40-44 | 0.006 | [0.026] | U | U |
| 45-49 | [0.000] | U | U | U |
| TOTAL | | | | |
| 15-19 | 0.075 | 0.111 | 0.126 | 0.154 |
| 20-24 | 0.267 | 0.285 | 0.310 | 0.297 |
| 25-29 | 0.178 | 0.209 | 0.218 | 0.274 |
| 30-34 | 0.053 | 0.097 | 0.124 | [0.189] |
| 35-39 | 0.030 | 0.044 | [0.076] | U |
| 40-44 | 0.005 | [0.024] | U | U |
| 45-49 | [0.000] | U | U | U |

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

Stillbirths are probably more accurately reported than abortions. Reports on 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. In NFHS, the reporting of live births and stillbirths is probably close to complete, because of the extensive probing that occurred when the birth histories were collected. However, abortions may be underreported.

There is relatively little variation in the outcome of pregnancies by age for the state as a whole, although especially in rural areas there is a slight tendency for the proportion of live births to increase with current age. Of the 9,826 pregnancies reported by sample women, 90 percent resulted in live births, 3 percent in stillbirths, 1 percent in induced abortions, and 6 percent in spontaneous abortions. The pattern is similar for rural areas, which account for 92 percent of all pregnancies. Women in urban areas report a higher proportion of pregnancies ending in induced abortions, 4 percent compared to 1 percent in rural areas, and a correspondingly lower proportion of live births.

| 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, Himachal Pradesh, 1992 | | | | |
| Duration of effective marriage | Years preceding survey | | | |
| | 0-4 | 5-9 | 10-14 | 15-19 |
| URBAN | | | | |
| 0 - 4 | 0.313 | 0.361 | 0.340 | 0.326 |
| 5 - 9 | 0.132 | 0.198 | 0.233 | 0.239 |
| 10-14 | 0.042 | 0.086 | 0.106 | 0.140 |
| 15-19 | 0.017 | 0.033 | 0.055 | * |
| 20-24 | 0.008 | 0.010 | * | * |
| 25-29 | 0.000 | * | * | * |
| RURAL | | | | |
| 0 - 4 | 0.371 | 0.358 | 0.337 | 0.316 |
| 5 - 9 | 0.231 | 0.262 | 0.300 | 0.303 |
| 10-14 | 0.090 | 0.155 | 0.173 | 0.256 |
| 15-19 | 0.042 | 0.079 | 0.101 | (0.191) |
| 20-24 | 0.022 | 0.034 | (0.098) | * |
| 25-29 | 0.002 | (0.010) | * | * |
| TOTAL | | | | |
| 0 - 4 | 0.365 | 0.358 | 0.337 | 0.317 |
| 5 - 9 | 0.220 | 0.255 | 0.293 | 0.298 |
| 10-14 | 0.085 | 0.148 | 0.168 | 0.247 |
| 15-19 | 0.039 | 0.075 | 0.097 | 0.183 |
| 20-24 | 0.021 | 0.032 | 0.093 | * |
| 25-29 | 0.002 | 0.010 | * | * |

Note: Duration-specific fertility rates are per woman. The duration of effective marriage at birth is defined as the difference between the woman's age at the specified time period and the age she began living with her husband.
 () Based on 125-249 person-years of exposure
 * Rate not shown; based on fewer than 125 person-years of exposure

Among rural women, the proportion of spontaneous abortions in the age group 15-19 is almost double that in other age groups, which may perhaps be explained by the difficult mountainous terrain in which younger women have to work (tend cattle, gather fuel wood and fodder), which may be a risk factor during pregnancies. With age, women may tend to be more careful in this respect.

In view of the problems of underreporting early spontaneous abortions, it is useful to consider induced abortions and stillbirths in relation to live births rather than to total pregnancies. By this measure, there were 3.0 stillbirths and 1.4 induced abortions for every 100 live births in the state as a whole.

5.3 Children Ever Born and Living

The number of children a woman has ever borne is a cohort measure of fertility. Because it reflects fertility in the past, it provides a somewhat different picture of fertility levels, trends, and differentials than do period measures of fertility such as the CBR and the TFR.

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, Himachal Pradesh, 1992

| Current age | Outcome of pregnancy | | | | Total percent | Number of pregnancies |
|--------------|----------------------|------------------|-------------|-------------|---------------|-----------------------|
| | Spontaneous abortion | Induced abortion | Still-birth | Live birth | | |
| URBAN | | | | | | |
| 20-24 | 7.8 | 1.9 | 2.4 | 87.9 | 100.0 | 64 |
| 25-29 | 4.2 | 5.8 | 1.0 | 88.9 | 100.0 | 148 |
| 30-34 | 8.1 | 5.1 | 1.9 | 84.9 | 100.0 | 199 |
| 35-39 | 7.3 | 3.3 | 1.5 | 87.9 | 100.0 | 161 |
| 40-44 | 5.4 | 5.0 | 1.6 | 88.1 | 100.0 | 138 |
| 45-49 | 5.0 | 1.0 | 2.6 | 91.4 | 100.0 | 118 |
| Total | 6.4 | 4.0 | 1.8 | 87.8 | 100.0 | 830 |
| RURAL | | | | | | |
| 15-19 | 11.5 | -- | 4.9 | 83.6 | 100.0 | 80 |
| 20-24 | 6.4 | 1.4 | 2.4 | 89.7 | 100.0 | 921 |
| 25-29 | 6.8 | 1.5 | 3.4 | 88.3 | 100.0 | 1742 |
| 30-34 | 6.4 | 1.6 | 2.2 | 89.8 | 100.0 | 1580 |
| 35-39 | 4.9 | 1.2 | 2.3 | 91.6 | 100.0 | 1715 |
| 40-44 | 5.5 | 0.7 | 3.1 | 90.7 | 100.0 | 1843 |
| 45-49 | 6.0 | 0.1 | 2.7 | 91.1 | 100.0 | 1114 |
| Total | 6.0 | 1.1 | 2.7 | 90.2 | 100.0 | 8996 |
| TOTAL | | | | | | |
| 15-19 | 12.0 | -- | 4.8 | 83.2 | 100.0 | 82 |
| 20-24 | 6.5 | 1.5 | 2.4 | 89.6 | 100.0 | 985 |
| 25-29 | 6.6 | 1.9 | 3.2 | 88.3 | 100.0 | 1891 |
| 30-34 | 6.6 | 2.0 | 2.1 | 89.3 | 100.0 | 1779 |
| 35-39 | 5.1 | 1.3 | 2.2 | 91.3 | 100.0 | 1876 |
| 40-44 | 5.5 | 1.0 | 3.0 | 90.5 | 100.0 | 1981 |
| 45-49 | 5.9 | 0.2 | 2.7 | 91.2 | 100.0 | 1233 |
| Total | 6.0 | 1.3 | 2.7 | 90.0 | 100.0 | 9826 |

Note: There were no reported pregnancies to women age 13-14. Total includes 2 pregnancies to urban women age 15-19, which are not shown separately.

-- Less than 0.05 percent

Table 5.6 presents percent distribution of all women (regardless of marital status) and currently married women by number of children ever born according to woman's current age. The table also shows age-specific mean numbers of children ever born and surviving. Women (of all marital statuses) in the childbearing years in Himachal Pradesh have had an average of 2.3 children and currently married women have had an average of 3.0 children. The difference between CEB to all women and currently married women is primarily due to the proportion of women unmarried among women under age 25. The mean number of children ever born increases steadily with age for all women as well as currently married women, reaching about five children per woman for the 45-49 age group. Early childbearing is relatively rare in Himachal Pradesh. Only 8 percent of all women in the 15-19 age group have ever had a child.

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, Himachal Pradesh, 1992

| 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 | 92.2 | 6.8 | 1.0 | -- | -- | -- | -- | -- | -- | -- | -- | 100.0 | 772 | 0.09 | 0.08 |
| 20-24 | 41.2 | 24.1 | 22.7 | 8.9 | 2.8 | 0.2 | 0.2 | -- | -- | -- | -- | 100.0 | 810 | 1.09 | 1.00 |
| 25-29 | 9.0 | 8.8 | 29.7 | 29.5 | 16.8 | 4.3 | 1.5 | 0.4 | -- | -- | -- | 100.0 | 650 | 2.57 | 2.38 |
| 30-34 | 4.7 | 4.6 | 18.2 | 34.1 | 21.1 | 10.4 | 4.7 | 1.9 | -- | 0.3 | -- | 100.0 | 490 | 3.24 | 2.93 |
| 35-39 | 2.4 | 3.0 | 12.8 | 26.7 | 21.0 | 14.5 | 11.2 | 5.6 | 1.8 | 1.0 | -- | 100.0 | 434 | 3.95 | 3.45 |
| 40-44 | 3.2 | 2.4 | 8.5 | 21.1 | 23.5 | 18.0 | 12.0 | 5.4 | 3.8 | 1.3 | 0.9 | 100.0 | 420 | 4.27 | 3.68 |
| 45-49 | 3.4 | 1.4 | 4.7 | 15.6 | 23.5 | 19.8 | 15.6 | 8.3 | 4.5 | 2.7 | 0.5 | 100.0 | 240 | 4.68 | 4.11 |
| Total | 30.4 | 9.3 | 15.1 | 17.6 | 12.6 | 7.0 | 4.5 | 2.1 | 0.9 | 0.5 | 0.1 | 100.0 | 3816 | 2.32 | 2.07 |
| CURRENTLY MARRIED WOMEN | | | | | | | | | | | | | | | |
| 15-19 | 59.6 | 35.1 | 5.3 | -- | -- | -- | -- | -- | -- | -- | -- | 100.0 | 149 | 0.46 | 0.43 |
| 20-24 | 23.2 | 31.0 | 29.8 | 11.8 | 3.7 | 0.2 | 0.2 | -- | -- | -- | -- | 100.0 | 607 | 1.43 | 1.32 |
| 25-29 | 5.5 | 8.7 | 30.6 | 30.8 | 17.8 | 4.6 | 1.6 | 0.4 | -- | -- | -- | 100.0 | 613 | 2.69 | 2.48 |
| 30-34 | 2.0 | 4.4 | 19.3 | 35.0 | 21.4 | 10.7 | 5.1 | 1.8 | -- | 0.3 | -- | 100.0 | 454 | 3.33 | 3.01 |
| 35-39 | 1.3 | 3.1 | 12.0 | 27.6 | 21.2 | 14.9 | 11.4 | 5.5 | 1.9 | 1.0 | -- | 100.0 | 413 | 4.01 | 3.50 |
| 40-44 | 1.8 | 2.0 | 8.1 | 22.1 | 21.9 | 19.3 | 13.4 | 5.6 | 3.9 | 1.1 | 1.1 | 100.0 | 376 | 4.39 | 3.79 |
| 45-49 | 2.2 | 1.6 | 5.4 | 14.8 | 21.0 | 21.5 | 16.9 | 9.4 | 3.9 | 2.5 | 0.6 | 100.0 | 208 | 4.77 | 4.15 |
| Total | 10.2 | 12.0 | 19.7 | 23.0 | 15.7 | 9.1 | 5.9 | 2.6 | 1.1 | 0.5 | 0.2 | 100.0 | 2819 | 2.98 | 2.66 |
| -- Less than 0.05 percent | | | | | | | | | | | | | | | |

It is not uncommon in sample surveys to find mean numbers of children ever born for older age groups declining, which may indicate deteriorating completeness of reporting of children ever born as women reach the end of the reproductive age span. Although the steady increase 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 parity distribution for older currently married women provides a measure of primary sterility. In Himachal Pradesh, 2 percent of currently married women age 40-49 have not given birth to any children. The low level of childlessness is probably an indication of the relative absence of primary sterility in the population of Himachal Pradesh.

On average, the number of dead children per woman is about 0.3 children among currently married women age 15-49, representing 11 percent of children ever born. The percentage of children ever born who later died increases with age of the mother. For example, 8 percent of children born to currently married women age 20-24 have died whereas 13 percent of children born to currently married women age 45-49 have died. Older women not only have had many children, but have lost many as well.

Table 5.7 shows differentials in the average number of children ever born and living according to selected background characteristics of currently married women. To avoid the confounding influence of different age distributions of women in different groups, the mean values in the table are standardized using the age distribution of all currently married women

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, Himachal Pradesh, 1992

| 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 | 0.7 | 1.4 | 0.7 | 0.7 | 1.3 |
| 25-29 | 1.3 | 1.3 | 2.7 | 1.3 | 1.2 | 2.5 |
| 30-34 | 1.8 | 1.5 | 3.3 | 1.6 | 1.4 | 3.0 |
| 35-39 | 2.0 | 2.0 | 4.0 | 1.8 | 1.7 | 3.5 |
| 40-44 | 2.2 | 2.2 | 4.4 | 1.9 | 1.9 | 3.8 |
| 45-49 | 2.3 | 2.4 | 4.8 | 2.0 | 2.1 | 4.2 |
| Residence | | | | | | |
| Urban | 1.3 | 1.1 | 2.5 | 1.3 | 1.1 | 2.3 |
| Rural | 1.5 | 1.5 | 3.0 | 1.4 | 1.3 | 2.7 |
| Education | | | | | | |
| Illiterate | 1.8 | 1.8 | 3.6 | 1.6 | 1.5 | 3.1 |
| Literate, < middle complete | 1.4 | 1.4 | 2.8 | 1.3 | 1.3 | 2.5 |
| Middle school complete | 1.2 | 0.9 | 2.1 | 1.1 | 0.8 | 1.9 |
| High school and above | 1.0 | 0.8 | 1.8 | 0.9 | 0.8 | 1.7 |
| Religion | | | | | | |
| Hindu | 1.5 | 1.4 | 3.0 | 1.4 | 1.3 | 2.6 |
| Muslim | (2.2) | (1.7) | (3.9) | (1.9) | (1.6) | (3.5) |
| Sikh | (1.4) | (1.1) | (2.6) | (1.3) | (1.1) | (2.3) |
| Caste/tribe | | | | | | |
| Scheduled caste | 1.6 | 1.5 | 3.1 | 1.4 | 1.3 | 2.7 |
| Scheduled tribe | 1.7 | 1.7 | 3.4 | 1.5 | 1.5 | 3.0 |
| Other | 1.5 | 1.4 | 2.9 | 1.3 | 1.3 | 2.6 |
| Total | 1.5 | 1.4 | 3.0 | 1.4 | 1.3 | 2.7 |

Note: The mean values 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. Total means are based on all currently married women age 13-49, including 24 women belonging to other religions, the means for whom are not shown separately.
() Based on 25-49 unweighted cases

in the state as the standard. 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. Differentials in children ever born by background characteristics seen in Table 5.7 are similar to differentials in the total fertility rate by the same characteristics. Fertility, as indicated by children ever born, is somewhat 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 tribes.

The differentials in the mean number of children still living are considerably 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 rates are relatively high. For example, illiterate women have twice as many children ever born,

on average, as women with a high school education, but the gap in the case of average number of living children is less because of the higher loss due to mortality for illiterate women.

5.4 Birth Order

The distribution of births during the three-year period before the survey by birth order and age of the mother at childbirth is shown in Table 5.8. As one would expect, the number of births at each order is greater than the number at the next higher order. Overall, 31 percent of all births are first births and 27 percent are second births. High order births are less common. Only 11 percent of all births are order five and above and just 6 percent are order six and above. Predictably, the birth order distribution is more skewed toward lower order births in urban areas, where only 6 percent of all births are of order five and above.

5.5 Birth Intervals

A birth interval is the period of time between two successive live births. Birth intervals indicate the pace of childbearing. In addition, various past research has shown that children

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, Himachal Pradesh, 1992

| Maternal age at birth | Order of birth | | | | | | Total percent | Number of births |
|-----------------------|----------------|-------------|-------------|-------------|------------|------------|---------------|------------------|
| | 1 | 2 | 3 | 4 | 5 | 6+ | | |
| URBAN | | | | | | | | |
| 20-24 | 47.7 | 33.8 | 13.8 | 3.8 | 0.8 | -- | 100.0 | 40 |
| 25-29 | 22.1 | 33.7 | 27.9 | 9.3 | 5.8 | 1.2 | 100.0 | 27 |
| 30-34 | (5.9) | (35.3) | (29.4) | (14.7) | (2.9) | (11.8) | 100.0 | 11 |
| Total | 35.4 | 32.5 | 19.3 | 7.3 | 2.9 | 2.6 | 100.0 | 85 |
| RURAL | | | | | | | | |
| 15-19 | 74.1 | 19.6 | 4.2 | 2.1 | -- | -- | 100.0 | 188 |
| 20-24 | 31.8 | 37.0 | 21.6 | 7.4 | 1.7 | 0.5 | 100.0 | 530 |
| 25-29 | 9.3 | 18.6 | 33.5 | 23.7 | 9.8 | 5.1 | 100.0 | 283 |
| 30-34 | (4.7) | (4.7) | (23.3) | (14.0) | (20.9) | (32.6) | 100.0 | 57 |
| 35-49 | (--) | (--) | (13.5) | (10.8) | (8.1) | (67.6) | 100.0 | 49 |
| Total | 30.4 | 26.0 | 21.4 | 11.2 | 4.8 | 6.2 | 100.0 | 1107 |
| TOTAL | | | | | | | | |
| 15-19 | 74.2 | 19.7 | 4.1 | 2.0 | -- | -- | 100.0 | 194 |
| 20-24 | 32.9 | 36.8 | 21.0 | 7.2 | 1.7 | 0.5 | 100.0 | 571 |
| 25-29 | 10.4 | 19.9 | 33.0 | 22.5 | 9.4 | 4.8 | 100.0 | 310 |
| 30-34 | 4.8 | 9.5 | 24.2 | 14.1 | 18.1 | 29.3 | 100.0 | 67 |
| 35-49 | (--) | (--) | (13.6) | (11.6) | (8.4) | (66.3) | 100.0 | 51 |
| Total | 30.8 | 26.5 | 21.3 | 10.9 | 4.6 | 5.9 | 100.0 | 1192 |

Note: Total for urban areas includes 6 births to women age 15-19 and 2 births to women age 35-49, which are not shown separately. There were no reported births to women age 13-14.

() Based on 25-49 unweighted cases

-- Less than 0.05 percent

born too close to a previous birth affect the health of mothers and survival chances of children. Risk of mortality is high especially if the interval between births is less than 24 months (Govindasamy et al., 1993; Hobcraft et al., 1983). Table 5.9 presents the percent distribution of second and higher order births in the five-year period preceding the survey by interval since previous birth. Intervals between marriage and first birth, which do not include an interval of postpartum amenorrhoea, are excluded to make comparison of the intervals over different characteristics of the women more meaningful. Overall, one in every seven births occurred

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, Himachal Pradesh, 1992

| 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 | 1.9 | 15.2 | 20.9 | 39.7 | 15.2 | 7.1 | 100.0 | 26.5 | 1018 |
| 30-39 | 2.0 | 4.6 | 12.4 | 32.6 | 23.3 | 25.1 | 100.0 | 35.2 | 305 |
| 40-49 | (--) | (7.6) | (11.4) | (11.4) | (12.3) | (57.2) | 100.0 | 50.1 | 35 |
| Order of prior birth | | | | | | | | | |
| 1 | 2.9 | 16.7 | 19.7 | 37.2 | 14.6 | 8.9 | 100.0 | 26.6 | 558 |
| 2-3 | 0.8 | 11.3 | 19.2 | 38.0 | 18.3 | 12.4 | 100.0 | 29.3 | 609 |
| 4-5 | 3.5 | 6.0 | 15.8 | 36.6 | 18.9 | 19.1 | 100.0 | 31.6 | 158 |
| 6+ | (--) | (3.3) | (10.5) | (32.6) | (20.3) | (33.3) | 100.0 | 36.6 | 40 |
| Sex of prior birth | | | | | | | | | |
| Male | 1.5 | 12.1 | 20.3 | 37.7 | 16.1 | 12.1 | 100.0 | 27.4 | 668 |
| Female | 2.3 | 13.2 | 17.2 | 37.0 | 17.7 | 12.6 | 100.0 | 29.2 | 697 |
| Survival of prior birth | | | | | | | | | |
| Still living | 1.4 | 11.3 | 18.8 | 39.0 | 17.1 | 12.5 | 100.0 | 28.6 | 1234 |
| Deceased | 6.7 | 25.9 | 18.5 | 22.4 | 15.2 | 11.2 | 100.0 | 23.1 | 132 |
| Residence | | | | | | | | | |
| Urban | 2.9 | 13.0 | 17.2 | 34.1 | 15.9 | 16.9 | 100.0 | 28.1 | 95 |
| Rural | 1.9 | 12.6 | 18.9 | 37.6 | 17.0 | 12.0 | 100.0 | 28.3 | 1270 |
| Education of the mother | | | | | | | | | |
| Illiterate | 2.2 | 11.8 | 17.6 | 37.5 | 18.3 | 12.6 | 100.0 | 29.1 | 717 |
| Lit., < middle complete | 1.5 | 12.7 | 20.7 | 36.2 | 17.4 | 11.5 | 100.0 | 27.4 | 384 |
| Middle school complete | 0.5 | 14.9 | 21.3 | 41.9 | 7.4 | 14.1 | 100.0 | 26.5 | 128 |
| High school and above | 3.1 | 14.9 | 17.1 | 35.9 | 17.0 | 12.0 | 100.0 | 29.1 | 136 |
| Religion | | | | | | | | | |
| Hindu | 1.9 | 12.8 | 18.3 | 37.7 | 16.7 | 12.5 | 100.0 | 28.3 | 1302 |
| Muslim | (4.3) | (7.8) | (31.1) | (22.3) | (22.5) | (12.1) | 100.0 | 27.7 | 38 |
| Caste/tribe | | | | | | | | | |
| Scheduled caste | 1.0 | 14.8 | 21.0 | 35.7 | 17.0 | 10.5 | 100.0 | 27.6 | 328 |
| Scheduled tribe | 2.5 | 8.0 | 23.2 | 39.3 | 13.6 | 13.3 | 100.0 | 28.8 | 106 |
| Other | 2.2 | 12.4 | 17.4 | 37.7 | 17.3 | 12.9 | 100.0 | 28.6 | 931 |
| Total | 1.9 | 12.7 | 18.7 | 37.4 | 16.9 | 12.4 | 100.0 | 28.3 | 1365 |

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 6 births to women age 15-19, 12 births to Sikh women, and 13 births to women belonging to other religions, which are not shown separately.

() Based on 25-49 unweighted cases

-- Less than 0.05 percent

within 18 months of the previous birth and one-third of all births occurred within 24 months. It is interesting to note that only 29 percent of couples observed the government's recommendation of spacing children at least three years apart.

The median birth interval in Himachal Pradesh is just over 28 months or 2.3 years. The median birth interval for women age 20-29 (27 months) is substantially less than the median interval for women age 40-49 (50 months). The relatively short birth interval for women age 20-29 at the time of the survey probably results from a selection effect. Only women who have had two or more births are included in the table, and 20-29 years old women with more than one birth have higher fecundability than women at large. In view of the correlation between age of mother and birth order, it is not surprising that the median birth interval increases with the birth order.

There is a sharp difference between the interval following a birth that is still living (29 months) and the interval following a deceased child (23 months). The proportion of births with intervals of less than 12 months is nearly five times as high when the last birth is deceased, as when the last birth is still alive. In large part, this reflects the shortening of postpartum amenorrhoea that occurs when the preceding child dies in infancy and breastfeeding stops prematurely. The median interval following a female birth is slightly longer than the median interval following a male birth, and there is no urban-rural difference in median birth intervals.

The median interval is somewhat longer for women who are either illiterate or those who have at least a high school education. Since women with more education often space their children more than women with less education, it is difficult to explain the relatively long median interval for illiterate women. Perhaps this pattern reflects the fact that illiterate women tend to be older and older women have births that are spaced further apart. Muslims have slightly shorter median intervals than Hindus. Scheduled tribes have a sharply lower proportion of babies born within 18 months of the previous birth than other groups.

5.6 Age at First and Last Birth

The age at onset and cessation of childbearing are important demographic determinants of fertility. Postponement of first births, reflecting a rise in the age at marriage, can make an important contribution to overall fertility decline. The percent distribution of women by age at first birth and median age at first birth according to current age of women and their place of residence are shown in Table 5.10. The median age at first birth for any group of women is the age by which half of them have had their first birth. For women in younger age groups however, the number who will eventually become mothers is not known since some first births to the cohort will occur only in the future. The medians shown in Table 5.10 are, therefore, calculated as the ages by which one half of *all* women in the cohort have had a first birth, rather than the age by which half of all mothers in the cohort have had a first birth. This statistic can be computed without knowing how many women in the cohort will eventually have a first birth.

Median ages at first birth have been increasing slightly over time, but not as rapidly as the median age at first marriage. Thus, the average gap between marriage and first birth has been decreasing as the age at marriage increases. The median age at first birth is about two years higher in urban areas than in rural areas. Very early childbearing (below age 15) is not

Table 5.10 Age at first birth

Percent distribution of women by age at first birth, according to current age and residence, Himachal Pradesh, 1992

| 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 | 98.7 | -- | 0.4 | 0.9 | NA | NA | NA | 100.0 | NC |
| 20-24 | 55.2 | -- | 4.5 | 14.3 | 18.3 | 7.7 | NA | 100.0 | NC |
| 25-29 | 19.0 | 0.5 | 14.9 | 12.2 | 19.0 | 24.4 | 9.9 | 100.0 | 22.3 |
| 30-34 | 6.4 | 0.5 | 12.6 | 21.5 | 17.3 | 19.7 | 22.0 | 100.0 | 21.6 |
| 35-39 | 3.8 | 2.7 | 20.9 | 20.2 | 16.1 | 19.5 | 16.8 | 100.0 | 21.0 |
| 40-44 | 5.6 | 3.2 | 14.4 | 24.0 | 12.0 | 23.2 | 17.6 | 100.0 | 21.5 |
| 45-49 | 2.2 | 1.1 | 16.3 | 21.7 | 16.3 | 26.1 | 16.3 | 100.0 | 21.2 |
| RURAL | | | | | | | | | |
| 15-19 | 91.7 | 0.2 | 3.0 | 5.2 | NA | NA | NA | 100.0 | NC |
| 20-24 | 39.9 | 1.3 | 11.8 | 22.7 | 18.4 | 5.9 | NA | 100.0 | NC |
| 25-29 | 7.7 | 1.6 | 18.4 | 24.0 | 27.7 | 16.3 | 4.3 | 100.0 | 20.5 |
| 30-34 | 4.3 | 1.9 | 22.4 | 28.0 | 23.9 | 13.4 | 6.2 | 100.0 | 19.9 |
| 35-39 | 2.2 | 2.0 | 27.2 | 27.8 | 19.7 | 13.9 | 7.1 | 100.0 | 19.5 |
| 40-44 | 3.0 | 3.5 | 26.2 | 27.6 | 20.0 | 14.2 | 5.5 | 100.0 | 19.6 |
| 45-49 | 3.4 | 1.9 | 27.4 | 28.7 | 19.9 | 10.0 | 8.7 | 100.0 | 19.4 |
| TOTAL | | | | | | | | | |
| 15-19 | 92.2 | 0.2 | 2.8 | 4.9 | NA | NA | NA | 100.0 | NC |
| 20-24 | 41.2 | 1.1 | 11.1 | 22.0 | 18.4 | 6.1 | NA | 100.0 | NC |
| 25-29 | 9.0 | 1.5 | 18.0 | 22.8 | 26.7 | 17.2 | 4.9 | 100.0 | 20.6 |
| 30-34 | 4.7 | 1.7 | 21.0 | 27.1 | 23.0 | 14.2 | 8.3 | 100.0 | 20.0 |
| 35-39 | 2.4 | 2.1 | 26.5 | 27.0 | 19.3 | 14.5 | 8.2 | 100.0 | 19.6 |
| 40-44 | 3.2 | 3.4 | 25.1 | 27.3 | 19.3 | 15.0 | 6.6 | 100.0 | 19.7 |
| 45-49 | 3.4 | 1.8 | 26.1 | 27.8 | 19.5 | 11.9 | 9.6 | 100.0 | 19.6 |

NA: Not applicable

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

common in any of the age groups and the incidence has been dropping fairly steadily over time. The proportion of women having their first child before age 20 dropped below 50 percent for the first time in the 30-34 age group.

Table 5.11 shows the median age at first birth by selected background characteristics. The urban-rural differences have already been discussed in connection with Table 5.10. The median ages at first birth within education groups show very little overall change with age, suggesting that the trend toward later age at first birth, especially for urban women, may be due to the higher educational level of the younger cohorts. There is a clear increase in the median age at first birth with the level of education within each age group.

There is essentially no difference in age at first birth between Hindus and Muslims, but the median age at first birth is somewhat higher for Sikhs. Note that the medians for Muslims and Sikhs are based on a small number of women. Scheduled caste women begin childbearing

Table 5.11 Age at first birth by background characteristics

Median age at first birth among women age 20-49 years, by current age and selected background characteristics, Himachal Pradesh, 1992

| Background characteristic | Current age | | | | | | | |
|-----------------------------|-------------|--------|-------|--------|-------|--------|-------|--------|
| | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 | 20-49 | 25-49 |
| Residence | | | | | | | | |
| Urban | NC | 22.3 | 21.6 | 21.0 | 21.5 | 21.2 | NC | 21.7 |
| Rural | NC | 0.5 | 19.9 | 19.5 | 19.6 | 19.4 | NC | 19.8 |
| Education | | | | | | | | |
| Illiterate | 19.6 | 19.6 | 19.4 | 19.2 | 19.3 | 19.5 | 19.4 | 19.4 |
| Literate, < middle complete | NC | 20.3 | 19.7 | 19.6 | 20.0 | 19.2 | NC | 19.8 |
| Middle school complete | NC | 20.9 | 20.3 | (19.8) | * | * | NC | 20.5 |
| High school and above | NC | 23.4 | 23.4 | 23.1 | 22.8 | (24.4) | NC | 23.2 |
| Religion | | | | | | | | |
| Hindu | NC | 20.6 | 20.0 | 19.6 | 19.6 | 19.5 | NC | 19.9 |
| Muslim | 19.8 | * | * | * | * | * | 20.0 | (20.2) |
| Sikh | NC | * | * | * | * | * | NC | (21.7) |
| Caste/tribe | | | | | | | | |
| Scheduled caste | NC | 19.6 | 19.1 | 19.2 | 18.9 | 18.7 | 19.5 | 19.1 |
| Scheduled tribe | (19.9) | (20.7) | * | * | * | * | NC | 20.2 |
| Other | NC | 20.9 | 20.4 | 19.8 | 19.9 | 19.9 | NC | 20.3 |
| Total | NC | 20.6 | 20.0 | 19.6 | 19.7 | 19.6 | NC | 20.0 |

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

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

() Based on 25-49 unweighted cases

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

about one year earlier than scheduled tribe and non-SC/ST women.

Among women age 40-49, the age at last child birth is an indicator of stopping of childbearing. Table 5.12 presents the distribution of ever-married women in the age group 40-49 by age at last birth. 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. More than half of these women had completed their childbearing by age 30 and 81 percent had their last birth before age 35. The median ages at last birth are not shown in the table, but may be computed by interpolation in the frequency distribution. The median age at last birth for women age 40-44 and 45-49 at the time of the survey are 28.8 and 30.7 years, respectively. The difference between the median age at first birth for the 45-49 age cohort (19.6 years from Table 5.11) and the median age at last birth for the same age cohort gives an estimated reproductive life span of 11 years.

5.7 Childbearing at Young Ages

Fertility among teenagers (those under age 20) is drawing increasing attention from policymakers. Children born to young mothers are more susceptible to illness and have a higher

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 and residence, Himachal Pradesh, 1992

| Current age | No birth | Age at last birth | | | | | | Total percent | Number of women |
|-------------|----------|-------------------|-------|-------|-------|-------|-------|---------------|-----------------|
| | | < 20 | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | | |
| 40-44 | 2.7 | 2.7 | 14.2 | 41.3 | 24.8 | 12.3 | 1.9 | 100.0 | 417 |
| 45-49 | 2.5 | 0.7 | 9.1 | 34.3 | 33.1 | 15.1 | 5.1 | 100.0 | 238 |
| 40-49 | 2.6 | 2.0 | 12.4 | 38.8 | 27.9 | 13.4 | 3.1 | 100.0 | 655 |

Note: There were no reported births to women age 45-49 at childbirth.

risk of dying during childhood than other children. Also young women may have to curtail their education due to childbearing and rearing. Table 5.13 shows the percentages of ever-married women age 13-19 who are either mothers or are pregnant with their first child. The sum of these two percentages represents the proportion of young ever-married women who have begun childbearing. Overall, over 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 be much less common than in the past. Not surprisingly, teenage motherhood is higher among illiterate women than among literate ones.

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

Percentage of ever-married women age 13-19 who are mothers or pregnant with their first child, by age and literacy, Himachal Pradesh, 1992

| Background characteristic | Percentage who are: | | Percent who have begun childbearing | Number of women |
|---------------------------|---------------------|---------------------------|-------------------------------------|-----------------|
| | Mothers | Pregnant with first child | | |
| Age | | | | |
| 13-17 | 17.3 | 22.6 | 39.9 | 25 |
| 18-19 | 43.5 | 14.5 | 58.1 | 128 |
| Literacy | | | | |
| Illiterate | 46.4 | 14.4 | 60.8 | 64 |
| Literate | 34.3 | 16.8 | 51.1 | 89 |
| Total | 39.3 | 15.8 | 55.2 | 153 |

5.8 Postpartum Amenorrhoea, Abstinence and Nonsusceptibility

The importance of lactational amenorrhoea and postpartum abstinence as determinants of fertility is well recognized. The duration of postpartum amenorrhoea (delayed resumption of ovulation) following a birth is closely associated with the duration of breastfeeding, which tends to suppress resumption of ovulation. Conception can also be delayed by prolonged postpartum abstinence. The total period of protection from amenorrhoea or abstinence or both is defined as the nonsusceptible duration. The percentage of births during the last 3 years whose

mothers are presently postpartum amenorrhoeic or abstaining or nonsusceptible, by duration since last birth, is presented in Table 5.14. The mean and median durations and the prevalence/incidence mean duration are also shown in the table. Estimates of means and medians are based on a smoothed distribution of the current status proportion in each months-since-birth group. The prevalence/incidence mean is obtained by dividing the number of mothers who are nonsusceptible by the average number of births per month over a 36-month period.

Ninety-one percent of all women who had a birth in the two months prior to the survey were still amenorrhoeic and 74 percent of women whose last birth occurred 2-3 months prior to the survey were still amenorrhoeic. The proportion amenorrhoeic gradually decreases as the number of months since birth increases. A little under half of all women with births that occurred 8-9 months before the survey were still amenorrhoeic, and amenorrhoea drops off rapidly thereafter. For children born in the 18 months before the survey, the proportions whose mothers were abstaining from sexual intercourse are much lower than the proportions whose mothers were amenorrhoeic. By 4-5 months since the birth, only one-quarter of women were still abstaining. Overall, half of women become susceptible to pregnancy within 8-9 months of giving birth and more than two-thirds become susceptible within 12-13 months.

Table 5.14 Postpartum amenorrhoea, abstinence and nonsusceptibility

Percentage of births occurring during the three years preceding the survey whose mothers are postpartum amenorrhoeic, postpartum abstaining or postpartum nonsusceptible, by number of months since birth, and median and mean durations, Himachal Pradesh, 1992

| Months since birth | Percent of births whose mothers are: | | | Number of births |
|----------------------------------|--------------------------------------|-----------------------|---------------------------|------------------|
| | Postpartum amenorrhoeic | Postpartum abstaining | Postpartum nonsusceptible | |
| < 2 | 91.4 | 87.9 | 99.5 | 68 |
| 2 - 3 | 74.0 | 40.3 | 79.0 | 65 |
| 4 - 5 | 55.7 | 25.8 | 64.4 | 64 |
| 6 - 7 | 58.0 | 8.5 | 59.9 | 85 |
| 8 - 9 | 45.0 | 10.6 | 48.9 | 68 |
| 10-11 | 33.7 | 7.0 | 36.0 | 57 |
| 12-13 | 23.5 | 8.4 | 31.9 | 82 |
| 14-15 | (15.9) | (2.6) | (18.5) | 50 |
| 16-17 | 8.5 | -- | 8.5 | 54 |
| 18-19 | 5.1 | 6.9 | 10.3 | 77 |
| 20-21 | (10.2) | (10.2) | (17.8) | 52 |
| 22-23 | 2.0 | 2.0 | 2.0 | 66 |
| 24-25 | 6.7 | -- | 6.7 | 59 |
| 26-27 | 2.0 | -- | 2.0 | 66 |
| 28-29 | -- | 1.9 | 1.9 | 69 |
| 30-31 | 2.0 | 4.0 | 6.0 | 66 |
| 32-33 | -- | 4.3 | 4.3 | 62 |
| 34-35 | -- | -- | -- | 60 |
| Median | 7.6 | 2.6 | 8.5 | NA |
| Mean | 9.0 | 4.7 | 10.2 | NA |
| Prevalence/incidence mean | 8.9 | 4.5 | 10.2 | 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

The median and mean durations of nonsusceptibility are 8.5 and 10.2 months, respectively. The median duration of amenorrhoea (7.6 months) is almost three times as high as the median duration of abstinence (2.6 months). The prevalence-incidence mean suggests that on average, women remain nonsusceptible to conception for just over 10 months after a birth, primarily due to the effects of postpartum amenorrhoea.

Table 5.15 shows median durations of postpartum amenorrhoea, postpartum abstinence, and postpartum nonsusceptibility by selected background characteristics. The median durations of amenorrhoea and abstinence, and thus of nonsusceptibility, are slightly longer overall for women age 30 and over than for women under age 30. They are also longer for women in rural areas than for women in urban areas, possibly due to the longer period of breastfeeding in rural areas (see Table 10.4 in Chapter 10). Periods of amenorrhoea and nonsusceptibility are also relatively long for illiterate women. On the other hand, these periods are particularly short for women belonging to scheduled tribes.

| Background characteristic | Postpartum amenorrhoea | Postpartum abstinence | Postpartum nonsusceptibility | Number of births |
|---------------------------|------------------------|-----------------------|------------------------------|------------------|
| Age | | | | |
| 13-29 | 7.2 | 2.5 | 8.0 | 1005 |
| 30-49 | 8.7 | 3.4 | 10.2 | 164 |
| Residence | | | | |
| Urban | 4.0 | 2.6 | 5.0 | 84 |
| Rural | 8.1 | 2.7 | 8.8 | 1084 |
| Education | | | | |
| Illiterate | 9.5 | 2.3 | 10.3 | 536 |
| Lit., < middle complete | 6.0 | 2.9 | 6.2 | 339 |
| Middle school complete | 4.7 | 3.7 | 5.7 | 127 |
| High school and above | 3.3 | 2.7 | 6.4 | 166 |
| Caste/tribe | | | | |
| Scheduled caste | 7.0 | 2.1 | 7.9 | 299 |
| Scheduled tribe | 4.0 | 2.5 | 4.0 | 69 |
| Other | 7.5 | 2.9 | 8.4 | 800 |
| Total | 7.6 | 2.6 | 8.5 | 1168 |

Note: Medians are based on current status.

5.9 Menopause

Menopause is a primary limiting factor of fertility. It is the culmination of a gradual decline in fecundity with increasing age of the woman. In the NFHS, menopause is defined as the lack of a menstrual period for at least the 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 Himachal Pradesh, menopause is relatively rare for women in their thirties, but its incidence increases rapidly after age 40 (Table 5.16). By age 44-45, just

under half of women are in menopause. This figure increases to 55 percent for women age 46-47 and 60 percent for women age 48-49 (but the number of women in the latter group is relatively small). The onset of menopause appears to be somewhat later in urban areas, but this result is based on a fairly small number of urban women in most age groups.

Table 5.16 Menopause

Percentage of currently married women age 30-49 years who are in menopause, by age and residence, Himachal Pradesh, 1992

| Age | Urban | | Rural | | Total | |
|-------|---------|--------|---------|--------|---------|--------|
| | Percent | Number | Percent | Number | Percent | Number |
| 30-34 | 3.1 | 60 | -- | 359 | 0.4 | 419 |
| 35-39 | 2.3 | 41 | 9.3 | 354 | 8.6 | 395 |
| 40-41 | (11.4) | 14 | 16.7 | 142 | 16.2 | 156 |
| 42-43 | (16.3) | 15 | 19.5 | 101 | 19.1 | 117 |
| 44-45 | (29.1) | 14 | 49.6 | 149 | 48.6 | 163 |
| 46-47 | (42.4) | 10 | 56.2 | 84 | 54.8 | 94 |
| 48-49 | * | 6 | (58.1) | 41 | (59.8) | 46 |
| Total | 13.0 | 159 | 18.0 | 1230 | 17.4 | 1390 |

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 reported that they are menopausal.

() Based on 25-49 unweighted cases

* Percentage not shown; based on fewer than 25 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 about 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 nearly universal in Himachal Pradesh, with all ever-married respondents in urban areas and 99 percent in rural areas reporting knowledge of at least one modern method of family planning (Figure 6.1). Ninety-six percent of ever-married women in urban areas who know a modern contraceptive method mentioned a method spontaneously compared to 79 percent in rural areas. Effective knowledge of family planning methods is, thus, lower in rural areas than in urban areas. Ever-married and currently married women do not differ much with regard to the knowledge of family planning methods.

Knowledge about sterilization is almost universal in Himachal Pradesh. This is true for female as well as male sterilization. In comparison, the three officially sponsored spacing methods, namely, IUDs, pills and condoms, are relatively less familiar to respondents. The

extent of knowledge of these spacing methods is nearly the same (with 69-73 percent of the women reporting knowledge of these methods). Less than half of the respondents know about injections as a contraceptive method. Traditional methods of contraception are generally less well known than modern methods in Himachal Pradesh; 61 percent of women reported knowledge of these methods, periodic abstinence being better known (49 percent) than the withdrawal method (37 percent). The table reveals that probing was often needed to elicit knowledge about contraceptive methods, particularly traditional methods.

The Third All India Survey on Family Planning Practices in India, conducted in 1988-89 (Operations Research Group, 1990), which studied currently married women age 15-44, reached broadly similar conclusions about women's knowledge of specific methods. It was observed in that survey that 90-100 percent of the currently married women in Himachal Pradesh knew about male and female sterilization, 77 percent knew about the condom, 40-60 percent knew about the IUD and 60 percent knew about the pill. The survey also observed that the proportion of

| 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 | 96.1 | 3.9 | 100.0 | 99.8 | 96.6 | 3.4 | 100.0 | 99.8 |
| Any modern method | 95.9 | 4.1 | 100.0 | 99.8 | 96.5 | 3.5 | 100.0 | 99.8 |
| Pill | 79.7 | 14.5 | 94.2 | 92.0 | 80.6 | 14.4 | 94.9 | 93.0 |
| Copper T/IUD | 79.2 | 16.1 | 95.4 | 93.9 | 79.7 | 16.2 | 95.8 | 94.5 |
| Injection | 14.3 | 31.7 | 46.0 | 44.0 | 14.5 | 32.1 | 46.6 | 44.6 |
| Condom | 77.7 | 17.5 | 95.3 | 93.2 | 78.7 | 17.1 | 95.7 | 93.9 |
| Female sterilization | 80.9 | 19.0 | 99.9 | 99.0 | 81.3 | 18.5 | 99.9 | 99.2 |
| Male sterilization | 72.3 | 26.9 | 99.1 | 98.5 | 72.5 | 26.7 | 99.2 | 98.7 |
| Any traditional method | 21.6 | 56.2 | 77.8 | NA | 21.6 | 57.3 | 78.9 | NA |
| Rhythm/periodic abstinence | 11.9 | 57.7 | 69.7 | 52.8 | 11.8 | 58.5 | 70.3 | 53.7 |
| Withdrawal | 6.8 | 48.8 | 55.6 | NA | 6.6 | 49.9 | 56.5 | NA |
| Other methods | 8.8 | NA | 8.8 | NA | 8.7 | NA | 8.7 | NA |
| Number of women | 288 | 288 | 288 | 288 | 276 | 276 | 276 | 276 |
| RURAL | | | | | | | | |
| Any method | 78.5 | 20.4 | 99.0 | 97.2 | 79.0 | 20.0 | 99.0 | 97.4 |
| Any modern method | 77.8 | 21.0 | 98.7 | 97.0 | 78.2 | 20.6 | 98.8 | 97.2 |
| Pill | 39.7 | 26.9 | 66.6 | 59.0 | 40.4 | 27.0 | 67.4 | 59.8 |
| Copper T/IUD | 40.1 | 30.6 | 70.7 | 64.2 | 40.7 | 30.7 | 71.3 | 64.9 |
| Injection | 12.7 | 32.4 | 45.1 | 37.7 | 13.0 | 32.5 | 45.5 | 38.2 |
| Condom | 39.2 | 31.8 | 71.0 | 62.8 | 39.9 | 31.9 | 71.8 | 63.5 |
| Female sterilization | 61.2 | 36.6 | 97.7 | 94.9 | 61.6 | 36.4 | 97.9 | 95.2 |
| Male sterilization | 48.6 | 46.4 | 95.0 | 90.4 | 49.0 | 46.2 | 95.3 | 90.7 |
| Any traditional method | 14.6 | 44.1 | 58.7 | NA | 14.6 | 44.4 | 59.0 | NA |
| Rhythm/periodic abstinence | 4.5 | 42.0 | 46.6 | 27.3 | 4.7 | 42.1 | 46.8 | 27.3 |
| Withdrawal | 1.8 | 33.1 | 34.8 | NA | 1.8 | 33.4 | 35.2 | NA |
| Other methods | 10.1 | NA | 10.1 | NA | 10.1 | NA | 10.1 | NA |
| Number of women | 2674 | 2674 | 2674 | 2674 | 2543 | 2543 | 2543 | 2543 |

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, Himachal Pradesh, 1992

| 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 | 80.3 | 18.8 | 99.1 | 97.4 | 80.7 | 18.4 | 99.1 | 97.6 |
| Any modern method | 79.5 | 19.3 | 98.8 | 97.3 | 80.0 | 18.9 | 98.9 | 97.5 |
| Pill | 43.6 | 25.7 | 69.3 | 62.2 | 44.3 | 25.7 | 70.1 | 63.1 |
| Copper T/IUD | 43.9 | 29.2 | 73.1 | 67.1 | 44.5 | 29.3 | 73.7 | 67.8 |
| Injection | 12.9 | 32.3 | 45.2 | 38.3 | 13.2 | 32.5 | 45.6 | 38.8 |
| Condom | 42.9 | 30.4 | 73.4 | 65.8 | 43.7 | 30.5 | 74.1 | 66.5 |
| Female sterilization | 63.1 | 34.9 | 97.9 | 95.3 | 63.5 | 34.6 | 98.1 | 95.6 |
| Male sterilization | 50.9 | 44.5 | 95.4 | 91.2 | 51.3 | 44.3 | 95.7 | 91.5 |
| Any traditional method | 15.3 | 45.3 | 60.6 | NA | 15.3 | 45.7 | 61.0 | NA |
| Rhythm/periodic abstinence | 5.2 | 43.6 | 48.8 | 29.8 | 5.4 | 43.7 | 49.1 | 29.9 |
| Withdrawal | 2.3 | 34.6 | 36.9 | NA | 2.3 | 35.0 | 37.3 | NA |
| Other methods | 10.0 | NA | 10.0 | NA | 9.9 | NA | 9.9 | NA |
| Number of women | 2962 | 2962 | 2962 | 2962 | 2819 | 2819 | 2819 | 2819 |

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.

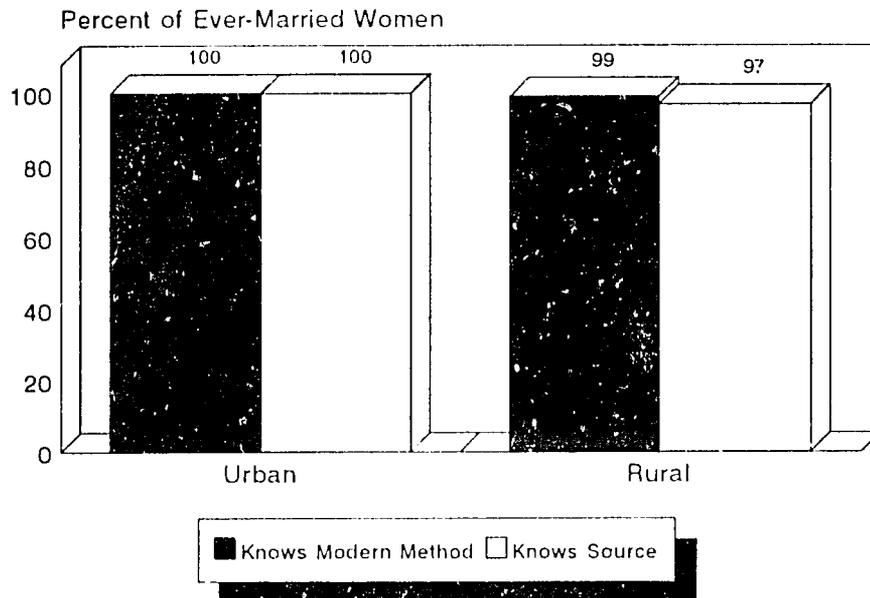
currently married women in Himachal Pradesh who had correct knowledge about how to use different family planning methods was moderate (37 percent for vasectomy, 45 percent for tubectomy, 63 percent for the condom, 38 percent for the pill and 30 percent for the IUD).

In the NFHS, urban-rural differentials in the level of knowledge are larger for spacing methods. While sterilization is known almost as well in rural areas as in urban areas, rural women are much less likely to know about any other modern methods. The two areas also differ in the knowledge of traditional methods. More than half of women in rural areas reported knowledge of any traditional method, compared to more than three-fourths in urban areas.

Table 6.1 also provides information about the extent of knowledge about sources of contraceptive methods. The question about the source of a method was asked only of those women who knew about the method. Knowledge about the sources of contraceptives is very high, with nearly all the respondents knowing where to obtain at least one modern method of family planning. Women are most knowledgeable about the source of sterilization. Spacing methods are not only less well known, but knowledge about their source is also more limited. For example, about two-thirds of women know a source for obtaining IUDs, pills and condoms, but only 38 percent know a source for injections. Urban women rank higher than rural women in the knowledge of sources, particularly for the spacing methods.

Table 6.2 shows differentials in the level of knowledge of modern contraceptive methods and sources of methods among currently married women. The differentials are shown according

Figure 6.1
 Knowledge of Modern Contraceptive
 Methods and Sources by Residence



NFHS, Himachal Pradesh, 1992

to background characteristics such as age and education of the woman, religion and caste/tribe. Regarding the level of knowledge of methods, the differentials by each characteristic are very small. Almost all urban women are cognizant of at least one modern method and source of supply, and rural women are only slightly behind them in this respect. In terms of respondent's age, the level of knowledge increases with age through age 30-34 and stays very high through age 49 years. The level of knowledge of at least one modern method of contraception increases with the level of education, although the differences are almost negligible. Knowledge about the source of a modern method is slightly lower than knowledge of modern methods themselves, but the former also increases with age and education. Contraceptive sources are slightly less well known among Muslim and scheduled tribe women.

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 method, age and residence, separately for ever-married and currently married women.

Table 6.2 Knowledge of methods and source by background characteristics

Percentage of currently married women knowing any method and at least one modern method and knowing a source for a modern method by selected background characteristics, Himachal Pradesh, 1992

| Background characteristic | Knows any method | Knows any modern method ¹ | Knows source for any modern method | Number of women |
|---------------------------|------------------|--------------------------------------|------------------------------------|-----------------|
| Age | | | | |
| 15-19 | 94.7 | 94.7 | 91.2 | 149 |
| 20-24 | 98.3 | 98.0 | 95.4 | 607 |
| 25-29 | 99.6 | 99.4 | 98.7 | 613 |
| 30-34 | 100.0 | 100.0 | 99.4 | 454 |
| 35-39 | 99.7 | 99.7 | 97.8 | 413 |
| 40-44 | 99.3 | 98.6 | 98.2 | 376 |
| 45-49 | 100.0 | 100.0 | 98.1 | 208 |
| Residence | | | | |
| Urban | 100.0 | 100.0 | 99.8 | 276 |
| Rural | 99.0 | 98.8 | 97.2 | 2543 |
| Education | | | | |
| Illiterate | 98.7 | 98.4 | 95.9 | 1379 |
| Lit., < middle complete | 99.3 | 99.2 | 98.3 | 795 |
| Middle school complete | 99.5 | 99.5 | 99.5 | 256 |
| High school and above | 100.0 | 100.0 | 100.0 | 389 |
| Religion | | | | |
| Hindu | 99.1 | 98.9 | 97.5 | 2738 |
| Muslim | (96.3) | (96.3) | (92.6) | 36 |
| Sikh | (100.0) | (100.0) | (100.0) | 21 |
| Caste/tribe | | | | |
| Scheduled caste | 99.2 | 98.8 | 97.2 | 664 |
| Scheduled tribe | 95.9 | 95.9 | 92.8 | 127 |
| Other | 99.3 | 99.2 | 97.8 | 2028 |
| Total | 99.1 | 98.9 | 97.5 | 2819 |

Note: There are no currently married interviewed women age 13-14. Total includes 25 women belonging to other religions, who are not shown separately.

() Based on 25-49 unweighted cases

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

In Himachal Pradesh, although 99 percent of the women have knowledge of at least one method of family planning, the practice of contraception is somewhat lower, with two-thirds of ever-married or currently married women having ever used a method. Modern methods have been used by 61 percent of currently married women and traditional methods by 20 percent. By far the most commonly accepted method is female sterilization, having been accepted by 33 percent of currently married women. Male sterilization has been used by 13 percent of couples. Condoms and IUDs have been used by 17 and 10 percent of currently married women, respectively. As expected, ever use of any method is higher in urban areas (81 percent) than in rural areas (66 percent) among currently married women (see Figure 6.2). However, the proportion of currently married women using either male or female sterilization as a method of contraception is higher in rural areas than in urban areas. A larger proportion of women in urban areas have ever used condoms than have been sterilized, and among other spacing methods only the IUD is relatively popular. In rural areas, besides female sterilization, the other most popular methods of contraception are condoms and male sterilization. Ever use of traditional methods is somewhat higher in urban areas.

In terms of differences by age, among ever-married women or currently married women, the use of any method increases through age 35-39 and thereafter declines gradually. Contraceptive use rates are highest in the age group 30-39, where knowledge is also reported to be the highest. A low use rate is observed among the youngest women: only 9 percent of those age 15-19 have ever used a modern method. Interestingly, in this age group the use of

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, Himachal Pradesh, 1992

| 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 | 51.0 | 46.2 | 6.2 | 18.6 | -- | 30.3 | 6.2 | 1.4 | 15.2 | 9.0 | 8.3 | 0.7 | 45 |
| 25-29 | 83.7 | 77.8 | 10.8 | 30.0 | 0.5 | 44.3 | 26.1 | 3.9 | 25.6 | 15.8 | 14.3 | 2.5 | 63 |
| 30-34 | 89.0 | 81.8 | 8.6 | 35.9 | -- | 36.8 | 33.0 | 8.6 | 33.5 | 18.7 | 17.7 | 5.7 | 65 |
| 35-39 | 93.7 | 88.8 | 4.2 | 26.6 | 0.7 | 28.7 | 45.5 | 14.0 | 28.0 | 20.3 | 13.3 | 1.4 | 44 |
| 40-44 | 88.3 | 81.7 | 3.3 | 20.8 | 0.8 | 40.8 | 35.0 | 16.7 | 26.7 | 15.0 | 18.3 | 1.7 | 37 |
| 45-49 | 80.4 | 75.0 | 3.3 | 6.5 | -- | 26.1 | 32.6 | 27.2 | 28.3 | 19.6 | 18.5 | 2.2 | 29 |
| Total | 80.3 | 74.4 | 6.7 | 24.9 | 0.3 | 35.2 | 28.8 | 10.0 | 26.2 | 16.1 | 14.8 | 2.6 | 288 |
| Currently married women | | | | | | | | | | | | | |
| 20-24 | 52.1 | 47.2 | 6.3 | 19.0 | -- | 31.0 | 6.3 | 1.4 | 15.5 | 9.2 | 8.5 | 0.7 | 44 |
| 25-29 | 83.7 | 77.7 | 10.9 | 30.2 | 0.5 | 44.6 | 25.7 | 4.0 | 25.7 | 15.8 | 14.4 | 2.5 | 63 |
| 30-34 | 90.1 | 82.8 | 7.9 | 36.1 | -- | 37.9 | 33.0 | 8.9 | 33.5 | 19.2 | 18.2 | 4.9 | 63 |
| 35-39 | 93.4 | 88.2 | 4.4 | 27.2 | 0.7 | 27.7 | 46.3 | 14.0 | 28.7 | 20.6 | 14.0 | 1.5 | 42 |
| 40-44 | 90.3 | 85.0 | 3.5 | 22.1 | 0.9 | 42.5 | 37.2 | 15.9 | 24.8 | 13.3 | 16.8 | 1.8 | 37 |
| 45-49 | 84.4 | 79.2 | 3.9 | 5.2 | -- | 28.6 | 33.8 | 28.6 | 28.6 | 20.8 | 18.2 | 2.6 | 24 |
| Total | 81.2 | 75.4 | 6.7 | 25.5 | 0.3 | 36.1 | 29.1 | 9.8 | 26.2 | 16.2 | 14.8 | 2.5 | 276 |
| RURAL | | | | | | | | | | | | | |
| Ever-married women | | | | | | | | | | | | | |
| 15-19 | 21.6 | 9.0 | 1.8 | 1.8 | -- | 7.2 | -- | -- | 16.2 | 9.0 | 10.8 | 0.9 | 146 |
| 20-24 | 36.7 | 25.5 | 3.0 | 5.5 | 0.5 | 12.6 | 8.0 | 2.5 | 18.1 | 11.9 | 10.6 | 0.2 | 574 |
| 25-29 | 72.4 | 65.2 | 8.6 | 12.4 | 0.9 | 20.3 | 39.3 | 8.2 | 23.1 | 15.2 | 12.1 | 1.6 | 563 |
| 30-34 | 82.9 | 81.0 | 6.3 | 10.8 | -- | 16.8 | 50.8 | 17.5 | 16.8 | 12.1 | 9.2 | 2.2 | 414 |
| 35-39 | 83.3 | 80.9 | 3.8 | 8.9 | 0.7 | 18.8 | 51.9 | 16.7 | 18.1 | 13.3 | 9.6 | 0.7 | 386 |
| 40-44 | 75.4 | 69.9 | 3.1 | 4.5 | 0.7 | 8.3 | 36.7 | 27.0 | 17.0 | 11.8 | 9.0 | 2.1 | 380 |
| 45-49 | 64.8 | 59.1 | 2.5 | 2.5 | 1.9 | 6.9 | 23.9 | 28.3 | 23.3 | 15.7 | 9.4 | 3.1 | 209 |
| Total | 65.0 | 58.5 | 4.7 | 7.7 | 0.6 | 14.4 | 32.4 | 13.4 | 19.1 | 12.9 | 10.2 | 1.4 | 2674 |
| Currently married women | | | | | | | | | | | | | |
| 15-19 | 21.1 | 9.2 | 1.8 | 1.8 | -- | 7.3 | -- | -- | 15.6 | 8.3 | 11.0 | 0.9 | 143 |
| 20-24 | 36.9 | 25.7 | 3.0 | 5.6 | 0.5 | 12.6 | 8.2 | 2.6 | 18.0 | 11.9 | 10.5 | 0.2 | 563 |
| 25-29 | 73.2 | 66.0 | 8.9 | 12.7 | 1.0 | 20.8 | 39.7 | 8.1 | 23.2 | 15.1 | 12.0 | 1.7 | 550 |
| 30-34 | 85.5 | 83.5 | 6.4 | 11.4 | -- | 17.5 | 52.2 | 18.2 | 17.2 | 12.5 | 9.1 | 2.0 | 391 |
| 35-39 | 85.5 | 83.0 | 3.9 | 9.2 | 0.7 | 19.1 | 52.8 | 17.7 | 18.4 | 13.5 | 9.9 | 0.7 | 371 |
| 40-44 | 77.6 | 72.2 | 3.1 | 4.2 | 0.8 | 8.5 | 37.8 | 28.2 | 17.4 | 12.4 | 8.9 | 2.3 | 341 |
| 45-49 | 68.6 | 62.1 | 2.9 | 2.9 | 2.1 | 7.1 | 25.0 | 29.3 | 25.0 | 16.4 | 10.7 | 3.6 | 184 |
| Total | 66.2 | 59.6 | 4.9 | 8.0 | 0.7 | 14.8 | 33.0 | 13.6 | 19.3 | 13.1 | 10.3 | 1.4 | 2543 |

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, Himachal Pradesh, 1992

| 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 |
|---|------------|-------------------|------|------|-----------|--------|----------------------|--------------------|------------------|---------------------|------------|---------------|-----------------|
| TOTAL | | | | | | | | | | | | | |
| Ever-married women | | | | | | | | | | | | | |
| 15-19 | 21.4 | 9.1 | 1.7 | 1.7 | -- | 7.4 | -- | -- | 16.0 | 8.9 | 10.8 | 0.9 | 152 |
| 20-24 | 37.7 | 27.0 | 3.2 | 6.5 | 0.4 | 13.9 | 7.9 | 2.4 | 17.9 | 11.7 | 10.4 | 0.3 | 619 |
| 25-29 | 73.6 | 66.5 | 8.9 | 14.2 | 0.9 | 22.7 | 37.9 | 7.8 | 23.4 | 15.2 | 12.4 | 1.7 | 626 |
| 30-34 | 83.7 | 81.1 | 6.7 | 14.2 | -- | 19.5 | 48.4 | 16.3 | 19.1 | 13.0 | 10.4 | 2.7 | 479 |
| 35-39 | 84.4 | 81.7 | 3.8 | 10.7 | 0.7 | 19.8 | 51.2 | 16.4 | 19.1 | 14.0 | 9.9 | 0.8 | 430 |
| 40-44 | 76.6 | 70.9 | 3.1 | 6.0 | 0.7 | 11.2 | 36.5 | 26.1 | 17.8 | 12.1 | 9.8 | 2.0 | 417 |
| 45-49 | 66.7 | 61.0 | 2.6 | 3.0 | 1.7 | 9.2 | 24.9 | 28.2 | 23.9 | 16.2 | 10.5 | 3.0 | 238 |
| Total | 66.5 | 60.0 | 4.9 | 9.4 | 0.6 | 16.4 | 32.1 | 13.1 | 19.8 | 13.3 | 10.7 | 1.5 | 2962 |
| Currently married women | | | | | | | | | | | | | |
| 15-19 | 21.0 | 9.3 | 1.8 | 1.8 | -- | 7.5 | -- | -- | 15.5 | 8.2 | 11.0 | 0.9 | 149 |
| 20-24 | 38.0 | 27.3 | 3.3 | 6.6 | 0.4 | 13.9 | 8.0 | 2.5 | 17.8 | 11.7 | 10.4 | 0.3 | 607 |
| 25-29 | 74.3 | 67.2 | 9.1 | 14.5 | 0.9 | 23.2 | 38.3 | 7.7 | 23.5 | 15.2 | 12.2 | 1.8 | 613 |
| 30-34 | 86.2 | 83.4 | 6.6 | 14.8 | -- | 20.3 | 49.5 | 16.9 | 19.4 | 13.4 | 10.4 | 2.4 | 454 |
| 35-39 | 86.3 | 83.5 | 4.0 | 11.1 | 0.7 | 20.0 | 52.2 | 17.3 | 19.5 | 14.2 | 10.3 | 0.8 | 413 |
| 40-44 | 78.8 | 73.4 | 3.1 | 5.9 | 0.8 | 11.7 | 37.8 | 27.0 | 18.1 | 12.4 | 9.6 | 2.3 | 376 |
| 45-49 | 70.4 | 64.1 | 3.0 | 3.1 | 1.9 | 9.6 | 26.0 | 29.2 | 25.4 | 16.9 | 11.6 | 3.5 | 208 |
| Total | 67.6 | 61.1 | 5.0 | 9.7 | 0.6 | 16.9 | 32.6 | 13.2 | 20.0 | 13.4 | 10.8 | 1.5 | 2819 |
| Note: Total for ever-married women includes 1 rural woman age 13-14 and 6 urban women age 15-19; and the total for currently married women includes 5 urban women age 15-19, who are not shown separately. -- Less than 0.05 percent | | | | | | | | | | | | | |

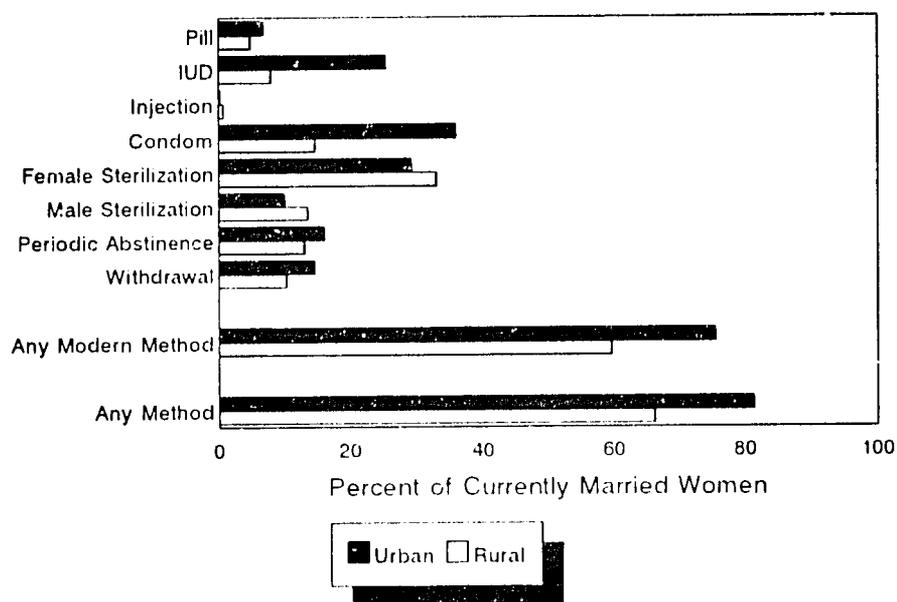
traditional methods is more prevalent than that of the modern methods. Among modern methods, the condom is the most used method until age 25, after which female sterilization is the most popular method except in the 45-49 age group. Among women age 45-49, male sterilization is the most popular method.

The age pattern of ever use of family planning is somewhat different in the urban and rural areas of the state. Ever use of contraception peaks in the 35-39 age group in urban areas, with 93 percent of currently married women having ever used any method. In rural areas, contraceptive use rates are highest (83 percent) in the age groups 30-34 and 35-39. In urban areas, the condom is the most popular method at all ages except 35-39 and 45-49 where female sterilization is the most popular method ever used. In rural areas, however, the most used modern methods are the condom through age 25, female sterilization at age 25-44, and male sterilization at age 45-49.

Current Use of Family Planning Methods

Himachal Pradesh has one of the highest current contraceptive use rates in India, with 58 percent of currently married women practising family planning; 54 percent use modern

Figure 6.2
Ever Use of Contraception by
Residence



NFHS, Himachal Pradesh, 1992

methods and another 4 percent use traditional methods (Table 6.4)¹. A vast majority (86 percent) of currently married women who have ever used contraception are currently using a method. The NFHS estimate of current contraceptive prevalence is very close to that obtained in a 1988-89 survey, the Third All India Survey on Family Planning in India (Operations Research Group, 1990). That survey (which covered currently married women age 15-44 only), found a contraceptive prevalence rate of 59 percent for Himachal Pradesh, with 51 percent using modern methods and 8 percent using traditional methods. When the NFHS sample is restricted to match the All India Survey's sample, the prevalence rate is 58 percent, with 54 percent using modern methods. The main difference in the contraceptive prevalence rate for modern methods between the two surveys is in sterilization (male and female sterilization combined) which was 41 percent in the 1988-89 survey and 45 percent in the NFHS; the prevalence rates for spacing methods in the two surveys are virtually identical.

According to official statistics (State Family Welfare Bureau, Himachal Pradesh, 1993), as of March, 1992, 38 percent of couples in Himachal Pradesh were sterilized compared to 46 percent in the NFHS. The lower estimate of sterilization in the official statistics than in the NFHS is difficult to explain. Part of the difference could be due to the fact that the official statistics do not include sterilization obtained from a private source, whereas in the NFHS, 2

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.

Table 6.4 Current use of contraception

Percent distribution of currently married women by contraceptive method currently used, according to age and residence, Himachal Pradesh, 1992

| 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 percent | Number of women |
|--------------|------------|-------------------|------|------|-----------|--------|----------------------|--------------------|------------------|---------------------|------------|---------------|----------------------|---------------|-----------------|
| URBAN | | | | | | | | | | | | | | | |
| 20-24 | 37.3 | 32.4 | 1.4 | 9.2 | -- | 14.1 | 6.3 | 1.4 | 4.9 | 1.4 | 3.5 | -- | 62.7 | 100.0 | 44 |
| 25-29 | 73.3 | 65.3 | 2.0 | 11.4 | -- | 22.3 | 25.7 | 4.0 | 7.9 | 2.0 | 5.9 | -- | 26.7 | 100.0 | 63 |
| 30-34 | 81.3 | 70.9 | 2.0 | 12.8 | -- | 14.8 | 33.0 | 8.4 | 10.3 | 3.9 | 5.9 | 0.5 | 18.7 | 100.0 | 63 |
| 35-39 | 86.8 | 77.9 | -- | 7.4 | -- | 10.3 | 46.3 | 14.0 | 8.8 | 3.7 | 5.1 | -- | 13.2 | 100.0 | 42 |
| 40-44 | 78.8 | 71.7 | 0.9 | 5.3 | -- | 13.3 | 37.2 | 15.0 | 7.1 | 1.8 | 5.3 | -- | 21.2 | 100.0 | 35 |
| 45-49 | 68.8 | 66.2 | -- | 1.3 | -- | 2.6 | 33.8 | 28.6 | 2.6 | -- | 2.6 | -- | 31.2 | 100.0 | 24 |
| 15-44 | 70.6 | 62.7 | 1.4 | 9.6 | -- | 15.4 | 28.7 | 7.7 | 7.9 | 2.6 | 5.2 | 0.1 | 29.4 | 100.0 | 252 |
| 15-49 | 70.4 | 63.0 | 1.2 | 8.9 | -- | 14.3 | 29.1 | 9.6 | 7.4 | 2.4 | 4.9 | 0.1 | 29.6 | 100.0 | 276 |
| 13-49 | 70.4 | 63.0 | 1.2 | 8.9 | -- | 14.3 | 29.1 | 9.6 | 7.4 | 2.4 | 4.9 | 0.1 | 29.6 | 100.0 | 276 |
| RURAL | | | | | | | | | | | | | | | |
| 15-19 | 9.2 | 4.6 | -- | -- | -- | 4.6 | -- | -- | 4.6 | -- | 4.6 | -- | 90.8 | 100.0 | 143 |
| 20-24 | 23.1 | 17.3 | 0.5 | 1.9 | -- | 4.2 | 8.2 | 2.6 | 5.8 | 3.5 | 2.3 | -- | 76.9 | 100.0 | 563 |
| 25-29 | 62.7 | 57.7 | 1.2 | 2.6 | -- | 6.2 | 39.7 | 7.9 | 5.0 | 1.9 | 2.9 | 0.2 | 37.3 | 100.0 | 550 |
| 30-34 | 81.1 | 79.5 | 0.7 | 3.0 | -- | 5.4 | 52.2 | 18.2 | 1.7 | 1.0 | 0.7 | -- | 18.9 | 100.0 | 391 |
| 35-39 | 79.1 | 78.4 | -- | 2.5 | 0.4 | 5.0 | 52.8 | 17.7 | 0.7 | 0.4 | 0.4 | -- | 20.9 | 100.0 | 371 |
| 40-44 | 73.0 | 69.1 | -- | 1.5 | -- | 1.5 | 37.8 | 28.2 | 3.9 | 1.2 | 2.3 | 0.4 | 27.0 | 100.0 | 341 |
| 45-49 | 56.4 | 55.0 | -- | -- | -- | 0.7 | 25.0 | 29.3 | 1.4 | 0.7 | 0.7 | -- | 43.6 | 100.0 | 184 |
| 15-44 | 57.1 | 53.3 | 0.5 | 2.2 | 0.1 | 4.6 | 33.6 | 12.3 | 3.8 | 1.7 | 2.0 | 0.1 | 42.9 | 100.0 | 2359 |
| 15-49 | 57.1 | 53.4 | 0.5 | 2.0 | 0.1 | 4.3 | 33.0 | 13.6 | 3.6 | 1.6 | 1.9 | 0.1 | 42.9 | 100.0 | 2543 |
| 13-49 | 57.1 | 53.4 | 0.5 | 2.0 | 0.1 | 4.3 | 33.0 | 13.6 | 3.6 | 1.6 | 1.9 | 0.1 | 42.9 | 100.0 | 2543 |
| TOTAL | | | | | | | | | | | | | | | |
| 15-19 | 9.1 | 4.6 | -- | -- | -- | 4.6 | -- | -- | 4.4 | -- | 4.4 | -- | 90.9 | 100.0 | 149 |
| 20-24 | 24.2 | 18.4 | 0.5 | 2.4 | -- | 4.9 | 8.0 | 2.5 | 5.8 | 3.4 | 2.4 | -- | 75.8 | 100.0 | 607 |
| 25-29 | 63.8 | 58.4 | 1.3 | 3.5 | -- | 7.9 | 38.3 | 7.5 | 5.3 | 1.9 | 3.2 | 0.2 | 36.2 | 100.0 | 613 |
| 30-34 | 81.2 | 78.3 | 0.9 | 4.4 | -- | 6.7 | 49.5 | 16.8 | 2.9 | 1.4 | 1.4 | 0.1 | 18.8 | 100.0 | 454 |
| 35-39 | 79.9 | 78.3 | -- | 3.0 | 0.3 | 5.5 | 52.2 | 17.3 | 1.5 | 0.7 | 0.8 | -- | 20.1 | 100.0 | 413 |
| 40-44 | 73.5 | 69.4 | 0.1 | 1.9 | -- | 2.6 | 37.8 | 27.0 | 4.2 | 1.2 | 2.6 | 0.4 | 26.5 | 100.0 | 376 |
| 45-49 | 57.9 | 56.3 | -- | 0.1 | -- | 0.9 | 26.0 | 29.2 | 1.6 | 0.6 | 0.9 | -- | 42.1 | 100.0 | 208 |
| 15-44 | 58.4 | 54.2 | 0.6 | 2.9 | 0.1 | 5.7 | 33.2 | 11.9 | 4.2 | 1.8 | 2.3 | 0.1 | 41.6 | 100.0 | 2611 |
| 15-49 | 58.4 | 54.4 | 0.5 | 2.7 | -- | 5.3 | 32.6 | 13.2 | 4.0 | 1.7 | 2.2 | 0.1 | 41.6 | 100.0 | 2819 |
| 13-49 | 58.4 | 54.4 | 0.5 | 2.7 | -- | 5.3 | 32.6 | 13.2 | 4.0 | 1.7 | 2.2 | 0.1 | 41.6 | 100.0 | 2819 |

Note: Total includes 5 urban women age 15-19, who are not shown separately.
 -- Less than 0.05 percent

percent of sterilization acceptors obtained sterilization from the private sector (see Table 6.9 in this chapter).

Table 6.4 shows that among current users of contraception, female sterilization is the most popular method in Himachal Pradesh as in almost all Indian states. Thirty-three percent of currently married women are sterilized, and female sterilization accounts for 56 percent of contraceptive prevalence. Thirteen percent of currently married women reported that their husbands are sterilized. The male sterilization rate is four times the national average and twice as high as any other state in India. The overall preponderance of terminal methods is commensurate with the emphasis on sterilization in the Indian family planning programme. Another 5 percent of currently married women reported the use of condoms. The IUD is used by 3 percent of currently married women and the pill is used by less than 1 percent.

The current use of contraception is 23 percent higher in urban areas (70 percent) than in rural areas (57 percent). It may, however, be noted that the proportion of acceptors of terminal methods is higher in rural areas, whereas the proportion of users of spacing methods is higher in urban areas.

The level of contraceptive use varies with the age of women, increasing from 9 percent for currently married women age 15-19 to a high of 81 percent for women age 30-34, and decreasing thereafter. In the two highest fertility age groups (20-24 and 25-29), the contraceptive prevalence rates are 24 and 64 percent, respectively. Among modern methods, female sterilization is the most used method for women age 20-44, and its use peaks in the age group 35-39 (52 percent). At age 45-49, male sterilization becomes the preponderant method of contraception. The use rate of most of the modern methods, especially female sterilization, shows an expected curvilinear relationship with age. The curvilinearity in the relationship with age is, however, absent in the case of male sterilization, in both urban and rural areas. The urban-rural differences in the age pattern of current use of contraception are similar to those discussed earlier in the case of ever use.

Socioeconomic Differentials in Current Use of Family Planning

Table 6.5 shows differentials in current contraceptive use. Interestingly, differentials in current use of any method by literacy and education of women are quite small in Himachal Pradesh (Figure 6.3). The use of spacing methods increases with the level of education, but sterilization, both male and female, decreases with the level of education. The use of traditional methods also increases with the level of education. The absence of educational differentials in contraceptive prevalence is probably due to the fact that women with more education are more likely to come from the younger age groups, where the use of contraception is also relatively low.

The practice of family planning is much lower among women from scheduled tribes than among other women. Only 35 percent of scheduled tribe women use any modern method of family planning, and sterilization accounts for 90 percent of the use. The use of spacing methods is almost nonexistent among scheduled tribe women and it is also not common among scheduled caste women. Contraceptive use is relatively low among Muslims and high among Sikhs, but the estimates for these two groups are based on a fairly small number of cases.

Table 6.5 Current use by background characteristics

Percent distribution of currently married women by contraceptive method currently used, according to selected background characteristics, Himachal Pradesh, 1992

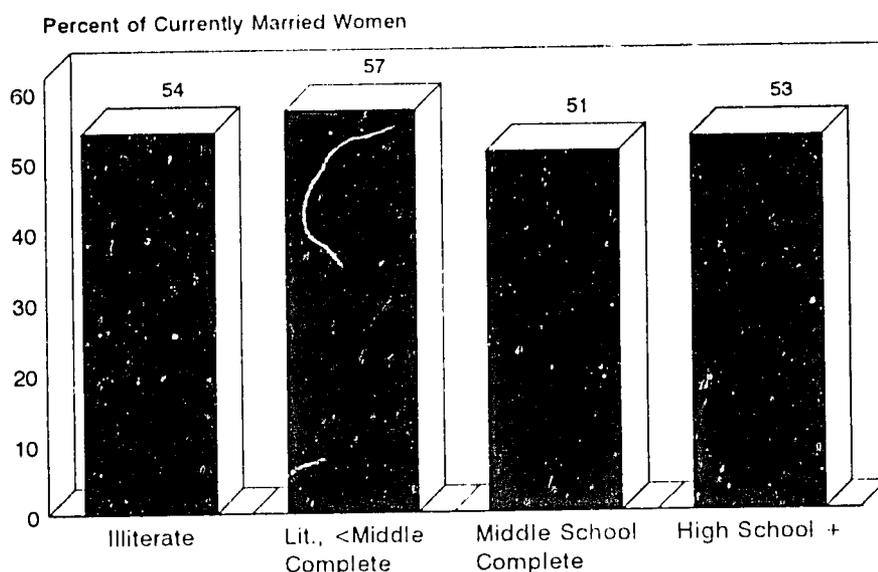
| Background characteristic | Any method | Any modern method | Pill | IUD | Injection | Condom | Female sterilization | Male sterilization | Any trad. method | Periodic abstinence | Withdrawal | Other methods | Not using any method | Total percent | Number of women |
|--|-------------|-------------------|------------|------------|-----------|------------|----------------------|--------------------|------------------|---------------------|------------|---------------|----------------------|---------------|-----------------|
| Residence | | | | | | | | | | | | | | | |
| Urban | 70.4 | 63.0 | 1.2 | .9 | -- | 14.3 | 29.1 | 9.6 | 7.4 | 2.4 | 4.9 | 0.1 | 29.6 | 100.0 | 276 |
| Rural | 57.1 | 53.4 | 0.5 | 2.0 | 0.1 | 4.3 | 33.0 | 13.6 | 3.6 | 1.6 | 1.9 | 0.1 | 42.9 | 100.0 | 2543 |
| Education | | | | | | | | | | | | | | | |
| Illiterate | 58.0 | 54.4 | 0.2 | 0.4 | 0.1 | 1.9 | 32.9 | 18.8 | 3.6 | 1.9 | 1.5 | 0.2 | 42.0 | 100.0 | 1379 |
| Literate, < middle school | 59.4 | 56.5 | 0.5 | 2.6 | -- | 4.2 | 39.7 | 9.4 | 3.0 | 1.2 | 1.8 | -- | 40.6 | 100.0 | 795 |
| Middle school complete | 55.4 | 50.7 | 0.8 | 3.3 | -- | 6.9 | 31.1 | 8.7 | 4.7 | 1.9 | 2.7 | 0.1 | 44.6 | 100.0 | 256 |
| High school and above | 59.6 | 52.5 | 1.7 | 10.4 | -- | 18.6 | 18.1 | 3.7 | 7.1 | 1.6 | 5.4 | -- | 40.4 | 100.0 | 389 |
| Religion | | | | | | | | | | | | | | | |
| Hindu | 58.8 | 54.8 | 0.5 | 2.7 | -- | 5.2 | 33.1 | 13.2 | 4.0 | 1.7 | 2.2 | 0.1 | 41.2 | 100.0 | 2738 |
| Muslim | (41.4) | (39.7) | (--) | (2.6) | (3.7) | (2.6) | (17.1) | (13.7) | (1.7) | (0.9) | (0.9) | (--) | (58.6) | 100.0 | 36 |
| Sikh | (72.9) | (63.9) | (2.9) | (5.8) | (--) | (25.3) | (23.8) | (6.1) | (9.0) | (--) | (9.0) | (--) | (27.1) | 100.0 | 21 |
| Caste/tribe | | | | | | | | | | | | | | | |
| Scheduled caste | 56.6 | 53.8 | 0.2 | 0.9 | -- | 2.4 | 36.0 | 14.3 | 2.8 | 1.6 | 1.2 | -- | 43.4 | 100.0 | 664 |
| Scheduled tribe | 39.5 | 34.9 | -- | 1.0 | 1.0 | 1.3 | 20.1 | 11.4 | 4.6 | 2.3 | 2.3 | -- | 60.5 | 100.0 | 127 |
| Other | 60.1 | 55.8 | 0.7 | 3.4 | -- | 6.5 | 32.3 | 12.9 | 4.3 | 1.7 | 2.5 | 0.1 | 39.9 | 100.0 | 2028 |
| Number and sex of living children | | | | | | | | | | | | | | | |
| None | 6.8 | 3.8 | -- | 0.4 | -- | 2.9 | 0.1 | 0.4 | 3.0 | 0.9 | 2.1 | -- | 93.2 | 100.0 | 307 |
| 1 child | 20.1 | 15.4 | 0.2 | 3.0 | -- | 6.9 | 3.1 | 2.2 | 4.7 | 2.1 | 2.6 | -- | 79.9 | 100.0 | 375 |
| 1 son | 22.5 | 18.5 | 0.3 | 4.1 | -- | 6.3 | 4.6 | 3.2 | 4.0 | 1.2 | 2.7 | -- | 77.5 | 100.0 | 213 |
| No sons | 16.8 | 11.2 | 0.2 | 1.6 | -- | 7.6 | 1.0 | 0.8 | 5.7 | 3.3 | 2.4 | -- | 83.2 | 100.0 | 161 |
| 2 children | 64.6 | 57.9 | 1.0 | 5.7 | -- | 8.7 | 32.8 | 9.7 | 6.8 | 3.2 | 3.6 | -- | 35.4 | 100.0 | 637 |
| 2 sons | 77.9 | 73.5 | 0.1 | 2.5 | -- | 3.7 | 52.5 | 14.6 | 4.4 | 2.8 | 1.6 | -- | 22.1 | 100.0 | 255 |
| 1 son | 63.1 | 55.4 | 2.0 | 8.1 | -- | 12.6 | 24.8 | 7.9 | 7.7 | 2.9 | 4.8 | -- | 36.9 | 100.0 | 293 |
| No sons | 31.6 | 21.3 | 0.3 | 7.2 | -- | 9.7 | 2.5 | 1.5 | 10.3 | 5.1 | 5.1 | -- | 68.4 | 100.0 | 89 |
| 3 children | 76.4 | 73.1 | 0.8 | 2.1 | -- | 4.5 | 48.4 | 17.3 | 5.2 | 1.3 | 1.9 | -- | 23.6 | 100.0 | 733 |
| 3 sons | 89.4 | 86.5 | 0.3 | 1.4 | -- | 0.7 | 56.5 | 27.6 | 2.8 | 1.4 | 1.4 | -- | 10.6 | 100.0 | 93 |
| 2 sons | 87.0 | 84.5 | 0.4 | 1.7 | -- | 2.5 | 60.6 | 19.3 | 2.5 | 1.4 | 1.1 | -- | 13.0 | 100.0 | 338 |
| 1 son | 66.2 | 62.1 | 1.7 | 3.1 | -- | 7.9 | 36.3 | 13.2 | 4.0 | 1.3 | 2.7 | -- | 33.8 | 100.0 | 266 |
| No sons | (19.4) | (14.1) | (--) | (0.8) | (--) | (7.2) | (2.5) | (3.6) | (5.3) | (--) | (4.4) | (0.8) | (80.6) | 100.0 | 37 |
| 4+ children | 75.3 | 72.8 | 0.2 | 1.4 | 0.2 | 3.6 | 44.9 | 22.5 | 2.5 | 0.9 | 1.2 | 0.3 | 24.7 | 100.0 | 767 |
| 2+ sons | 79.5 | 76.9 | 0.3 | 0.8 | 0.2 | 2.8 | 48.8 | 23.9 | 2.5 | 1.0 | 1.1 | 0.5 | 20.5 | 100.0 | 541 |
| 1 son | 68.0 | 65.4 | -- | 2.6 | -- | 3.9 | 37.6 | 21.4 | 2.6 | 0.8 | 1.8 | -- | 32.0 | 100.0 | 203 |
| Total | 58.4 | 54.4 | 0.5 | 2.7 | -- | 5.3 | 32.6 | 13.2 | 4.0 | 1.7 | 2.2 | 0.1 | 41.6 | 100.0 | 2819 |

Note: Total includes 25 women belonging to other religions and 24 women with four or more female children and 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, Himachal Pradesh, 1992

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 7 percent for women who have no living children to 76 percent for women with three living children. The same trend is evident for sterilized women. The data on the prevalence rate by the sex composition of living children indicate the existence of son preference; at each parity, the current use of family planning is lowest for women having no sons and highest for women having all sons. As expected, sterilization is a particularly unpopular method for women who do not have any sons. Among women having two or more living children, current use is highest among those who have two or more sons.

Number of Children at First Use of Contraception

In order to examine the timing of initial family planning use, the NFHS included a question on how many living children women 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 6.6. Overall, only 4 percent of all ever-married women initiated the use of contraception before having any children and another 16 percent started after the first child. Only 35 percent of them initiated use when they had fewer than three living children. The largest proportion of women (16 percent) started using a method only after four or more children. The pattern of first acceptance at relatively high parities indicates that family planning has a smaller demographic impact than it would if

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, Himachal Pradesh, 1992

| Current age | Never used | Number of living children at the time of first use | | | | | Total percent | Number of women |
|--------------|------------|--|------|------|------|------|---------------|-----------------|
| | | 0 | 1 | 2 | 3 | 4+ | | |
| URBAN | | | | | | | | |
| 20-24 | 49.0 | 13.8 | 22.8 | 13.8 | 0.7 | -- | 100.0 | 45 |
| 25-29 | 16.3 | 8.9 | 37.9 | 22.7 | 10.8 | 3.4 | 100.0 | 63 |
| 30-34 | 11.0 | 3.8 | 31.1 | 31.6 | 16.7 | 5.7 | 100.0 | 65 |
| 35-39 | 6.3 | -- | 30.1 | 26.6 | 23.8 | 13.3 | 100.0 | 44 |
| 40-44 | 11.7 | 1.7 | 30.0 | 25.8 | 19.2 | 11.7 | 100.0 | 37 |
| 45-49 | 19.6 | 3.3 | 27.2 | 10.9 | 18.5 | 20.7 | 100.0 | 29 |
| Total | 19.7 | 5.6 | 30.2 | 22.7 | 14.2 | 7.6 | 100.0 | 288 |
| RURAL | | | | | | | | |
| 15-19 | 78.4 | 18.0 | 2.7 | 0.9 | -- | -- | 100.0 | 146 |
| 20-24 | 63.3 | 7.3 | 16.7 | 9.4 | 3.0 | 0.2 | 100.0 | 574 |
| 25-29 | 27.6 | 2.6 | 21.5 | 24.1 | 16.4 | 7.9 | 100.0 | 563 |
| 30-34 | 17.1 | 1.3 | 14.9 | 19.7 | 25.1 | 21.9 | 100.0 | 414 |
| 35-39 | 16.7 | 2.0 | 13.0 | 15.4 | 22.2 | 30.7 | 100.0 | 386 |
| 40-44 | 24.6 | 0.7 | 7.3 | 9.0 | 20.4 | 38.1 | 100.0 | 380 |
| 45-49 | 35.2 | -- | 6.3 | 9.4 | 18.9 | 30.2 | 100.0 | 209 |
| Total | 35.0 | 3.7 | 14.0 | 14.4 | 15.6 | 17.3 | 100.0 | 2674 |
| TOTAL | | | | | | | | |
| 15-19 | 78.6 | 17.6 | 3.0 | 0.9 | -- | -- | 100.0 | 152 |
| 20-24 | 62.3 | 7.8 | 17.2 | 9.7 | 2.8 | 0.2 | 100.0 | 619 |
| 25-29 | 26.4 | 3.2 | 23.1 | 23.9 | 15.8 | 7.5 | 100.0 | 626 |
| 30-34 | 16.3 | 1.6 | 17.1 | 21.3 | 24.0 | 19.7 | 100.0 | 479 |
| 35-39 | 15.6 | 1.8 | 14.7 | 16.5 | 22.3 | 28.9 | 100.0 | 430 |
| 40-44 | 23.4 | 0.8 | 9.3 | 10.5 | 20.3 | 35.7 | 100.0 | 417 |
| 45-49 | 33.3 | 0.4 | 8.8 | 9.6 | 18.8 | 29.0 | 100.0 | 238 |
| Total | 33.5 | 3.9 | 15.6 | 15.2 | 15.4 | 16.4 | 100.0 | 2962 |

Note: Total includes 6 urban women age 15-19 and 1 rural woman age 13-14, who are not shown separately.
 -- Less than 0.05 percent

contraceptive use were initiated earlier. Table 6.6, however, does show a gradual shift toward initiating use at lower parities. As one moves toward the older age cohorts, the percentage of women accepting family planning when they do not have any children or after one or two children generally decreases. For example, only 10 percent of ever-married women in the age group 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 is about twice as large (19 percent) among women in the 30-34 age group. In comparison to rural women, urban women start using contraception at earlier parities.

Problems in the Current Use of Family Planning

Table 6.7 deals with the problems faced by women while using the IUD and sterilization. Most of the women using these methods did not report any problems. In the case of the IUD, backache is the main complaint with 14 percent of the users reporting this problem. The proportion of women complaining of a problem is higher in the case of female sterilization, the most commonly used method. The major causes of discomfort reported in this case are pain and backache. The same problems were most commonly mentioned in the case of male sterilization.

| Problem | Method | |
|--|-----------------------------|---------------------------|
| | Copper T/IUD | |
| No problems | 83.4 | |
| Cramps | 0.4 | |
| Backache | 14.1 | |
| Irregular periods | 0.8 | |
| Excessive bleeding | 4.7 | |
| Weakness/inability to work | 0.4 | |
| Other | 1.7 | |
| Number of IUD users | 76 | |
| | Female sterilization | Male sterilization |
| No problems | 65.5 | 77.5 |
| Fever | 1.5 | 1.1 |
| Pain/backache | 26.3 | 18.0 |
| Sepsis | 4.3 | 3.0 |
| Weakness/inability to work | 6.5 | 4.0 |
| Failure/woman got pregnant | 0.1 | -- |
| Loss of sexual power | 0.1 | 0.4 |
| Other | 3.9 | 1.4 |
| Number sterilized | 920 | 371 |
| Note: Percentages may sum to more than 100.0 because multiple problems could be recorded. -- Less than 0.05 percent | | |

Age at Sterilization

Table 6.8 shows the age and time at which couples obtained a sterilization. Of the 1,291 sterilization operations reported, 45 percent were conducted fewer than 6 years before the survey, another 24 percent were conducted 6-9 years before the survey and the remaining 32 percent were conducted 10 or more years before the survey. Almost three-fourths of the sterilized couples had undergone sterilization before age 30. There are only a negligible number of cases of sterilization being performed when the woman was in her forties. The median age of the woman at the time of sterilization is 26.9 years. Almost half of the sterilized women (46 percent) accepted this terminal method of family planning at age 25-29, just after their most fecund age.

Table 6.8 Timing of sterilization

Percent distribution of currently married sterilized women and sterilized couples by age at the time of sterilization, according to the number of years since the operation, Himachal Pradesh, 1992

| Years since operation | Woman's age at the time of operation | | | | | Total percent | Number | Median age ¹ |
|--------------------------------|--------------------------------------|-------------|-------------|------------|------------|---------------|-------------|-------------------------|
| | <25 | 25-29 | 30-34 | 35-39 | 40-44 | | | |
| STERILIZED WOMEN | | | | | | | | |
| < 2 | 27.8 | 47.5 | 11.1 | 9.3 | 4.4 | 100.0 | 180 | 26.3 |
| 2-3 | 32.7 | 41.0 | 15.7 | 8.2 | 2.3 | 100.0 | 171 | 26.6 |
| 4-5 | 35.4 | 37.8 | 17.5 | 8.1 | 1.2 | 100.0 | 114 | 26.8 |
| 6-7 | 21.5 | 53.6 | 21.8 | 2.1 | 1.0 | 100.0 | 128 | 27.7 |
| 8-9 | 35.4 | 36.7 | 20.8 | 7.1 | -- | 100.0 | 115 | 26.5 |
| 10+ | 24.1 | 53.9 | 19.8 | 2.2 | U | 100.0 | 212 | NC |
| Total | 28.9 | 46.1 | 17.5 | 6.0 | 1.6 | 100.0 | 920 | 26.9 |
| WIVES OF STERILIZED MEN | | | | | | | | |
| < 10 | 37.1 | 35.5 | 15.2 | 9.5 | 2.8 | 100.0 | 175 | 26.2 |
| 10 + | 27.2 | 39.4 | 30.8 | 2.7 | -- | 100.0 | 196 | NC |
| Total | 31.9 | 37.5 | 23.4 | 5.9 | 1.3 | 100.0 | 371 | 27.1 |
| STERILIZED COUPLES | | | | | | | | |
| < 2 | 30.5 | 44.0 | 11.1 | 10.1 | 4.4 | 100.0 | 218 | 26.2 |
| 2-3 | 34.1 | 39.2 | 15.5 | 8.1 | 3.2 | 100.0 | 207 | 26.5 |
| 4-5 | 32.5 | 38.5 | 18.0 | 10.2 | 0.9 | 100.0 | 151 | 26.9 |
| 6-7 | 24.9 | 50.9 | 20.3 | 2.8 | 1.2 | 100.0 | 165 | 27.4 |
| 8-9 | 36.9 | 37.0 | 19.9 | 6.2 | -- | 100.0 | 141 | 26.4 |
| 10+ | 25.6 | 46.9 | 25.1 | 2.4 | U | 100.0 | 408 | NC |
| Total | 29.7 | 43.6 | 19.2 | 6.0 | 1.5 | 100.0 | 1291 | 26.9 |

NC: Not calculated due to censoring

U: Not available

-- 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.

6.3 Source of Supply of Contraception

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

In order to assess the relative importance of various sources of contraceptive methods, the NFHS included a question about where current users of contraception obtain their methods. Overall, the public sector, consisting of government hospitals, Primary Health Centres and other governmental health infrastructure, supply 91 percent of the current users of all modern

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, Himachal Pradesh, 1992

| Source of supply | Copper T/ IUD | Con- dom | Female steril- ization | Male steril- ization | All modern methods |
|-------------------------------|------------------|-------------|------------------------------|----------------------------|--------------------------|
| URBAN | | | | | |
| Public sector | 83.5 | 14.2 | 96.9 | 98.8 | 75.2 |
| Government/municipal hospital | 68.4 | 10.2 | 76.4 | 72.7 | 58.8 |
| Primary Health Centre | 7.6 | 3.1 | 15.8 | 14.1 | 11.2 |
| Sub-centre | 7.6 | 0.8 | -- | -- | 1.2 |
| Family planning clinic | -- | -- | -- | -- | -- |
| Public mobile clinic | -- | -- | -- | -- | -- |
| Camp | -- | -- | 4.6 | 11.8 | 3.9 |
| Government paramedic | -- | -- | -- | -- | -- |
| Private medical sector | 16.5 | 5.5 | 2.7 | 1.2 | 5.3 |
| Private hospital or clinic | 8.9 | 2.4 | 2.7 | -- | 3.0 |
| Pharmacy/drugstore | -- | 1.6 | -- | -- | 0.4 |
| Private doctor | 7.6 | 0.8 | -- | 1.2 | 1.8 |
| Private mobile clinic | -- | -- | -- | -- | -- |
| Field worker | -- | 0.8 | -- | -- | 0.2 |
| Other source | -- | 80.3 | 0.4 | -- | 19.4 |
| Shop | -- | 37.8 | -- | -- | 9.6 |
| Husband | -- | 40.9 | -- | -- | 9.3 |
| Friend, relative | -- | -- | -- | -- | -- |
| Other | -- | 1.6 | 0.4 | -- | 0.5 |
| Total percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number | 24 | 39 | 80 | 26 | 174 |
| RURAL | | | | | |
| Public sector | (84.6) | 42.9 | 98.6 | 95.8 | 92.5 |
| Government/municipal hospital | (33.3) | 8.3 | 45.3 | 47.7 | 42.3 |
| Primary Health Centre | (38.5) | 26.2 | 25.4 | 23.3 | 25.3 |
| Sub-centre | (10.3) | 3.3 | 3.6 | 1.9 | 4.1 |
| Family planning clinic | (2.6) | -- | 0.2 | 0.8 | 0.4 |
| Public mobile clinic | (--) | -- | 0.8 | 0.4 | 0.6 |
| Camp | (--) | -- | 23.4 | 21.8 | 19.9 |
| Government paramedic | (--) | -- | -- | -- | -- |
| Private medical sector | (15.4) | 9.5 | 0.9 | 1.1 | 2.3 |
| Private hospital or clinic | (7.7) | 2.4 | 0.9 | 1.1 | 1.4 |
| Pharmacy/drugstore | (--) | 1.2 | -- | -- | 0.1 |
| Private doctor | (7.7) | 6.0 | -- | -- | 0.9 |
| Private mobile clinic | (--) | -- | -- | -- | -- |
| Field worker | (--) | -- | -- | -- | -- |
| Other source | (--) | 47.6 | 0.5 | 3.1 | 5.1 |
| Shop | (--) | 21.4 | -- | -- | 1.9 |
| Husband | (--) | 23.8 | -- | -- | 1.9 |
| Friend, relative | (--) | -- | -- | -- | -- |
| Other | (--) | 2.4 | 0.5 | 3.1 | 1.3 |
| Total percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number | 51 | 111 | 839 | 345 | 1359 |

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, Himachal Pradesh, 1992

| Source of supply | Copper T/ IUD | Con- dom | Female steril- ization | Male steril- ization | All modern methods |
|-------------------------------|------------------|-------------|------------------------------|----------------------------|--------------------------|
| TOTAL | | | | | |
| Public sector | 84.3 | 35.3 | 98.4 | 96.0 | 90.6 |
| Government/municipal hospital | 44.6 | 8.8 | 48.0 | 49.5 | 44.2 |
| Primary Health Centre | 28.5 | 20.1 | 24.6 | 22.6 | 23.7 |
| Sub-centre | 9.4 | 6.4 | 3.3 | 1.8 | 3.7 |
| Family planning clinic | 1.7 | -- | 0.1 | 0.7 | 0.3 |
| Public mobile clinic | -- | -- | 0.7 | 0.4 | 0.5 |
| Camp | -- | -- | 21.7 | 21.0 | 18.1 |
| Government paramedic | -- | -- | -- | -- | -- |
| Private medical sector | 15.7 | 8.5 | 1.1 | 1.1 | 2.7 |
| Private hospital or clinic | 8.1 | 2.4 | 1.1 | 1.1 | 1.5 |
| Pharmacy/drugstore | -- | 1.3 | -- | -- | 0.1 |
| Private doctor | 7.7 | 4.6 | -- | 0.1 | 1.0 |
| Private mobile clinic | -- | -- | -- | -- | -- |
| Field worker | -- | 0.2 | -- | -- | -- |
| Other source | -- | 56.2 | 0.5 | 2.8 | 6.8 |
| Shop | -- | 25.7 | -- | -- | 2.8 |
| Husband | -- | 28.3 | -- | -- | 2.8 |
| Friend, relative | -- | -- | -- | -- | -- |
| Other | -- | 2.2 | 0.5 | 2.8 | 1.2 |
| Total percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number | 76 | 150 | 920 | 371 | 1533 |

Note: Total current users of all modern methods includes 15 users of pills and 1 user of injections, who are not shown separately.

() Based on 25-49 unweighted cases

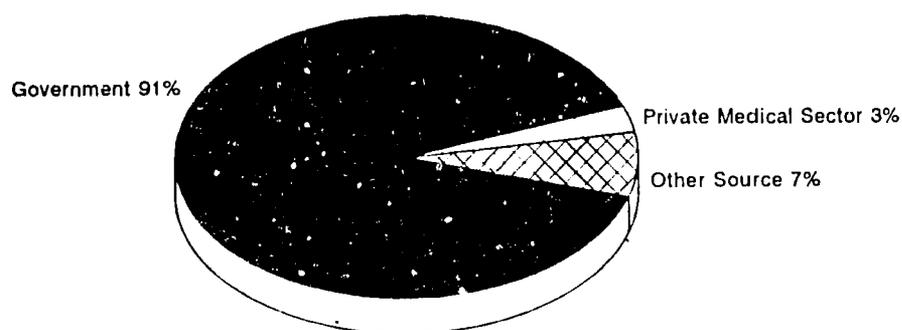
-- Less than 0.05 percent

methods, while the private medical sector, including private hospitals or clinics, private doctors and pharmacies/drugstores, supplies only 3 percent (Table 6.9 and Figure 6.4). Seven percent of users obtain their methods from other sources, such as shops or their husbands.

As noted above, the public sector is the dominant source of supply for nearly all users of contraceptive methods. However, the mix of public and private sector source varies somewhat according to the method used. For clinical methods (IUD and sterilization), the government is by far the major source of supply; nearly all male and female sterilization operations and 84 percent of IUD insertions are obtained at a government source. The condom is provided primarily by the private sector, particularly shops and husbands. Overall, government hospitals and Primary Health Centres supply a little over two-thirds of the users of modern contraceptive methods in this state.

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 (93 percent), while in urban areas, the public sector is the source of supply for a somewhat smaller proportion of users (75 percent). As expected, other (nonmedical) sources provide condoms for a sizable percentage of users (80 percent) in urban areas. The predominance of

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



NFHS, Himachal Pradesh, 1992

the public sector is almost complete in the case of female and male sterilization in both urban and rural areas.

Although the large network of government family planning outlets have had a fairly significant impact on the use of family planning methods in Himachal Pradesh, this network needs to be improved in the tribal areas of the state, where (as noted in Table 6.5) the current rate of contraceptive use is much lower.

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, the largest proportion of women said they stopped using contraception because they are in menopause or their husbands are absent. Health and other method-related problems were also cited fairly often. It should be noted that 4 percent of women discontinued use either because they did not like the method or felt it to be difficult to get. With a little motivation and improvement in services, these women, whose proportion is greater in urban areas, may be encouraged to adopt family planning. The same is also true for another 3 percent of women who had to discontinue use because they became pregnant while using a method.

Table 6.10 Reasons for discontinuation

Percent distribution of nonpregnant, currently married ever users who are not currently using a contraceptive method by main reason for stopping use and residence, Himachal Pradesh, 1992

| Reason for stopping use | Urban | Rural | Total |
|-----------------------------|-------|-------|-------|
| Method failed/got pregnant | -- | 2.2 | 1.9 |
| Lack of sexual satisfaction | -- | 3.6 | 3.2 |
| Created menstrual problem | 7.8 | 7.2 | 7.3 |
| Created health problem | 13.0 | 4.3 | 5.3 |
| Hard to get method | 1.3 | 0.7 | 0.8 |
| Did not like the method | 3.9 | 2.9 | 3.0 |
| Wanted to have a child | 28.6 | 32.4 | 31.9 |
| Lack of privacy for use | -- | 1.4 | 1.3 |
| Menopausal | 18.2 | 17.3 | 17.4 |
| Husband absent | 2.6 | 10.8 | 9.8 |
| Other | 19.5 | 14.4 | 15.0 |
| Don't know/missing | -- | 0.7 | 0.6 |
| Total percent | 100.0 | 100.0 | 100.0 |
| Number | 24 | 183 | 207 |

-- Less than 0.05 percent

6.5 Intention to Use Family Planning in the Future

In the NFHS, all currently married women who were not using contraception at the time of the interview (including those who were currently pregnant) were asked about their future intentions regarding the use of family planning and their method preference if they intended to use contraception. 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. Responses to the questions on future use according to past use, place of residence, and number of living children are given in Table 6.11.

Overall, nearly 4 out of 10 currently married nonusers reported that they do not intend to use contraception in the future, 1 in 2 women said that they would use it in the future and the remaining women were not sure about their intentions. The lack of intentions to use family planning shown by 40 percent of currently married nonusers suggests that it will be difficult for the family planning programme to be completely successful without a strong Information, Education and Communication (IEC) component to motivate couples to use contraception. A little more than half of the intended users said they would use contraception within the next 12 months, 43 percent said they would use it at a later stage, and 5 percent were not sure when they would start using contraception. Among women who have never used contraceptive methods before, 41 percent reported that they do not intend to use them in the future, and 11 percent were not sure of their intentions. In contrast, 35 percent of those who have used contraception in the past (but are not currently using) do not intend to use contraception again in the future, and 5 percent were not sure of their intentions.

The proportion of women who intend to use family planning in the future increases gradually with an increase in the number of living children for women with two or fewer children, but it falls as the number of living children rises beyond two children. A plausible

Table 6.11 Future use

Percent distribution of currently married women who are currently not using any contraceptive method by intention to use in the future, according to number of living children, residence and whether ever used contraception, Himachal Pradesh, 1992

| 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 | 10.5 | 22.2 | 23.1 | (4.8) | (7.4) | 15.6 |
| Intends to use later | 19.3 | 19.4 | 10.8 | (7.1) | (--) | 13.3 |
| Intends to use, unsure when | -- | 1.4 | 4.6 | (--) | (--) | 1.5 |
| Unsure as to intention | 22.8 | 8.3 | 7.7 | (7.1) | (--) | 10.3 |
| Does not intend to use | 38.6 | 26.4 | 9.2 | (11.9) | (29.6) | 22.8 |
| Previously used contraception | | | | | | |
| Intends to use in next 12 months | -- | 4.2 | 10.8 | (28.6) | (18.5) | 10.3 |
| Intends to use later | 5.3 | 11.1 | 12.3 | (14.3) | (7.4) | 10.3 |
| Intends to use, unsure when | -- | -- | 1.5 | (4.8) | (--) | 1.1 |
| Unsure as to intention | -- | -- | 1.5 | (--) | (--) | 0.4 |
| Does not intend to use | 3.5 | 6.9 | 16.9 | (21.4) | (37.0) | 14.1 |
| Missing | -- | -- | 1.5 | (--) | (--) | 0.4 |
| 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 | 10.5 | 26.4 | 33.8 | (33.3) | (25.9) | 25.9 |
| Intends to use later | 24.6 | 30.6 | 23.1 | (21.4) | (7.4) | 23.6 |
| Intends to use, unsure when | -- | 1.4 | 6.2 | (4.8) | (--) | 2.7 |
| Unsure as to intention | 22.8 | 8.3 | 9.2 | (7.1) | (--) | 10.6 |
| Does not intend to use | 42.1 | 33.3 | 26.2 | (33.3) | (66.7) | 36.9 |
| Missing | -- | -- | 1.5 | (--) | (--) | 0.4 |
| Total percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number | 18 | 22 | 20 | 13 | 8 | 82 |
| RURAL | | | | | | |
| Never used contraception | | | | | | |
| Intends to use in next 12 months | 2.8 | 20.0 | 22.9 | 16.8 | 23.2 | 17.8 |
| Intends to use later | 22.0 | 24.2 | 17.2 | 13.7 | 6.0 | 17.2 |
| Intends to use, unsure when | 0.7 | 1.9 | 2.6 | 3.1 | 2.0 | 2.0 |
| Unsure as to intention | 12.1 | 10.7 | 5.7 | 4.6 | 6.6 | 8.1 |
| Does not intend to use | 51.1 | 28.8 | 24.0 | 26.7 | 37.7 | 32.8 |
| Missing | 1.4 | 1.9 | -- | 0.8 | -- | 0.8 |
| Previously used contraception | | | | | | |
| Intends to use in next 12 months | 0.7 | 7.0 | 14.6 | 13.0 | 6.6 | 8.6 |
| Intends to use later | 4.3 | 3.7 | 5.2 | 3.1 | 3.3 | 4.0 |
| Intends to use, unsure when | -- | -- | 0.5 | 0.8 | -- | 0.2 |
| Unsure as to intention | 1.4 | -- | 1.6 | 2.3 | 0.7 | 1.1 |
| Does not intend to use | 3.5 | 1.9 | 5.7 | 15.3 | 13.9 | 7.3 |
| 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 | 3.5 | 27.0 | 37.5 | 29.8 | 29.8 | 26.4 |
| Intends to use later | 26.2 | 27.9 | 22.4 | 16.8 | 9.3 | 21.2 |
| Intends to use, unsure when | 0.7 | 1.9 | 3.1 | 3.8 | 2.0 | 2.3 |
| Unsure as to intention | 13.5 | 10.7 | 7.3 | 6.9 | 7.3 | 9.2 |
| Does not intend to use | 54.6 | 30.7 | 29.7 | 42.0 | 51.7 | 40.1 |
| Missing | 1.4 | 1.9 | -- | 0.8 | -- | 0.8 |
| Total percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number | 186 | 283 | 253 | 172 | 199 | 1092 |

Table 6.11 Future use (Contd.)

Percent distribution of currently married women who are currently not using any contraceptive method by intention to use in the future, according to number of living children, residence and whether ever used contraception, Himachal Pradesh, 1992

| 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 | 3.5 | 20.2 | 22.9 | 15.9 | 22.5 | 17.7 |
| Intends to use later | 21.8 | 23.8 | 16.7 | 13.3 | 5.7 | 17.0 |
| Intends to use, unsure when | 0.6 | 1.8 | 2.8 | 2.8 | 1.9 | 2.0 |
| Unsure as to intention | 13.0 | 10.5 | 5.9 | 4.8 | 6.4 | 8.2 |
| Does not intend to use | 50.0 | 28.7 | 22.9 | 25.7 | 37.4 | 32.1 |
| Missing | 1.3 | 1.7 | -- | 0.7 | -- | 0.8 |
| Previously used contraception | | | | | | |
| Intends to use in next 12 months | 0.6 | 6.8 | 14.3 | 14.1 | 7.1 | 8.7 |
| Intends to use later | 4.3 | 4.3 | 5.7 | 3.8 | 3.5 | 4.4 |
| Intends to use, unsure when | -- | -- | 0.6 | 1.0 | -- | 0.3 |
| Unsure as to intention | 1.3 | -- | 1.6 | 2.1 | 0.6 | 1.0 |
| Does not intend to use | 3.5 | 2.2 | 6.6 | 15.7 | 14.8 | 7.8 |
| Missing | -- | -- | 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 | 4.1 | 26.9 | 37.2 | 30.0 | 29.6 | 26.4 |
| Intends to use later | 26.1 | 28.1 | 22.4 | 17.1 | 9.2 | 21.4 |
| Intends to use, unsure when | 0.6 | 1.8 | 3.3 | 3.9 | 1.9 | 2.3 |
| Unsure as to intention | 14.3 | 10.5 | 7.4 | 6.9 | 7.0 | 9.3 |
| Does not intend to use | 53.5 | 30.9 | 29.4 | 41.4 | 52.3 | 39.9 |
| Missing | 1.3 | 1.7 | 0.1 | 0.7 | -- | 0.8 |
| Total percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number | 203 | 305 | 273 | 185 | 207 | 1174 |

() Based on 25-49 unweighted cases

-- Less than 0.05 percent

¹Includes current pregnancy, if any

explanation of the pattern is that the former group has more women who are motivated to limit the number of their children, while the latter group contains more women who never used contraception before and are also not motivated to do so for the future. The latter group also undoubtedly includes more women who are menopausal or subfecund because of their age. The situation is more or less the same in urban and rural areas.

6.6 Reasons for Nonuse of Contraception

Currently married women who were not using any contraceptive method and who said that they do not intend to use contraception at any time in the future were asked the main reason for their intended nonuse. Information on reasons for no use is crucial for designing successful information programmes and for understanding the obstacles to further increase in contraceptive prevalence. Reasons for not intending to use any method are indicated in Table 6.12. The largest proportion of women (50 percent) said they do not intend to use contraception because they want more children, particularly sons. This reason was given by 88 percent of women less than 30 years of age and by 15 percent of women age 30 and over.

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, Himachal Pradesh, 1992

| Reason | Urban | | | Rural | | | Total | | |
|-------------------------------|---------|---------|-------|---------|---------|-------|---------|---------|-------|
| | Age <30 | Age 30+ | Total | Age <30 | Age 30+ | Total | Age <30 | Age 30+ | Total |
| Wants children | (62.1) | 13.2 | 27.8 | 56.0 | 10.8 | 33.3 | 56.3 | 11.0 | 33.0 |
| Wants a son | (24.1) | 2.9 | 9.3 | 31.9 | 3.6 | 17.7 | 31.6 | 3.5 | 17.2 |
| Worry about side effects | (3.4) | 2.9 | 3.1 | 1.2 | 3.0 | 2.1 | 1.3 | 3.0 | 2.2 |
| Lack of knowledge | (--) | 1.5 | 1.0 | 1.2 | 5.4 | 3.3 | 1.2 | 5.0 | 3.2 |
| Afraid of sterilization | (--) | -- | -- | -- | 0.6 | 0.3 | -- | 0.5 | 0.3 |
| Hard to get methods | (--) | 1.5 | 1.0 | 0.6 | -- | 0.3 | 0.6 | 0.1 | 0.3 |
| Against religion | (3.4) | 1.5 | 2.1 | 2.4 | 0.6 | 1.5 | 2.5 | 0.7 | 1.5 |
| Opposed to family planning | (--) | -- | -- | 0.6 | -- | 0.3 | 0.6 | -- | 0.3 |
| Husband opposed | (--) | 2.9 | 2.1 | 1.8 | 4.8 | 3.3 | 1.7 | 4.6 | 3.2 |
| Other people opposed | (--) | -- | -- | 0.6 | -- | 0.3 | 0.6 | -- | 0.3 |
| Difficult to get pregnant | (3.4) | 19.1 | 14.4 | -- | 13.2 | 6.6 | 0.1 | 13.7 | 7.1 |
| Menopausal/had hysterectomy | (--) | 29.4 | 20.6 | -- | 37.1 | 18.6 | -- | 36.5 | 18.7 |
| Health does not permit | (3.4) | 14.7 | 11.3 | 0.6 | 6.6 | 3.6 | 0.7 | 7.3 | 4.1 |
| Inconvenient | (--) | -- | -- | -- | 0.6 | 0.3 | -- | 0.5 | 0.3 |
| Doesn't like existing methods | (--) | 4.4 | 3.1 | 0.6 | 3.0 | 1.8 | 0.6 | 3.1 | 1.9 |
| Other | (--) | 5.9 | 4.1 | 2.4 | 10.8 | 6.6 | 2.3 | 10.3 | 6.4 |
| Total percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number | 9 | 21 | 30 | 218 | 220 | 438 | 227 | 241 | 468 |

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

A minor proportion (5 percent) of women reported that contraception is either against their religion or that they or their husbands are against the use of family planning. Half of older women reported their actual or perceived sterility as the main reason for not intending to use contraception in the future. Three percent of all women and 5 percent of older women do not intend to use family planning methods due to lack of knowledge. Therefore, there is still some scope for the family planning programme to increase contraceptive use through providing contraceptive information, particularly in rural areas. The most important reasons for nonuse of family planning are broadly the same in urban and rural areas, although the desire to have a son is a more important reason in rural areas.

6.7 Preferred Future Method of Family Planning

Women who said they intend to use a method in the future were asked to specify the method of family planning that they would like to use. From Table 6.13 it can be seen that 29 percent of the women who reported their intention to use contraception in the future say they prefer to use modern spacing methods and about two-thirds (63 percent) of women prefer terminal methods, especially female sterilization. Among the spacing methods, the pill is the most preferred method (10 percent), followed by the IUD (9 percent) and condoms (8 percent).

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, Himachal Pradesh, 1992

| Preferred method | Timing of intended use | | | All women |
|----------------------|------------------------|-------|--------|-----------|
| | Next 12 months | Later | Unsure | |
| URBAN | | | | |
| Pill | 11.8 | 1.6 | * | 6.6 |
| Copper T/IUD | 19.1 | 1.6 | * | 10.2 |
| Injection | 2.9 | -- | * | 1.5 |
| Condom | 20.6 | -- | * | 11.7 |
| Female sterilization | 32.4 | 72.6 | * | 50.4 |
| Male sterilization | 4.4 | 4.8 | * | 5.8 |
| Periodic abstinence | 1.5 | 3.2 | * | 2.2 |
| Withdrawal | -- | -- | * | -- |
| Other | 2.9 | 3.2 | * | 2.9 |
| Unsure | 4.4 | 12.9 | * | 8.8 |
| Total percent | 100.0 | 100.0 | 100.0 | 100.0 |
| Number | 21 | 19 | 2 | 42 |
| RURAL | | | | |
| Pill | 13.2 | 7.4 | * | 10.4 |
| Copper T/IUD | 12.8 | 4.0 | * | 8.5 |
| Injection | 3.7 | 0.6 | * | 2.2 |
| Condom | 11.0 | 3.4 | * | 7.7 |
| Female sterilization | 48.4 | 74.4 | * | 60.1 |
| Male sterilization | 3.7 | 3.4 | * | 3.6 |
| Periodic abstinence | 0.9 | -- | * | 0.7 |
| Withdrawal | 1.8 | 0.6 | * | 1.2 |
| Other | 1.8 | 0.6 | * | 1.2 |
| Unsure | 2.7 | 5.7 | * | 4.3 |
| Total percent | 100.0 | 100.0 | 100.0 | 100.0 |
| Number | 288 | 232 | 25 | 545 |
| TOTAL | | | | |
| Pill | 13.1 | 6.9 | (4.8) | 10.1 |
| Copper T/IUD | 13.2 | 3.8 | (--) | 8.6 |
| Injection | 3.6 | 0.5 | (--) | 2.1 |
| Condom | 11.6 | 3.1 | (12.0) | 8.0 |
| Female sterilization | 47.3 | 74.3 | (60.4) | 59.4 |
| Male sterilization | 3.7 | 3.5 | (7.1) | 3.8 |
| Periodic abstinence | 1.0 | 0.2 | (4.8) | 0.8 |
| Withdrawal | 1.7 | 0.5 | (--) | 1.1 |
| Other | 1.9 | 0.8 | (--) | 1.3 |
| Unsure | 2.9 | 6.2 | (10.8) | 4.7 |
| Total percent | 100.0 | 100.0 | 100.0 | 100.0 |
| Number | 309 | 251 | 27 | 587 |

() Based on 25-49 unweighted cases

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

-- Less than 0.05 percent

The choice of preferred methods is slightly different for those who intend to use them within 12 months and for those who intend to use them later, with female sterilization being preferred more among women in the latter group and the pill, IUD and condom (nearly equally) in the former group. The pattern of preferred future methods is generally similar in urban and rural areas, although female sterilization is a more popular choice in rural areas.

The contraceptive method mix that intended future users say they would prefer is substantially different from the methods selected by current users. Modern spacing methods are being used by only 15 percent of current users (Table 6.4), but 29 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 stronger among the intended future users than among current users 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 Himachal Pradesh.

6.8 Exposure to Family Planning Messages on Radio and Television

For many years, the family welfare programme has been utilizing the electronic mass media to promote family planning. In order to explore the spread of family planning messages through various mass media, respondents were asked whether they had heard such messages on radio and/or television in the past month. Table 6.14 shows the variation in the percentage of women exposed to family planning messages according to various background characteristics. The effort to disseminate family planning information through the electronic mass media has succeeded in reaching a little under half of ever-married women (45 percent) in Himachal Pradesh. This is not surprising since 32 percent of households in Himachal Pradesh own televisions and 50 percent own radios (Table 3.9). More than one in four women (26 percent) had heard a message on both radio and television in the month preceding the survey. One in twelve women (8 percent) had heard a family planning message only on radio and one in 10 women (10 percent) had heard a family planning message only on television. This indicates that electronic media have played a significant role in reaching potential users of family planning.

Urban-rural differentials in media coverage are understandably substantial. The percentage of women exposed to family planning messages on radio or television is 82 and 41 in urban and rural areas, respectively. Television is relatively more prominent in disseminating family planning messages in urban areas and radio and television are equally prominent in rural areas.

Women's exposure to family planning messages on radio and television is positively related with educational attainment. Only 29 percent of illiterate respondents reported that they had heard a family planning message on the radio or television, whereas 82 percent of women with a high school education had heard a message. The proportion hearing a message on television or on both radio and television increases sharply with increasing education. The percentage who had heard a family planning message on radio or television is lower among scheduled caste and scheduled tribe women than among non-SC/ST women.

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, Himachal Pradesh, 1992

| Background characteristic | Heard family planning message on radio or television | | | | Total percent | Number |
|-----------------------------|--|------------|-----------------|-------------|---------------|-------------|
| | Neither | Radio only | Television only | Both | | |
| Age | | | | | | |
| 13-19 | 61.4 | 8.6 | 6.2 | 23.7 | 100.0 | 153 |
| 20-29 | 54.7 | 9.2 | 10.2 | 25.8 | 100.0 | 1245 |
| 30-39 | 52.0 | 8.4 | 10.9 | 28.8 | 100.0 | 909 |
| 40-49 | 57.4 | 6.9 | 10.7 | 25.0 | 100.0 | 655 |
| Residence | | | | | | |
| Urban | 18.0 | 3.3 | 16.8 | 61.9 | 100.0 | 288 |
| Rural | 58.8 | 9.0 | 9.6 | 22.6 | 100.0 | 2674 |
| Education | | | | | | |
| Illiterate | 71.1 | 9.8 | 6.0 | 13.1 | 100.0 | 1471 |
| Lit., < middle complete | 47.6 | 9.8 | 13.7 | 29.0 | 100.0 | 834 |
| Middle school complete | 42.7 | 4.3 | 13.9 | 39.2 | 100.0 | 259 |
| High school and above | 17.9 | 3.0 | 17.1 | 62.0 | 100.0 | 398 |
| Religion | | | | | | |
| Hindu | 54.5 | 8.5 | 10.5 | 26.5 | 100.0 | 2879 |
| Muslim | (77.0) | (7.3) | (2.6) | (13.1) | 100.0 | 36 |
| Sikh | (32.1) | (1.4) | (13.0) | (53.4) | 100.0 | 21 |
| Other | (76.3) | (5.1) | (2.4) | (16.2) | 100.0 | 26 |
| Caste/tribe | | | | | | |
| Scheduled caste | 64.6 | 8.7 | 9.7 | 17.0 | 100.0 | 702 |
| Schedule' tribe | 72.3 | 9.1 | 4.4 | 14.2 | 100.0 | 134 |
| Other | 50.5 | 8.3 | 10.9 | 30.3 | 100.0 | 2126 |
| Use of contraception | | | | | | |
| Ever used | 50.6 | 8.3 | 11.4 | 29.6 | 100.0 | 1968 |
| Never used | 63.1 | 8.5 | 8.3 | 20.1 | 100.0 | 994 |
| Total | 54.8 | 8.4 | 10.3 | 26.4 | 100.0 | 2962 |

() Based on 25-49 unweighted cases

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 vast majority of the women (84 percent) said it is acceptable to have family planning messages on radio and television, while only 7 percent said it is not acceptable and the rest (9 percent) were not sure (Table 6.15). Older women (over age 39), and illiterate women are less likely than other women to think it is acceptable to broadcast family planning messages on radio or television. The acceptability of family planning messages on the electronic media is higher among urban women than rural women and among Hindus and Sikhs than among women of other religions. The responses suggest a considerable amount of ambivalence regarding the acceptability of media messages on family planning among illiterate women and those belonging to the scheduled tribes and scheduled castes.

Table 6.15 Acceptability of media messages on family planning

Percentage of ever-married women by their attitudes toward having messages about family planning on the radio or television, by selected background characteristics, Himachal Pradesh, 1992

| Background characteristic | Acceptability of media messages | | | | Total percent | Number of women |
|---------------------------|---------------------------------|----------------|------------|-----------|---------------|-----------------|
| | Acceptable | Not acceptable | Unsure | Missing | | |
| Age | | | | | | |
| 15-19 | 86.6 | 5.6 | 7.8 | -- | 100.0 | 152 |
| 20-24 | 85.8 | 4.2 | 10.0 | -- | 100.0 | 619 |
| 25-29 | 85.0 | 6.5 | 8.4 | -- | 100.0 | 626 |
| 30-34 | 84.1 | 4.8 | 11.0 | -- | 100.0 | 479 |
| 35-39 | 85.3 | 5.2 | 9.6 | -- | 100.0 | 430 |
| 40-44 | 80.7 | 10.3 | 8.7 | 0.3 | 100.0 | 417 |
| 45-49 | 79.9 | 11.4 | 8.7 | -- | 100.0 | 238 |
| Residence | | | | | | |
| Urban | 90.4 | 7.4 | 2.2 | -- | 100.0 | 288 |
| Rural | 83.5 | 6.3 | 10.1 | -- | 100.0 | 2674 |
| Education | | | | | | |
| Illiterate | 74.8 | 8.5 | 16.5 | 0.1 | 100.0 | 1471 |
| Lit., < middle complete | 91.9 | 4.4 | 3.7 | -- | 100.0 | 834 |
| Middle school complete | 96.9 | 2.1 | 1.0 | -- | 100.0 | 259 |
| High school and above | 94.0 | 6.0 | 0.1 | -- | 100.0 | 398 |
| Religion | | | | | | |
| Hindu | 84.5 | 6.3 | 9.1 | -- | 100.0 | 2879 |
| Muslim | (59.1) | (9.9) | (31.0) | (--) | 100.0 | 36 |
| Sikh | (95.7) | (4.3) | (--) | (--) | 100.0 | 21 |
| Other | (69.5) | (15.3) | (15.3) | (--) | 100.0 | 26 |
| Caste/tribe | | | | | | |
| Scheduled caste | 80.4 | 4.7 | 14.7 | 0.2 | 100.0 | 702 |
| Scheduled tribe | 68.8 | 9.3 | 21.9 | -- | 100.0 | 134 |
| Other | 86.3 | 6.9 | 6.8 | -- | 100.0 | 2126 |
| Total | 84.1 | 6.5 | 9.4 | -- | 100.0 | 2962 |

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

6.10 Discussion of Family Planning Among Couples

Among nonsterilized couples, all currently married women who knew a contraceptive method were asked how often they had talked with their husbands about family planning in the past year. The extent of such communication is fairly high in the state. Overall, 58 percent of women said they had discussed this topic with their husbands in the previous year (Table 6.16). Thirty-six percent discussed family planning once or twice while 23 percent discussed it more often. A relatively high percentage (70 percent) of women age 25-34 reported that they had discussed family planning with their husbands. Women in the early and late reproductive years are least likely to have communicated with their husbands on family planning.

Substantial differences are also observed according to the place of residence, respondent's level of education, her husband's education, 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

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, Himachal Pradesh, 1992

| Background characteristic | Number of times family planning discussed | | | Total percent | Number of women |
|-------------------------------|---|---------------|-------------|---------------|-----------------|
| | Never | Once or twice | More often | | |
| Age | | | | | |
| 15-19 | 54.5 | 35.0 | 10.4 | 100.0 | 141 |
| 20-24 | 40.7 | 38.7 | 20.6 | 100.0 | 533 |
| 25-29 | 29.3 | 38.6 | 32.1 | 100.0 | 330 |
| 30-34 | 31.8 | 37.0 | 31.2 | 100.0 | 153 |
| 35-39 | 42.8 | 36.2 | 21.0 | 100.0 | 125 |
| 40-44 | 56.9 | 24.9 | 18.2 | 100.0 | 130 |
| 45-49 | 69.9 | 19.4 | 10.7 | 100.0 | 93 |
| Residence | | | | | |
| Urban | 34.1 | 23.4 | 42.5 | 100.0 | 169 |
| Rural | 43.0 | 37.1 | 19.9 | 100.0 | 1334 |
| Respondent's education | | | | | |
| Illiterate | 46.8 | 36.4 | 16.8 | 100.0 | 647 |
| Lit., < middle complete | 44.4 | 33.0 | 22.6 | 100.0 | 399 |
| Middle school complete | 44.1 | 36.6 | 19.2 | 100.0 | 153 |
| High school and above | 27.5 | 36.6 | 35.9 | 100.0 | 305 |
| Religion | | | | | |
| Hindu | 42.0 | 35.6 | 22.4 | 100.0 | 1446 |
| Muslim | (51.3) | (32.1) | (16.6) | 100.0 | 23 |
| Sikh | (23.2) | (29.9) | (46.9) | 100.0 | 15 |
| Caste/tribe | | | | | |
| Scheduled caste | 44.9 | 35.6 | 19.6 | 100.0 | 325 |
| Scheduled tribe | 47.4 | 40.6 | 12.0 | 100.0 | 82 |
| Other | 40.7 | 35.2 | 24.1 | 100.0 | 1096 |
| Use of cont. acception | | | | | |
| Ever used | 27.6 | 39.7 | 32.7 | 100.0 | 616 |
| Never used | 52.0 | 32.7 | 15.3 | 100.0 | 887 |
| Husband's education | | | | | |
| Illiterate | 44.6 | 36.4 | 19.0 | 100.0 | 254 |
| Lit., < primary complete | 60.1 | 24.4 | 15.4 | 100.0 | 117 |
| Primary school complete | 44.5 | 40.9 | 14.6 | 100.0 | 270 |
| Middle school complete | 39.3 | 38.1 | 22.6 | 100.0 | 195 |
| High school complete | 39.9 | 38.0 | 22.1 | 100.0 | 504 |
| Above high school | 30.5 | 22.7 | 46.7 | 100.0 | 174 |
| Total | 42.0 | 35.5 | 22.5 | 100.0 | 1503 |

Note: Table excludes women who are sterilized or whose husbands are sterilized. Total includes 19 women belonging to other religions, who are not shown separately.
() Based on 25-49 unweighted cases

rural areas (66 percent compared to 57 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, 72 percent of women who completed high school had discussed family planning with their husbands compared to only 53 percent of illiterate women. Similarly, interspousal communication is more common among women whose husbands had studied beyond high school (69 percent) than among those whose husbands are illiterate (55 percent).

A large majority (72 percent) of the women who have ever used a family planning method have discussed the topic with their husbands in the last year; 40 percent having discussed it once or twice and 33 percent having discussed it more often. Among those who have never used family planning, however, only 48 percent have discussed family planning with their husbands in the past year.

6.11 Attitudes of Couples Toward Family Planning

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

Table 6.17 shows that 92 percent of currently married, nonsterilized women who knew of a contraceptive method approve of family planning use and only 8 percent disapprove. While 11 percent of women said they do not know their husband's attitude, only one-tenth of the rest thought that their husbands disapprove of family planning. There is a substantial amount of consensus between individual husbands and wives regarding the approval of family planning. In fact, 78 percent of female respondents reported that both they and their husbands approve of family planning and only 4 percent said they both disapprove. This pattern of consensus among couples in favour of family planning makes the task of family planning administrators much easier.

The percentage of women approving family planning decreases slowly with the age of the woman. Urban women are somewhat more likely to approve of family planning than rural women (98 percent versus 91 percent). The approval of family planning by both husband and wife is 90 and 76 percent in urban and rural areas, respectively. 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, 89 percent of illiterate women approve of family planning compared to 95 percent of women who had completed high school. Approval by both husband and wife is the lowest (67 percent) among illiterate women. A similar relationship is observed with the level of husband's education. As education of the husband increases, the proportion of women who reported that both they and their husbands approve of family planning increases, from 63 percent in the case of illiterates to 91 percent for those having more than a high school education.

Approval is substantially lower among those belonging to scheduled tribes than among other groups. Ninety percent of the women who had ever used family planning reported that both they and their husbands approve of family planning, compared with 69 percent of never users. Among never users who approve of family planning, only 7 percent said their husbands do not approve of family planning.

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, Himachal Pradesh, 1992

| Background characteristic | Respondent approves | | | Respondent disapproves | | | Respondent unsure | Total percent | Number of women |
|--|---------------------|---------------------|---|------------------------|---------------------|---|-------------------|---------------|-----------------|
| | Husband approves | Husband disapproves | Husband's attitude unknown ¹ | Husband approves | Husband disapproves | Husband's attitude unknown ¹ | | | |
| Respondent's age | | | | | | | | | |
| 15-19 | 78.6 | 4.9 | 11.6 | 1.9 | 1.2 | 1.9 | -- | 100.0 | 141 |
| 20-24 | 81.8 | 3.1 | 8.0 | 1.8 | 2.8 | 2.0 | 0.5 | 100.0 | 533 |
| 25-29 | 79.2 | 4.5 | 8.5 | 2.4 | 4.2 | 1.2 | -- | 100.0 | 330 |
| 30-34 | 83.1 | 7.7 | 6.6 | -- | 1.7 | 0.9 | -- | 100.0 | 153 |
| 35-39 | 82.7 | 3.4 | 3.7 | 3.4 | 3.7 | 3.2 | -- | 100.0 | 125 |
| 40-44 | 60.6 | 7.1 | 17.9 | 4.3 | 6.1 | 4.1 | -- | 100.0 | 130 |
| 45-49 | 58.1 | 9.1 | 17.6 | 2.1 | 10.2 | 2.8 | -- | 100.0 | 93 |
| Residence | | | | | | | | | |
| Urban | 89.6 | 2.9 | 5.1 | 1.1 | 1.3 | -- | -- | 100.0 | 169 |
| Rural | 76.3 | 5.0 | 10.0 | 2.3 | 3.9 | 2.3 | 0.2 | 100.0 | 1334 |
| Respondent's education | | | | | | | | | |
| Illiterate | 67.4 | 6.9 | 14.6 | 2.5 | 4.8 | 3.5 | 0.4 | 100.0 | 647 |
| Lit., < primary complete | 81.7 | 4.8 | 7.0 | 2.2 | 2.6 | 1.6 | -- | 100.0 | 399 |
| Middle school complete | 86.9 | 1.3 | 7.3 | 1.7 | 2.8 | -- | -- | 100.0 | 153 |
| High school and above | 90.3 | 2.1 | 2.7 | 1.4 | 3.0 | 0.4 | -- | 100.0 | 305 |
| Religion | | | | | | | | | |
| Hindu | 78.2 | 4.7 | 9.5 | 2.0 | 3.5 | 1.9 | 0.2 | 100.0 | 1446 |
| Muslim | (53.7) | (16.9) | (--) | (--) | (18.2) | (11.3) | (--) | 100.0 | 23 |
| Sikh | (89.2) | (--) | (--) | (10.8) | (--) | (--) | (--) | 100.0 | 15 |
| Caste/tribe | | | | | | | | | |
| Scheduled caste | 73.7 | 5.4 | 13.5 | 2.0 | 2.1 | 3.2 | -- | 100.0 | 325 |
| Schedule-1 tribe | 68.3 | 5.2 | 10.4 | -- | 8.0 | 8.0 | -- | 100.0 | 82 |
| Other | 79.7 | 4.6 | 8.1 | 2.3 | 3.8 | 1.2 | 0.2 | 100.0 | 1096 |
| Use of contraception | | | | | | | | | |
| Ever used | 90.1 | 3.2 | 3.9 | 1.7 | 1.0 | -- | 0.2 | 100.0 | 516 |
| Never used | 69.3 | 5.9 | 13.3 | 2.4 | 5.5 | 3.4 | 0.1 | 100.0 | 887 |
| Family planning discussed with husband in last year | | | | | | | | | |
| Never | 66.5 | 7.1 | 16.4 | 1.8 | 4.4 | 3.8 | -- | 100.0 | 631 |
| Once or twice | 83.0 | 4.0 | 4.8 | 2.8 | 4.0 | 1.2 | 0.2 | 100.0 | 534 |
| More often | 70.8 | 1.7 | 3.6 | 1.8 | 1.7 | -- | 0.4 | 100.0 | 338 |
| Husband's education | | | | | | | | | |
| Illiterate | 63.0 | 4.7 | 19.5 | 2.2 | 4.9 | 5.7 | -- | 100.0 | 254 |
| Lit., < primary complete | 61.2 | 12.4 | 17.4 | 4.5 | 4.5 | -- | -- | 100.0 | 117 |
| Primary school complete | 75.5 | 6.9 | 9.0 | 2.7 | 3.4 | 2.0 | 0.5 | 100.0 | 270 |
| Middle school complete | 81.8 | 4.0 | 8.7 | 0.7 | 1.4 | 3.4 | -- | 100.0 | 195 |
| High school complete | 84.4 | 2.9 | 4.9 | 2.2 | 4.6 | 0.8 | 0.3 | 100.0 | 504 |
| Above high school | 91.4 | 2.7 | 3.5 | 1.0 | 1.4 | -- | -- | 100.0 | 164 |
| Total | 77.8 | 4.8 | 9.4 | 2.1 | 3.6 | 2.0 | 0.2 | 100.0 | 1503 |

Note: Table excludes women who are sterilized or whose husbands are sterilized. Total includes 19 women belonging to other religions, 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

Table 6.17 also reveals that as expected, the approval of family planning by both the husband and wife is positively related to the number of times family planning was discussed between the husband and the wife in the past year. The percentage of women who reported that both they and their husbands approve family planning is 67 for those who have never discussed family planning, 83 for those who have discussed the topic once or twice and 91 for those who have had more frequent discussions of family planning with their husbands. The percentage of women who are not aware of their husband's attitude is greatest (20 percent) among those who did not discuss family planning with their husbands in the last year.

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 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 25 percent of women said they want another child at some time in the future and nearly two-thirds of these women said they would like to wait at least two years before having their next birth. Only 9 percent of women say they would like another child soon (that is, within two years). Less than 1 percent of women express the attitude that the matter of having another child is "up to God". One-fourth of women say they do not want any more children and 46 percent of women (or their husbands) are sterilized, so that they cannot have any more children. These two groups (i.e., those not wanting any more children and those sterilized) together constitute 72 percent of all currently married women in Himachal Pradesh.

In this chapter, it is assumed that women who are sterilized or whose husbands are sterilized do not want any more children. Although some women may regret that the sterilization took place because they want to have another child, only 2 percent or 19 women out of 1,253 women in the Himachal Pradesh sample who were sterilized or whose husbands were sterilized said they regret that sterilization was performed (data not shown). Moreover, fewer than half of these women said they regret the sterilization because they or their husbands want to have another child. (Most of the remainder cited medical complications or side effects as the

reason for their regret.) 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.

Overall, 88 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 varies little between urban (91 percent) and rural areas (87 percent). Among women who want another child, there is a strong preference for having a son as the next child. More than half (54 percent) say they want a son, only 5 percent express a desire for a daughter,

| 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, Himachal Pradesh, 1992 | | | | | | | | |
| 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 | 61.5 | (11.4) | 1.6 | 2.1 | -- | (--) | * | 7.3 |
| Have another later ³ | 26.2 | (46.2) | 5.2 | 0.8 | -- | (--) | * | 10.8 |
| Have another, undecided when | 1.5 | (0.8) | -- | -- | -- | (--) | * | 0.2 |
| Undecided | 4.6 | (1.5) | 0.3 | -- | -- | (--) | * | 0.7 |
| Want no more | 3.1 | (35.6) | 61.9 | 35.2 | 28.7 | (40.5) | * | 41.3 |
| Sterilized | 1.5 | (3.0) | 30.0 | 61.4 | 69.1 | (59.5) | * | 38.7 |
| Declared infecund | 1.5 | (1.5) | 1.0 | 0.4 | 2.1 | (--) | * | 1.0 |
| Total percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number | 20 | 41 | 95 | 73 | 29 | 13 | 4 | 276 |
| Preferred sex of additional child | | | | | | | | |
| Boy | 17.2 | 28.6 | * | * | NC | NC | NC | 32.5 |
| Girl | 3.4 | 6.5 | * | * | NC | NC | NC | 5.5 |
| Doesn't matter | 67.2 | 53.2 | * | * | NC | NC | NC | 52.1 |
| Up to God | 12.1 | 11.7 | * | * | NC | NC | NC | 9.8 |
| Total percent | 100.0 | 100.0 | 100.0 | 100.0 | NC | NC | NC | 100.0 |
| Number wanting more | 18 | 24 | 7 | 2 | 0 | 0 | 0 | 51 |
| RURAL | | | | | | | | |
| Desire for additional child | | | | | | | | |
| Have another soon ² | 56.1 | 18.2 | 7.4 | 2.3 | 1.0 | 0.7 | 1.8 | 9.6 |
| Have another later ³ | 29.7 | 66.7 | 13.4 | 5.7 | 2.4 | 1.3 | 0.9 | 16.4 |
| Have another, undecided when | 1.9 | -- | 0.2 | -- | -- | -- | -- | 0.2 |
| Undecided | 2.6 | 1.9 | 2.9 | 0.4 | 0.7 | 1.3 | 0.9 | 1.5 |
| Up to God | 1.9 | -- | 0.4 | 0.2 | -- | -- | -- | 0.3 |
| Want no more | 3.2 | 6.2 | 33.7 | 25.2 | 25.8 | 29.4 | 38.1 | 24.1 |
| Sterilized | 0.6 | 5.4 | 41.1 | 65.0 | 69.2 | 66.0 | 56.6 | 46.6 |
| Declared infecund | 3.9 | 1.6 | 0.9 | 1.2 | 1.0 | 1.3 | 1.8 | 1.4 |
| Total percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number | 204 | 339 | 589 | 672 | 388 | 201 | 149 | 2543 |
| Preferred sex of additional child | | | | | | | | |
| Boy | 35.3 | 47.5 | 78.7 | 95.1 | * | * | * | 55.5 |
| Girl | -- | 6.8 | 10.6 | 4.9 | * | * | * | 5.3 |
| Doesn't matter | 42.6 | 32.0 | 7.4 | -- | * | * | * | 26.7 |
| Up to God | 22.1 | 13.7 | 3.2 | -- | * | * | * | 12.5 |
| Total percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number wanting more | 179 | 288 | 124 | 54 | 13 | 4 | 4 | 666 |

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, Himachal Pradesh, 1992

| 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 | 56.6 | 17.5 | 6.6 | 2.3 | 0.9 | 0.6 | 1.7 | 9.3 |
| Have another later ³ | 29.4 | 64.5 | 12.3 | 5.2 | 2.2 | 1.2 | 0.9 | 15.9 |
| Have another, undecided when | 1.9 | 0.1 | 0.2 | -- | -- | -- | -- | 0.2 |
| Undecided | 2.8 | 1.9 | 2.5 | 0.4 | 0.6 | 1.2 | 0.9 | 1.4 |
| Up to God | 1.8 | -- | 0.4 | 0.2 | -- | -- | -- | 0.3 |
| Want no more | 3.2 | 9.4 | 37.6 | 26.2 | 26.0 | 30.1 | 37.4 | 25.7 |
| Sterilized | 0.7 | 5.2 | 39.5 | 64.6 | 69.2 | 65.6 | 57.5 | 45.8 |
| Declared infecund | 3.7 | 1.5 | 0.9 | 1.1 | 1.1 | 1.2 | 1.7 | 1.4 |
| Total percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number | 224 | 380 | 685 | 746 | 417 | 214 | 153 | 2819 |
| Preferred sex of additional child | | | | | | | | |
| Boy | 33.6 | 46.0 | 78.1 | (95.3) | * | * | * | 53.9 |
| Girl | 0.3 | 6.8 | 10.6 | (4.7) | * | * | * | 5.3 |
| Doesn't matter | 44.9 | 33.6 | 8.3 | (--) | * | * | * | 28.5 |
| Up to God | 21.1 | 13.5 | 3.0 | (--) | * | * | * | 12.3 |
| Total percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number wanting more | 197 | 312 | 130 | 56 | 13 | 4 | 4 | 716 |

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

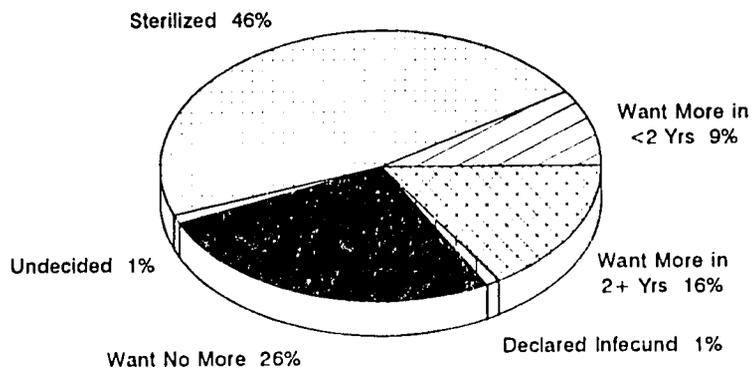
²Wants next birth within 2 years

³Wants to delay next birth for 2 or more years

and the rest say that the sex of the child does not matter (29 percent) or that it is up to God (12 percent). The desire for a son is particularly strong in rural areas. Women who do not have any children are extremely unlikely to want a daughter for their first child. Only 0.3 percent of them express a desire for a daughter, 34 percent say they want a son, and a still higher percentage (45) would be happy with a child of either sex.

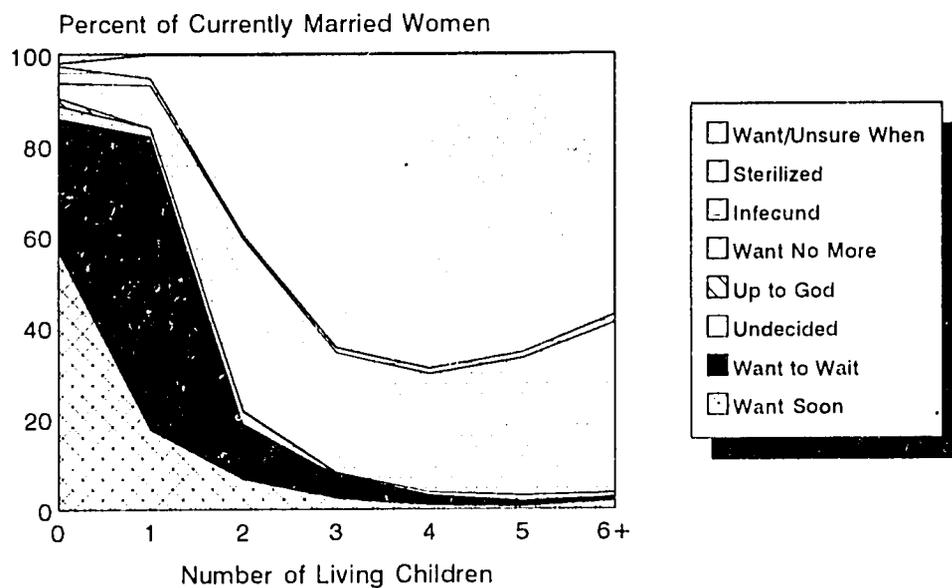
As expected, the desire for more children declines rapidly as the number of children increases (Table 7.1 and Figure 7.2). Eighty-eight percent of women with no child say they want a child and only 4 percent say they do not want any children or are sterilized. The proportion who want another child drops to 19 percent for women who have two living children and 8 percent for those with three living children. The desire to have a child within two years drops even more rapidly, from 57 percent for women without any living children to 7 percent or less for women with two or more living children. Interestingly, the desire for spacing children is very strong for women who have fewer than three children. Twenty-nine 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 12 percent of women with two children would like to wait at least two years before having their next child. Since 46 percent of all women have fewer than three living children, the expressed desire for spacing children

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



NFHS, Himachal Pradesh, 1992

Figure 7.2
Fertility Preferences by Number of
Living Children



NFHS, Himachal Pradesh, 1992

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 Himachal Pradesh who wish to space their children. The encouragement of spacing methods for women who want more children is 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 living children discussed above. Almost half of currently married women age 15-24 want to space their next birth and by age 30-34 nearly 92 percent 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 residence differences have already been discussed above. Educational attainment is not strongly related to fertility desires for women who have fewer than two children. For women with two living children, however, education is strongly related to the desire to have no more children suggesting that the two-child family norm is much more acceptable to educated women. Differentials by the number of sons and daughters provide further evidence of son preference in Himachal Pradesh. The desire to stop childbearing increases with the number of living sons as well as with the number of living daughters. However, the desire to stop is more prevalent among women with all sons than among women with all daughters. For example, among women with exactly two living children, 94 percent want to stop if both children are sons, but only 22 percent want to stop if the children are both daughters. The most conspicuous fact

| 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, Himachal Pradesh, 1992 | | | | | | | | |
| 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 | * | 18.3 | 7.4 | 9.4 | 0.7 | -- | -- | 7.3 |
| Have another later ² | * | 34.5 | 14.4 | 3.4 | 0.7 | -- | -- | 10.8 |
| Have another/undecided when | * | -- | -- | -- | -- | 0.9 | 1.3 | 0.2 |
| Undecided | * | 0.7 | 1.0 | 0.5 | -- | -- | 1.3 | 0.7 |
| Want no more | * | 38.7 | 47.0 | 44.8 | 37.5 | 43.4 | 32.5 | 41.3 |
| Sterilized | * | 7.7 | 29.7 | 41.4 | 60.3 | 52.2 | 62.3 | 38.7 |
| Declared infecund | * | -- | 0.5 | 0.5 | 0.7 | 3.5 | 2.6 | 1.0 |
| Total percent | | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number | | 5 | 44 | 63 | 63 | 42 | 35 | 24 |
| Preferred sex of additional child | | | | | | | | |
| Boy | * | 29.3 | (27.3) | (42.3) | * | NC | NC | 32.5 |
| Girl | * | 6.7 | (4.5) | (7.7) | * | NC | NC | 5.5 |
| Doesn't matter | * | 53.3 | (54.5) | (50.0) | * | NC | NC | 52.1 |
| Up to God | * | 10.7 | (13.6) | (--) | * | NC | NC | 9.8 |
| Total percent | | 100.0 | 100.0 | 100.0 | 100.0 | NC | NC | 100.0 |
| Number wanting more | | 4 | 23 | 14 | 8 | 1 | 0 | 51 |

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, Himachal Pradesh, 1992

| 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 | 31.2 | 21.3 | 8.1 | 3.4 | 3.2 | 1.9 | 1.4 | 9.6 |
| Have another later ² | 57.8 | 43.5 | 14.1 | 2.0 | 0.7 | 0.4 | -- | 16.4 |
| Have another/undecided when | -- | 0.7 | -- | 0.3 | -- | -- | -- | 0.2 |
| Undecided | 2.8 | 2.6 | 1.7 | 0.7 | -- | 1.5 | 1.4 | 1.5 |
| Up to God | -- | 0.2 | 0.2 | 0.3 | 0.4 | 0.8 | -- | 0.3 |
| Want no more | 8.3 | 20.3 | 27.5 | 22.2 | 23.0 | 26.3 | 39.3 | 24.1 |
| Sterilized | -- | 10.7 | 47.6 | 70.4 | 70.6 | 66.0 | 54.3 | 46.6 |
| Declared infecund | -- | 0.7 | 0.7 | 0.7 | 2.1 | 3.1 | 3.6 | 1.4 |
| Total percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number | 143 | 563 | 550 | 391 | 371 | 341 | 184 | 2543 |
| Preferred sex of additional child | | | | | | | | |
| Boy | 44.3 | 52.1 | 73.1 | * | * | * | * | 55.5 |
| Girl | 6.2 | 5.7 | 2.2 | * | * | * | * | 5.3 |
| Doesn't matter | 33.0 | 27.5 | 20.4 | * | * | * | * | 26.7 |
| Up to God | 16.5 | 14.6 | 4.3 | * | * | * | * | 12.5 |
| Total percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number wanting more | 128 | 368 | 122 | 22 | 14 | 8 | 3 | 666 |
| TOTAL | | | | | | | | |
| Desire for additional child | | | | | | | | |
| Have another soon ¹ | 30.9 | 21.0 | 8.1 | 4.2 | 2.9 | 1.8 | 1.3 | 9.3 |
| Have another later ² | 57.8 | 42.8 | 14.1 | 2.2 | 0.7 | 0.4 | -- | 15.9 |
| Have another/undecided when | -- | 0.7 | -- | 0.3 | -- | 0.1 | 0.1 | 0.2 |
| Undecided | 2.9 | 2.4 | 1.6 | 0.6 | -- | 1.4 | 1.4 | 1.4 |
| Up to God | -- | 0.2 | 0.2 | 0.3 | 0.3 | 0.7 | -- | 0.3 |
| Want no more | 8.4 | 21.7 | 29.5 | 25.4 | 24.5 | 27.8 | 38.5 | 25.7 |
| Sterilized | -- | 10.5 | 45.8 | 66.3 | 69.5 | 64.7 | 55.2 | 45.8 |
| Declared infecund | -- | 0.7 | 0.7 | 0.6 | 2.0 | 3.1 | 3.5 | 1.4 |
| Total percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number | 149 | 607 | 613 | 454 | 413 | 376 | 208 | 2819 |
| Preferred sex of additional child | | | | | | | | |
| Boy | 44.3 | 50.8 | 68.5 | (63.1) | * | * | * | 53.9 |
| Girl | 6.0 | 5.8 | 2.4 | (6.4) | * | * | * | 5.3 |
| Doesn't matter | 33.5 | 29.0 | 23.9 | (30.5) | * | * | * | 28.5 |
| Up to God | 16.2 | 14.4 | 5.2 | (--) | * | * | * | 12.3 |
| Total percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number wanting more | 132 | 392 | 136 | 30 | 15 | 8 | 3 | 716 |

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

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, Himachal Pradesh, 1992

| Background characteristic | Number of living children ¹ | | | | | | | Total |
|---|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6+ | |
| Age | | | | | | | | |
| 13-19 | 2.0 | 0.9 | * | NC | NC | NC | NC | 8.4 |
| 20-29 | 0.5 | 9.9 | 69.0 | 81.5 | 86.3 | * | * | 53.8 |
| 30-39 | * | (53.7) | 92.5 | 95.0 | 100.0 | 98.6 | (95.2) | 92.8 |
| 40-49 | * | * | (96.1) | 98.4 | 95.9 | 96.0 | (95.7) | 93.0 |
| Residence | | | | | | | | |
| Urban | 4.6 | (38.6) | 91.9 | 96.6 | (97.9) | (100.0) | * | 80.0 |
| Rural | 3.9 | 11.6 | 74.8 | 90.2 | 94.9 | 95.4 | 94.7 | 70.6 |
| Education | | | | | | | | |
| Illiterate | 9.1 | 12.5 | 67.9 | 86.1 | 95.2 | 95.8 | 95.0 | 75.1 |
| Literate, < middle complete | (0.6) | 10.4 | 79.5 | 95.9 | 96.7 | (93.9) | * | 73.4 |
| Middle school complete | (3.1) | (13.5) | 73.0 | 94.5 | * | * | NC | 59.5 |
| High school and above | 0.6 | 22.7 | 91.4 | 95.5 | (82.8) | * | * | 63.2 |
| Religion | | | | | | | | |
| Hindu | 4.0 | 14.6 | 77.9 | 90.9 | 95.0 | 96.2 | 95.5 | 71.7 |
| Muslim | * | * | * | * | * | * | * | (72.7) |
| Sikh | * | * | * | * | * | * | NC | (58.9) |
| Caste/tribe | | | | | | | | |
| Scheduled caste | 6.1 | 6.0 | 67.3 | 92.4 | 92.3 | (97.3) | (96.5) | 69.0 |
| Scheduled tribe | * | * | * | (74.5) | * | * | * | 60.7 |
| Other | 3.4 | 18.2 | 81.5 | 91.4 | 95.7 | 95.7 | 96.2 | 73.0 |
| Number of living sons² | | | | | | | | |
| None | 3.9 | 7.3 | 22.3 | (33.6) | * | * | * | 11.5 |
| 1 | NA | 23.9 | 81.9 | 84.6 | 95.2 | 97.4 | (91.1) | 74.4 |
| 2 | NA | NA | 94.3 | 99.9 | 99.1 | 98.2 | (97.2) | 97.9 |
| 3+ | NA | NA | NA | 97.2 | 97.0 | (95.0) | (98.0) | 96.8 |
| Number of living daughters² | | | | | | | | |
| None | 3.9 | 23.9 | 94.3 | 97.2 | * | * | * | 52.6 |
| 1 | NA | 7.3 | 81.9 | 99.9 | 96.2 | * | * | 79.9 |
| 2 | NA | NA | 22.3 | 84.6 | 99.1 | (92.5) | * | 81.6 |
| 3+ | NA | NA | NA | (33.6) | 89.6 | 96.9 | (95.9) | 89.6 |
| Total | 3.9 | 14.5 | 77.2 | 90.8 | 95.1 | 95.7 | 94.8 | 71.5 |

Note: Women who have been sterilized, or whose husbands have been sterilized, are considered to want no more children. Total percentages are based on all currently married women age 13-49 including 24 women belonging to other religions, the percentages for whom are not shown separately.

NA: Not applicable

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

¹Includes current pregnancy, if any

²Excludes pregnant women

emerging from Table 7.3 is that the desire to have no more children is fairly strong in all population subgroups as currently married women come to have two living children and with every additional child (up to five children) the desire becomes more and more pervasive.

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 footnotes to the table contain detailed definitions of these concepts.

Overall, 15 percent of women in Himachal Pradesh have an unmet need for family planning, according to these definitions. The unmet need is slightly greater for spacing births (9 percent) than for limiting births (6 percent). Together with the 58 percent of currently married women who are using contraception, a total of 73 percent of currently married women have a demand for family planning. If all of the women who say they want to space or limit their births were to use family planning, the contraceptive prevalence rate would increase from 58 percent to 73 percent of married women. This means that 80 percent of the demand for family planning is being met by current programmes, as seen in the last column of Table 7.4. If the level of unmet need indicated in the table is assumed to reflect the needs of all currently married women age 13-49 in Himachal Pradesh, then about 140,000 women in Himachal Pradesh have an unmet need for family planning.

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 particularly strong for women under age 25. This is the segment of the population whose overall family planning needs are least likely to be met by current programmes, primarily because the needs for spacing are not being satisfied. Only 22 percent of the total demand for family planning services is being met for married women age 15-19 and this figure rises to only 44 percent for women age 20-24.

The unmet need for family planning is slightly higher in rural areas than in urban areas and the total demand for family planning is also less likely to be satisfied in rural areas. Eighty-six percent of the total demand is satisfied in urban areas, compared to 79 percent in rural areas. Interestingly, the unmet need for family planning is fairly constant across education groups for literate women. The total unmet demand of Muslims and those belonging to scheduled tribes is much greater than that of other categories. 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 fewer than two children.

Table 7.4 Need for family planning services

Percent of currently married women with unmet need, met need, and total demand for family planning services by selected background characteristics, Himachal Pradesh, 1992

| Background characteristic | Unmet need for FP ¹ | | | Met need-currently using ² | | | Total demand for FP | | | Percent of need satisfied |
|----------------------------------|--------------------------------|------------|-------------|---------------------------------------|-------------|-------------|---------------------|-------------|-------------|---------------------------|
| | To space | To limit | Total | To space | To limit | Total | To space | To limit | Total | |
| Age | | | | | | | | | | |
| 15-19 | 32.2 | 0.9 | 33.1 | 8.2 | 0.9 | 9.1 | 40.4 | 1.8 | 42.2 | 21.5 |
| 20-24 | 24.7 | 5.6 | 30.3 | 7.9 | 16.3 | 24.2 | 32.6 | 21.9 | 54.5 | 44.3 |
| 25-29 | 8.5 | 7.4 | 15.9 | 4.8 | 59.0 | 63.8 | 13.3 | 66.4 | 79.7 | 80.0 |
| 30-34 | 1.7 | 7.3 | 9.0 | 2.5 | 78.7 | 81.2 | 4.2 | 85.9 | 90.2 | 90.0 |
| 35-39 | 0.3 | 4.9 | 5.2 | 0.3 | 79.5 | 79.9 | 0.6 | 84.5 | 85.1 | 93.9 |
| 40-44 | 0.4 | 4.0 | 4.3 | 0.4 | 73.2 | 73.5 | 0.7 | 77.2 | 77.9 | 94.4 |
| 45-49 | -- | 4.5 | 4.5 | -- | 57.9 | 57.9 | -- | 62.4 | 62.4 | 92.7 |
| Residence | | | | | | | | | | |
| Urban | 5.7 | 5.5 | 11.2 | 5.8 | 64.6 | 70.4 | 11.6 | 70.1 | 81.7 | 86.2 |
| Rural | 9.6 | 5.6 | 15.3 | 3.4 | 53.6 | 57.1 | 13.0 | 59.3 | 72.3 | 78.9 |
| Education | | | | | | | | | | |
| Illiterate | 5.9 | 5.4 | 11.4 | 1.9 | 56.0 | 58.0 | 7.9 | 61.5 | 69.3 | 83.6 |
| Lit., <middle complete | 10.4 | 6.6 | 17.0 | 3.1 | 56.4 | 59.4 | 13.4 | 63.0 | 76.4 | 77.8 |
| Middle school complete | 17.6 | 4.1 | 21.6 | 6.1 | 49.3 | 55.4 | 23.7 | 53.3 | 77.0 | 71.9 |
| High school and above | 13.2 | 5.3 | 18.5 | 9.3 | 50.3 | 59.6 | 22.5 | 55.6 | 78.1 | 76.3 |
| Religion | | | | | | | | | | |
| Hindu | 9.2 | 5.5 | 14.7 | 3.6 | 55.2 | 58.8 | 12.8 | 60.7 | 73.5 | 80.0 |
| Muslim | (11.9) | (16.5) | (28.4) | (1.7) | (39.7) | (41.4) | (13.7) | (56.2) | (69.9) | (59.3) |
| Sikh | (6.1) | (2.9) | (9.0) | (19.8) | (53.1) | (72.9) | (26.0) | (56.0) | (82.0) | (89.0) |
| Caste/tribe | | | | | | | | | | |
| Scheduled caste | 10.3 | 4.8 | 15.1 | 2.9 | 53.7 | 56.6 | 13.2 | 58.5 | 71.7 | 79.0 |
| Scheduled tribe | 14.5 | 9.6 | 24.0 | 3.1 | 36.4 | 39.5 | 17.6 | 46.0 | 63.5 | 62.2 |
| Other | 8.6 | 5.7 | 14.2 | 3.9 | 56.2 | 60.1 | 12.5 | 61.9 | 74.4 | 80.9 |
| Number of living children | | | | | | | | | | |
| None | 21.8 | 2.2 | 24.0 | 6.3 | 0.5 | 6.8 | 28.0 | 2.8 | 30.8 | 22.1 |
| 1 | 29.9 | 1.1 | 31.0 | 11.8 | 8.3 | 20.1 | 41.7 | 9.4 | 51.1 | 39.3 |
| 2 | 6.9 | 7.1 | 14.0 | 4.6 | 60.1 | 64.6 | 11.5 | 67.2 | 78.6 | 82.2 |
| 3 | 3.9 | 6.4 | 10.2 | 0.7 | 75.7 | 76.4 | 4.6 | 82.0 | 86.6 | 88.2 |
| 4 | 2.0 | 5.5 | 7.5 | 1.0 | 77.8 | 78.8 | 3.0 | 83.4 | 86.3 | 91.3 |
| 5 | -- | 9.9 | 9.9 | 0.6 | 75.0 | 75.6 | 0.6 | 84.9 | 85.5 | 88.4 |
| 6+ | 0.9 | 8.1 | 9.0 | -- | 65.5 | 65.5 | 0.9 | 73.5 | 74.4 | 88.0 |
| Total | 9.2 | 5.6 | 14.9 | 3.7 | 54.7 | 58.4 | 12.9 | 60.3 | 73.2 | 79.7 |

Note: Total includes 25 women belonging to other religions, who are not shown separately.

() Based on 25-49 unweighted cases

-- Less than 0.05 percent

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

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

7.3 Ideal Number of Children

The preceding analysis focused on the respondent's reproductive desires for the future, implicitly taking into account the number of sons and daughters that she already has. In determining the *ideal* number of children, on the other hand, the respondent is asked to perform the more difficult abstract task of stating the number of children she would like to have 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, 96 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 2-3 children for a large majority of women. Only 4 percent of women expressed a desire for fewer than two children and only 5 percent thought that four or more children would be ideal. For those who gave numeric responses, the average number of children considered ideal is 2.4. The mean ideal number of children ranges from 2.0 for women with less than two children to 3.0 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, 87 percent state that their ideal family would consist of fewer than five children. Similarly, 79 percent of women with four 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 increases steadily from 2.2 children for women under age 20 to 2.7 children for women age 45-49. The stated ideal family size is about half a child higher, on the average, in rural areas than in urban areas. The most pronounced differentials are by educational attainment, particularly the wife's education. The average ideal family size is half a child higher for illiterate women than for women who have completed middle school or above. There is little difference in the ideal number of children by the work status of the respondent.

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 1.3 sons and 0.8 daughters. 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

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, Himachal Pradesh, 1992

| Ideal number of children | Number of living children ¹ | | | | | | | Total |
|--------------------------------|--|-------|-------|-------|-------|--------|-------|-------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6+ | |
| URBAN | | | | | | | | |
| None | -- | 0.7 | -- | -- | -- | (--) | * | 0.1 |
| 1 | 24.3 | 37.3 | 11.7 | 5.4 | 4.7 | (2.3) | * | 13.2 |
| 2 | 67.1 | 58.2 | 81.6 | 63.6 | 58.5 | (39.5) | * | 66.7 |
| 3 | 2.9 | 2.2 | 3.5 | 25.6 | 32.1 | (34.9) | * | 14.3 |
| 4 | -- | -- | -- | -- | 0.9 | (9.3) | * | 0.9 |
| Non-numeric responses | 5.7 | 1.5 | 3.2 | 5.4 | 3.8 | (14.0) | * | 4.8 |
| Total percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number of women | 22 | 42 | 98 | 75 | 33 | 13 | 6 | 288 |
| Mean ideal number ² | | | | | | | | |
| Ever-married women | 1.8 | 1.6 | 1.9 | 2.2 | 2.3 | 2.6 | * | 2.0 |
| Currently married women | 1.8 | 1.6 | 1.9 | 2.2 | 2.3 | 2.6 | * | 2.0 |
| RURAL | | | | | | | | |
| None | -- | -- | -- | -- | -- | -- | -- | -- |
| 1 | 7.7 | 6.3 | 1.7 | 2.1 | 0.6 | 1.9 | 2.5 | 2.8 |
| 2 | 75.7 | 76.7 | 79.0 | 51.1 | 43.6 | 31.9 | 25.8 | 58.8 |
| 3 | 10.7 | 14.4 | 16.7 | 42.5 | 34.4 | 46.9 | 40.8 | 29.2 |
| 4 | -- | 0.7 | 1.3 | 1.9 | 15.3 | 6.9 | 14.2 | 4.6 |
| 5 | 1.2 | -- | -- | 0.2 | 0.3 | 2.5 | 0.8 | 0.4 |
| 6+ | -- | -- | -- | -- | 0.3 | 1.2 | 2.5 | 0.3 |
| Non-numeric responses | 4.7 | 1.9 | 1.3 | 2.3 | 5.4 | 8.7 | 13.3 | 3.8 |
| Total percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number of women | 222 | 355 | 614 | 700 | 413 | 211 | 158 | 2674 |
| Mean ideal number ² | | | | | | | | |
| Ever-married women | 2.1 | 2.1 | 2.2 | 2.5 | 2.7 | 2.8 | 3.0 | 2.4 |
| Currently married women | 2.1 | 2.1 | 2.2 | 2.5 | 2.7 | 2.8 | 2.9 | 2.4 |
| TOTAL | | | | | | | | |
| None | -- | 0.1 | -- | -- | -- | -- | -- | -- |
| 1 | 9.2 | 9.5 | 3.1 | 2.4 | 0.9 | 1.9 | 2.4 | 3.8 |
| 2 | 75.0 | 74.7 | 79.4 | 52.3 | 44.7 | 32.3 | 25.7 | 59.6 |
| 3 | 10.0 | 13.2 | 14.9 | 40.8 | 34.2 | 46.2 | 40.5 | 27.7 |
| 4 | -- | 0.7 | 1.1 | 1.7 | 14.2 | 7.0 | 14.2 | 4.3 |
| 5 | 1.1 | -- | -- | 0.2 | 0.3 | 2.4 | 0.8 | 0.4 |
| 6+ | -- | -- | -- | -- | 0.3 | 1.2 | 2.4 | 0.3 |
| Non-numeric responses | 4.8 | 1.8 | 1.5 | 2.6 | 5.3 | 9.1 | 14.0 | 3.9 |
| Total percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number of women | 244 | 397 | 712 | 775 | 446 | 224 | 164 | 2962 |
| Mean ideal number ² | | | | | | | | |
| Ever-married women | 2.0 | 2.0 | 2.1 | 2.4 | 2.7 | 2.8 | 3.0 | 2.4 |
| Currently married women | 2.0 | 2.0 | 2.1 | 2.4 | 2.7 | 2.8 | 2.9 | 2.4 |

() Based on 25-49 unweighted cases

* Percentage/mean not shown; based on fewer than 25 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, Himachal Pradesh, 1992

| Background characteristic | Current age | | | | | | | Total |
|---------------------------------|-------------|-------|-------|-------|-------|-------|-------|-------|
| | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 | |
| Residence | | | | | | | | |
| Urban | * | 1.9 | 1.9 | 2.0 | 2.2 | 2.2 | 2.2 | 2.0 |
| Rural | 2.2 | 2.2 | 2.3 | 2.4 | 2.5 | 2.6 | 2.7 | 2.4 |
| Education | | | | | | | | |
| Illiterate | 2.2 | 2.5 | 2.5 | 2.5 | 2.6 | 2.8 | 2.7 | 2.6 |
| Literate, < middle complete | (2.2) | 2.1 | 2.2 | 2.3 | 2.4 | 2.4 | 2.6 | 2.3 |
| Middle school complete | (2.0) | 2.1 | 2.1 | 2.1 | 2.5 | * | * | 2.1 |
| High school and above | * | 1.9 | 1.9 | 2.0 | 2.1 | 2.1 | 2.1 | 1.9 |
| Religion | | | | | | | | |
| Hindu | 2.2 | 2.2 | 2.3 | 2.3 | 2.5 | 2.6 | 2.7 | 2.4 |
| Muslim | * | * | * | * | * | * | * | (2.7) |
| Sikh | * | * | * | * | * | * | * | (2.3) |
| Caste/tribe | | | | | | | | |
| Scheduled caste | (2.1) | 2.3 | 2.3 | 2.4 | 2.6 | 2.5 | 3.0 | 2.4 |
| Scheduled tribe | * | * | * | * | * | * | * | 2.7 |
| Other | 2.1 | 2.1 | 2.2 | 2.3 | 2.5 | 2.6 | 2.5 | 2.3 |
| Work status | | | | | | | | |
| Not working | 2.1 | 2.1 | 2.2 | 2.2 | 2.5 | 2.7 | (2.5) | 2.3 |
| Working in family farm/business | 2.2 | 2.3 | 2.4 | 2.4 | 2.6 | 2.6 | 2.8 | 2.4 |
| Employed by someone else | * | (2.0) | 2.1 | 2.2 | 2.2 | (2.2) | * | 2.1 |
| Self employed | * | * | * | * | * | * | * | (2.2) |
| Husband's education | | | | | | | | |
| Illiterate | * | 2.4 | 2.5 | 2.5 | 2.7 | 2.8 | 3.0 | 2.6 |
| Literate, < primary complete | * | (2.6) | (2.6) | (2.5) | (2.7) | (3.0) | * | 2.7 |
| Primary school complete | (2.2) | 2.3 | 2.4 | 2.5 | 2.5 | 2.6 | (2.4) | 2.4 |
| Middle school complete | * | 2.2 | 2.3 | 2.3 | 2.5 | 2.6 | (2.6) | 2.3 |
| High school complete | (2.1) | 2.1 | 2.1 | 2.2 | 2.4 | 2.3 | 2.7 | 2.2 |
| Above high school | * | 1.7 | 2.0 | 2.0 | 2.1 | 2.2 | * | 2.0 |
| Total | 2.2 | 2.2 | 2.3 | 2.3 | 2.5 | 2.6 | 2.7 | 2.4 |

Note: Total means are based on all women including 24 women belonging to other religions, the means for whom are not shown separately.

() Based on 25-49 unweighted cases

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

to exhibit a weaker preference for sons, but no matter what the current composition of the family is, son preference persists.

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 and each current pregnancy, women were asked whether the pregnancy was wanted at that time (planned), wanted at a later time (mistimed), or not wanted at all (unwanted). Responses to 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

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, Himachal Pradesh, 1992

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

Note: Table excludes women who gave non-numeric responses to the questions on the ideal number of sons and daughters. Total means are based on all women, including women with four or more daughters and no sons, the means for whom 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

form a potentially powerful indicator of the degree to which couples successfully control childbearing.

Table 7.8 shows that one-quarter of all births (including current pregnancies)¹ 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 13 percent were mistimed. Differentials in fertility planning by residence, religion, caste and tribe are not very substantial. More educated women are less likely to have unplanned 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 most likely to be mistimed, and fourth and higher order births are particularly likely to be unwanted (31 percent). The percentage of pregnancies that were planned decreases steadily with increasing age to a level of 55 percent for women age 35-39. Forty-six percent of all births to women age 35-39 were reported to be unwanted.

¹ The term births includes current pregnancies in the subsequent discussion of Table 7.8.

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, Himachal Pradesh, 1992

| Background characteristic | Planning status of pregnancy ¹ | | | Total percent | Number of births |
|--|---|--------------|----------------|---------------|------------------|
| | Wanted then | Wanted later | Wanted no more | | |
| Residence | | | | | |
| Urban | 74.8 | 14.9 | 10.3 | 100.0 | 135 |
| Rural | 76.2 | 13.2 | 10.6 | 100.0 | 1645 |
| Education | | | | | |
| Illiterate | 79.6 | 9.2 | 11.2 | 100.0 | 813 |
| Lit., < middle complete | 73.3 | 14.8 | 11.9 | 100.0 | 526 |
| Middle school complete | 71.3 | 18.2 | 10.5 | 100.0 | 190 |
| High school and above | 74.3 | 20.1 | 5.6 | 100.0 | 250 |
| Religion | | | | | |
| Hindu | 76.0 | 13.4 | 10.6 | 100.0 | 1709 |
| Muslim | (76.5) | (10.3) | (13.2) | 100.0 | 35 |
| Sikh | (78.4) | (13.7) | (7.7) | 100.0 | 16 |
| Caste/tribe | | | | | |
| Scheduled caste | 78.7 | 11.7 | 9.6 | 100.0 | 468 |
| Scheduled tribe | 84.1 | 7.2 | 8.7 | 100.0 | 109 |
| Other | 74.4 | 14.5 | 11.1 | 100.0 | 1203 |
| Birth order¹ | | | | | |
| 1 | 87.2 | 12.5 | 0.2 | 100.0 | 553 |
| 2 | 81.3 | 17.2 | 1.5 | 100.0 | 502 |
| 3 | 67.9 | 14.1 | 18.1 | 100.0 | 355 |
| 4+ | 60.5 | 8.5 | 31.0 | 100.0 | 370 |
| Mother's age at birth² | | | | | |
| 15-19 | 85.6 | 14.4 | -- | 100.0 | 284 |
| 20-24 | 79.5 | 15.6 | 4.9 | 100.0 | 857 |
| 25-29 | 70.1 | 12.5 | 17.3 | 100.0 | 457 |
| 30-34 | 65.8 | 3.5 | 30.8 | 100.0 | 112 |
| 35-39 | 54.5 | -- | 45.5 | 100.0 | 58 |
| Total | 76.1 | 13.3 | 10.5 | 100.0 | 1780 |

Note: Total includes 21 births to women belonging to other religions and 12 births to mothers age 40-44 at childbirth, which are not shown separately.

() Based on 25-49 unweighted cases

-- Less than 0.05 percent

¹Includes current pregnancy, if any

²For current pregnancy, estimated maternal age at birth.

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 is 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 2.04 is lower by one child (or 31 percent) than the TFR of 2.97, as shown in Table 7.9. Large differences between these two measures are evident for all population subgroups.

| 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, Himachal Pradesh, 1992 | | |
| Background characteristic | Total wanted fertility rate | Total fertility rate |
| Residence | | |
| Urban | 1.47 | 2.03 |
| Rural | 2.10 | 3.07 |
| Education | | |
| Illiterate | 2.52 | 3.63 |
| Literate, < middle complete | 2.07 | 3.12 |
| Middle school complete | 2.06 | 2.77 |
| High school and above | 1.56 | 2.02 |
| Religion | | |
| Hindu | 1.98 | 2.90 |
| Muslim | (2.82) | (4.78) |
| Sikh | (3.80) | (4.38) |
| Caste/tribe | | |
| Scheduled caste | 2.15 | 3.10 |
| Scheduled caste | 3.42 | 4.22 |
| Other | 1.93 | 2.86 |
| Total | 2.04 | 2.97 |
| <p>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, the rates for whom are not shown separately.</p> <p>() Based on 125-249 person-years of exposure</p> | | |

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, collected through a large survey of this type, forms a base for assessment of population and health policies and programmes. The estimates derived from mortality data 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 Household and Woman's Questionnaire. The Household Questionnaire includes questions on individuals in the household suffering from blindness, tuberculosis, leprosy, physical impairment of the limbs, and malaria. The Household Questionnaire also includes a question on deaths occurring in the household during the past two years and the Woman's Questionnaire collects information on the survival status of all births, the age at death if the child died, and the prevalence of common childhood diseases for children under 4 years of age. The prevalence and treatment of childhood diseases are discussed in Chapter 9.

8.1 Morbidity

In general, demographic sample surveys do not include questions on the prevalence of diseases and hence there is little experience with the results of such questions. The patterns shown by the morbidity data analysed 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 derived from this survey may 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 in the household population of the five health conditions by age, sex, and place of residence. Blindness (partial or complete), reported for 14 per 1,000 population, has the highest prevalence. Malaria which afflicted 11 per 1,000 population during the three months prior to the survey is next most prevalent. The remaining diseases all show an overall incidence of 6 or fewer persons per 1,000. The morbidity conditions are discussed below in the descending order of their occurrence.

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, Himachal Pradesh, 1992

| 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 | 0.7 | 6.2 | -- | -- | 8.2 | 4.1 | 475 |
| 15-59 | 1.4 | 2.4 | 1.4 | -- | 8.7 | 4.5 | 935 |
| 60+ | 14.6 | 7.3 | -- | -- | 10.9 | 14.6 | 89 |
| Sex | | | | | | | |
| Male | 2.5 | 4.6 | 0.8 | -- | 7.6 | 5.5 | 771 |
| Female | 1.3 | 3.1 | 0.9 | -- | 9.8 | 4.5 | 728 |
| Total | 2.0 | 3.9 | 0.9 | -- | 8.7 | 5.0 | 1499 |
| RURAL | | | | | | | |
| Age | | | | | | | |
| 0 -14 | 0.7 | 6.6 | 0.7 | 0.5 | 3.7 | 8.3 | 5489 |
| 15-59 | 6.9 | 2.1 | 2.8 | 0.5 | 5.3 | 12.0 | 8123 |
| 60+ | 62.2 | 11.0 | 8.2 | 1.8 | 11.9 | 26.5 | 1460 |
| Sex | | | | | | | |
| Male | 10.5 | 5.5 | 3.3 | 1.1 | 6.3 | 13.9 | 7233 |
| Female | 9.5 | 3.7 | 1.9 | 0.2 | 4.4 | 10.4 | 7838 |
| Total | 10.0 | 4.6 | 2.6 | 0.6 | 5.3 | 12.1 | 15071 |
| TOTAL | | | | | | | |
| Age | | | | | | | |
| 0 -14 | 0.7 | 6.5 | 0.7 | 0.4 | 4.0 | 7.9 | 5964 |
| 15-59 | 6.3 | 2.2 | 2.7 | 0.4 | 5.6 | 11.2 | 9058 |
| 60+ | 59.5 | 10.8 | 7.8 | 1.7 | 11.8 | 25.8 | 1549 |
| Sex | | | | | | | |
| Male | 9.8 | 5.5 | 3.1 | 1.0 | 6.4 | 13.0 | 8004 |
| Female | 8.8 | 3.7 | 1.8 | 0.2 | 4.9 | 9.9 | 8566 |
| Total | 9.3 | 4.5 | 2.4 | 0.6 | 5.6 | 11.4 | 16570 |
| -- Less than 0.05 persons per 1,000 | | | | | | | |

Partial and Complete Blindness

The overall prevalence of partial blindness is 9 per 1,000 population, with wide variations by place of residence. Partial blindness is much higher in rural areas (10 per 1,000 population) than in urban areas (2 per 1,000 population). The prevalence of partial blindness is found to be very high for those age 60+ (60 per 1,000). The high prevalence among older persons, by far the largest differential displayed for any of these morbidity data, is particularly striking. The prevalence of partial blindness is slightly higher for males (10 per 1,000) than females (9 per 1,000).

The overall level of complete blindness is 5 per 1,000 population. The NFHS estimate of total blindness is considerably higher than the 1981 Census estimate of 0.1 percent (Office

of the Registrar General and Census Commissioner, 1983), which is probably indicative of relatively high underenumeration in the census rather than a substantial increase in blindness in Himachal Pradesh between 1981 and 1992.

Rural residents (5 per 1,000) are slightly more likely to be completely blind than urban residents (4 per 1,000). Males are slightly more prone to complete blindness than females. Complete blindness is five times as prevalent among persons over age 60 as among persons age 15-59 and three times more prevalent among persons age 0-14 than among persons age 15-59.

Malaria

The overall level of malaria in the three months prior to the survey was 11 per 1,000. The prevalence was substantially lower in urban areas (5 per 1,000) than in rural areas (12 per 1,000). The prevalence was slightly higher for males than females in both urban and rural areas. More marked sex differentials can be seen in rural areas than in urban areas.

The prevalence of malaria increases with age. The prevalence was highest for those age 60 and over (26 per 1,000) and lowest for those age 0-14 (8 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.

Physical Impairment of the Limbs

The overall prevalence of persons with physically impaired limbs is 6 per 1,000 population. Males have slightly higher prevalence in rural areas and females have slightly higher prevalence in urban areas. There is only a slight difference in prevalence under age 60, but those age 60 and over are more likely to have physically impaired limbs than others. Physical impairment of the limbs is more common in urban areas (9 per 1,000) than in rural areas (5 per 1,000).

Tuberculosis

The overall prevalence of tuberculosis is 2 per 1,000 population. The prevalence of tuberculosis is higher in rural areas (3 per 1,000) than in urban areas (1 per 1,000). Age differences are marked, with values of 1 per 1,000 for persons age 0-14, 3 per 1,000 for those age 15-59, and 8 per 1,000 for those age 60 and over. In rural areas, the prevalence is higher for males whereas no such differential is observed in urban areas.

Leprosy

The reported prevalence of leprosy is only 1 per 1,000 population. The prevalence rates are low for all age and sex groups. The reported number of leprosy cases is negligible in urban areas. It is possible that some incidence of leprosy was not reported in the NFHS due to the stigma attached to the disease.

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 Himachal Pradesh from the NFHS and the SRS are shown in Table 8.2. The crude death rate from the NFHS is based on deaths occurring to usual residents of the household during the two years preceding the survey as obtained in the Household Questionnaire, whereas the SRS estimates are based on deaths during a one-year period. The NFHS CDR is calculated as the annual number of deaths in the two-year period before the date of interview per 1,000 usual residents. The denominator of this measure is calculated by projecting the number of usual residents at the time of the survey backwards to the mid-point of the time period on the basis of the intercensal population growth rate in the state. 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. We, therefore, begin by considering the evidence on the completeness of reporting of deaths. The Sample Registration System (SRS), maintained by the Office of the Registrar General, India, provides the most useful comparison. The most recent report on mortality estimates by age for Himachal Pradesh is for 1991 (Office of the Registrar General, 1993).

Table 8.2 shows an average annual crude death rate for the usually resident population of Himachal Pradesh of 8.4 per 1,000 for the two years before the NFHS survey (roughly 1991-92). The SRS crude death rate for the state is 8.9 per 1,000 for 1991. Therefore, the NFHS estimate of CDR compares very well with the SRS estimate. The NFHS 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 Himachal Pradesh. The rate of natural increase is estimated to be 18.0 per 1,000 population per year for the two-year period before the

| Table 8.2 Crude death rates and age-sex specific death rates | | | | | | | | | |
|---|----------------|--------|-------|---------------------------|--------|-------|------------|--------|-------|
| Crude death rates (CDR) and age-sex specific death rates, Himachal Pradesh, 1991-92 | | | | | | | | | |
| Age | NFHS (1991-92) | | | | | | SRS (1991) | | |
| | Death rate | | | Number of usual residents | | | Death rate | | |
| | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| 0 - 4 | 19.4 | 11.3 | 15.5 | 1051 | 982 | 2033 | 20.4 | 18.0 | 19.3 |
| 5 -14 | 0.7 | 0.7 | 0.7 | 1998 | 1934 | 3931 | 0.6 | 1.3 | 0.9 |
| 15-49 | 3.4 | 1.8 | 2.6 | 3617 | 4304 | 7921 | 3.3 | 2.8 | 3.0 |
| 50+ | 33.9 | 28.1 | 31.0 | 1339 | 1347 | 2686 | 35.7 | 29.2 | 32.6 |
| CDR | 10.1 | 6.9 | 8.4 | 8004 | 8566 | 16570 | 9.8 | 8.0 | 8.9 |

Note: Crude death rates and age-sex specific death rates from the NFHS are based on the annual number of deaths reported for the *de jure* population during the two years prior to the survey. The two years before the survey extend approximately from 16 August 1990 to 16 August 1992 and are labelled 1991-92 in the table. (The NFHS was conducted between 6 June and 24 October 1992.) The SRS rates are also *de jure* based on deaths during 1991.

Source for SRS data: Office of the Registrar General (1993)

survey. This translates into an annual growth rate of 1.8 percent, which would imply a doubling of the population of Himachal Pradesh in 39 years if there were no net migration.

The age-specific death rates for broad age groups shown in Table 8.2 can be compared directly with the SRS rates. Although the SRS does not report the death rates for all of the specific age groups shown in Table 8.2, these rates are estimated based on the SRS age distribution. The NFHS rate is slightly lower than the SRS rate at all ages, as would be expected because the SRS estimates are for a slightly earlier period. The NFHS and SRS age-specific death rates are nearly identical at ages 5-14 and 15-49 and quite close at ages 50+. This analysis suggests that the NFHS in Himachal Pradesh has obtained reasonably complete reporting of deaths during 1991-92.

In most countries, male death rates are higher than female death rates at nearly all ages. South Asia generally has been an exception in this respect, with higher death rates for females over much of the age span (Preston, 1990; Ghosh, 1987). Sex-specific mortality differentials can be analysed by computing the ratio of female to male rates in each age group. For the NFHS, these ratios are 0.58, 1.00, 0.53 and 0.83 for the 0-4, 5-14, 15-49 and 50+ age groups, respectively. The ratios calculated from the SRS (1991) are 0.88, 2.17, 0.85 and 0.82 for the same age groups. The comparison of the NFHS with the SRS reveals that the ratio is higher for the 5-14 age group than for other ages in both sources. Differential treatment of male and female children is the most likely explanation for the higher ratio in the age group 5-14. The differential treatment of children by sex is further explored in Chapters 9 and 10.

8.3 Infant and Child Mortality

Definitions of Infant and Child Mortality

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

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 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:

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

| | |
|--|--|
| 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 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. Results from Table B.5 (see Appendix B) suggest that early infant deaths have *not* been severely underreported in the Himachal Pradesh NFHS, since the ratios of deaths under seven days to all neonatal deaths are quite high (a ratio of less than 25 percent is often used as a guideline to indicate underreporting of early neonatal deaths). The ratios are almost the same for 0-4 years (65) and 5-9 years (68) prior to the survey. However, the ratio for the period 10-14 years prior to the survey is slightly lower (55) indicating that some early infant deaths may not have been reported by older women. The ratios of infant deaths that occurred during the neonatal period (see Appendix Table B.6) are also quite high and follow the same pattern as that of early neonatal deaths. These ratios show an increase over time from 47 to 62.

One problem that is inherent in most retrospective surveys is heaping of the age at death on certain digits, e.g., 6, 12 and 18 months. Misreporting of age at death will bias estimates of the age pattern of mortality if the net result of misreporting is the transference of deaths between age segments for which the rates are calculated. For example, an overestimate of child mortality relative to infant mortality may result if children dying during the first year of life are reported as having died at age one or 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), may have actually occurred during infancy (i.e., at ages

0-11 months). In this case, heaping would bias the infant mortality rate (${}_1q_0$) downward and child mortality (${}_4q_1$) upward.

In the Himachal Pradesh NFHS, there was some misreporting of age at death due to preference for reporting age at death at 5, 10, 15, 20 and 25 days (see Appendix Table B.5). Examination of the distribution of deaths under age two years during the 15 years prior to the survey by month of death (Appendix Table B.6) indicates that there was some heaping at ages 8, 12 and 18 months. However, the calculated infant mortality rates for the population of Himachal Pradesh as a whole are not likely to be understated by more than 1 or 2 percent on this account. Hence, it is unnecessary to make any adjustment in the infant and child mortality rates to correct for age heaping.

This brief check on internal consistency of the Himachal Pradesh NFHS childhood mortality data suggests that there is no serious underreporting of deaths during the time periods for which the mortality rates are estimated. Moreover, 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.

It is seldom possible to establish, with confidence, mortality levels for a period more than 15 years before a survey. Even within the recent 15-year period considered here, apparent trends in mortality rates should be interpreted with caution, for several reasons. First, there may exist differences in the completeness of death reporting related to the length of time before the survey. Second, the accuracy of reports of age at death and of date of birth may deteriorate systematically with time. Third, sampling variability for mortality rates is relatively high (see Appendix A). The fourth reason relates to truncation of mortality rates further back in time, because women age 50 and over who were bearing children during these periods were not included in the survey. This truncation particularly affects mortality trends. For example, for the period 10-14 years before the survey, the rates do not include any births for women age 40-49 since these women were over age 50 at the time of the survey and not eligible to be interviewed. Since these excluded births to older women were likely to be at a somewhat greater risk of dying than births to younger women, the mortality levels for the period may be slightly underestimated. However, the estimates for later periods are less affected by the truncation bias since fewer older women are excluded. The extent of this bias depends on the proportion of births omitted, however, and Table 8.6 shows that among children born in the five years prior to the survey, only 4 percent were born to women over age 34 years. Given this small proportion of births excluded, selection bias for infant and child mortality statistics as far as 15 years back from the survey should be minor.

Levels and Trends in Infant and Child Mortality

Table 8.3 and Figure 8.1 show various measures of infant and child mortality for the three quinquennial periods preceding the survey by residence group. Infant mortality rates declined substantially in Himachal Pradesh during the 15 years prior to the NFHS in 1992. The infant mortality rate for the total population declined from 79 per 1,000 live births during 1978-82 (10-14 years prior to the survey) to 56 per 1,000 live births during 1988-92 (0-4 years prior to the survey), an average rate of decline of two infant deaths per 1,000 live births per year. The percentage decline is higher for child mortality (which dropped by more than half), also

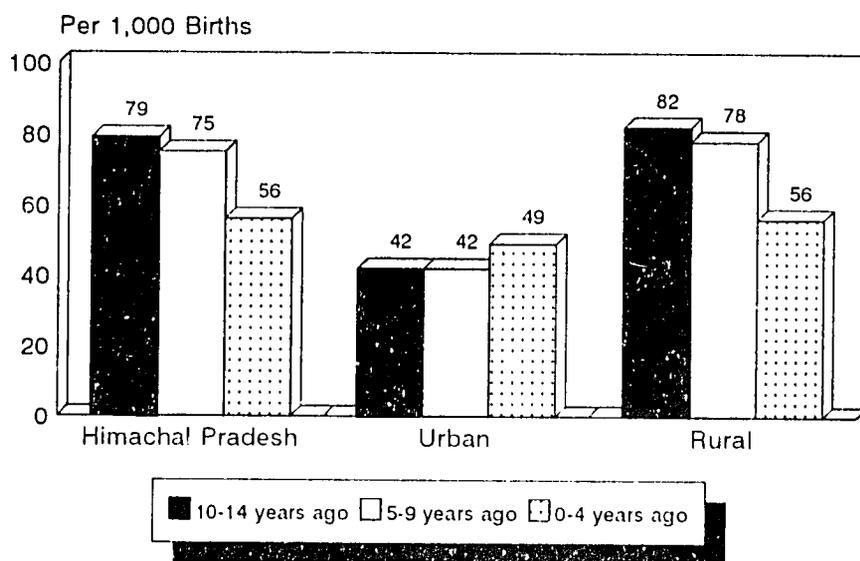
| Table 8.3 Infant and child mortality | | | | | |
|---|-------------------------|---|--|---|--|
| Neonatal, postneonatal, infant, child and under-five mortality for five-year periods preceding the survey, by residence, Himachal Pradesh, 1992 | | | | | |
| Years prior to survey | Neonatal mortality (NN) | Postneonatal mortality ¹ (PNN) | Infant mortality (₁ Q ₀) | Child mortality (₄ Q ₁) | Under-five mortality (₆ Q ₀) |
| URBAN | | | | | |
| 0-4 years | (37.6) | (11.2) | (48.8) | (--) | (48.8) |
| 5-9 years | 30.3 | 11.5 | 41.8 | 15.9 | 57.1 |
| 10-14 years | (25.7) | (15.9) | (41.7) | (17.6) | (58.5) |
| RURAL | | | | | |
| 0-4 years | 33.9 | 22.5 | 56.4 | 15.4 | 71.0 |
| 5-9 years | 43.2 | 34.6 | 77.9 | 30.4 | 105.9 |
| 10-14 years | 40.7 | 41.3 | 81.9 | 32.2 | 111.5 |
| TOTAL | | | | | |
| 0-4 years | 34.2 | 21.7 | 55.8 | 14.1 | 69.1 |
| 5-9 years | 42.1 | 32.5 | 74.6 | 29.1 | 101.6 |
| 10-14 years | 39.4 | 39.2 | 78.6 | 31.0 | 107.2 |
| () Based on 250-499 unweighted children surviving to the beginning of the age interval -- Less than 0.05 ¹ Computed as the difference between the infant and neonatal mortality rates | | | | | |

very high for postneonatal mortality, but only modest for neonatal mortality. The rate of decline is higher in rural areas than in urban areas for most of the mortality measures. In fact, neonatal mortality appears to have increased over time in urban areas, but the large sampling errors for these estimates suggest that the relatively small changes in neonatal mortality over time cannot be reliably interpreted as showing an increasing trend in neonatal mortality. For all measures, the rate of mortality decline accelerated between the last two periods. Despite the rapid overall decline in infant mortality (29 percent over a 10-year period), 1 in every 18 children born in the five years before the NFHS died within the first year of life and 1 in every 14 children died before reaching age five. Therefore, child survival programmes need to be intensified to produce further reductions in the level of infant and child mortality.

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 one and half times as high in rural areas as in urban areas (67 per 1,000 live births compared to 45 per 1,000 live births). Children in rural areas of Himachal Pradesh experience a 68 percent higher risk of dying before their fifth birthday than urban children. Infant mortality declines sharply with increasing education of women overall, as expected, ranging from a high of 73 per 1,000 live births for illiterate women to a low of 39 per 1,000 live births for women with at least a high school education. Similar variation is displayed by the other mortality indicators shown in the table, with the exception of neonatal mortality, which varies relatively little with education. Child mortality is high among children from scheduled castes (34 per 1,000 live births).

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



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

NFHS, Himachal Pradesh, 1992

As expected, the presence of medical maternity care for mothers (antenatal or delivery care by a trained health professional) is associated with substantially lower mortality risks. Infant mortality rates fall from 76 per 1,000 for births with no care, to 59 per 1,000 for births with either antenatal or delivery care, and to 31 per 1,000 for births with both antenatal and delivery care.

One might expect the effect of antenatal and delivery care to be most pronounced for mortality risks immediately following birth, but this is not at all the case. The greatest impact of antenatal and delivery care is on child deaths (those occurring one to five years following birth) and postneonatal deaths (those occurring one month to one year after birth). While it is possible that antenatal and delivery care could influence mortality risks one month to one year following birth (postneonatal mortality), such care seems unlikely to have a substantial impact on survival one to five years after birth (child mortality). The presence of such care is undoubtedly associated with other circumstances favourable to child survival, however, which might explain the apparently large effect of antenatal and delivery care on child mortality. Given the magnitude of the apparent impact, it seems likely that this explains a substantial portion of the effect on postneonatal mortality as well.

Although the impact of antenatal and delivery care on survival during the first month of life (neonatal mortality) is less than the effect on mortality risks at later ages, it is nonetheless substantial. This differential persists despite the fact that women who have pregnancy-related complications (whose babies have a relatively high risk of nonsurvival) are usually more likely to seek antenatal and delivery care (see Table 9.7).

Demographic Differentials in Infant and Child Mortality

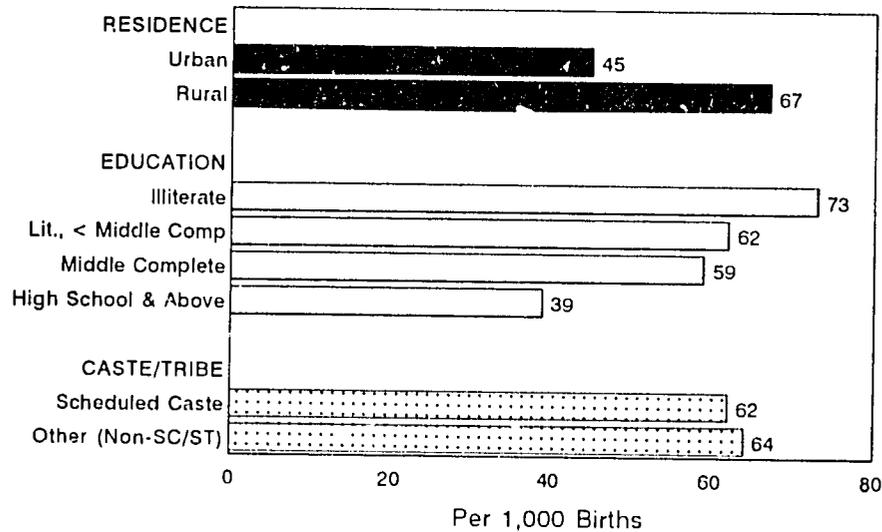
This section examines differentials in early child mortality by various demographic characteristics of both the child and the mother. Table 8.5 and Figure 8.3 present mortality rates for the 10 years preceding the survey by sex of the child, age of the mother at the time of the child's birth, birth order,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

The pattern of sex differentials in mortality by age in Table 8.5 provides evidence of differential treatment of male and female children leading to higher mortality risks for females. However, it is observed that excess female mortality occurs only after the first month of life. Neonatal mortality, which reflects a substantial component of congenital conditions, is substantially higher for males than for females. Higher neonatal mortality among boys than girls is found in most populations and reflects greater underlying male frailty. However, postneonatal mortality is 11 percent higher for females than for males. The largest differential is in the child

| Background characteristic | Neonatal mortality (NN) | Postneonatal mortality ¹ (PNN) | Infant mortality (I ₀) | Child mortality (C ₀) | Under-five mortality (U ₀) |
|---|-------------------------|---|------------------------------------|-----------------------------------|--|
| Residence | | | | | |
| Urban | 33.6 | 11.3 | 45.0 | 7.9 | 52.5 |
| Rural | 38.5 | 28.4 | 67.0 | 22.6 | 88.0 |
| Mother's education | | | | | |
| Illiterate | 35.6 | 37.6 | 73.2 | 27.7 | 98.8 |
| Literate, < middle complete | 43.4 | 18.9 | 62.3 | 19.9 | 81.0 |
| Middle school complete | (42.2) | (17.0) | (59.1) | (5.3) | (64.1) |
| High school and above | 33.1 | 6.2 | 39.3 | 1.3 | 40.5 |
| Caste/tribe | | | | | |
| Scheduled caste | 32.2 | 29.4 | 61.7 | 34.0 | 93.6 |
| Other (Non-SC/ST) | 38.7 | 25.3 | 64.0 | 17.8 | 80.7 |
| Medical maternity care² | | | | | |
| No antenatal or delivery care | (36.5) | (39.8) | (76.4) | (4.5) | (80.5) |
| Either antenatal or delivery care | 35.8 | 23.3 | 59.2 | 20.7 | 78.6 |
| Both antenatal and delivery care | 25.9 | 5.4 | 31.2 | (--) | 31.2 |
| Total | 38.1 | 27.0 | 65.2 | 21.3 | 85.0 |

Note: Total includes the mortality experience of 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
 -- Less than 0.05
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.

Figure 8.2
 Infant Mortality Rates by Selected
 Background Characteristics



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

NFHS, Himachal Pradesh, 1992

mortality rate (${}_4q_1$), which is 44 percent higher for females than for males. This reversal of sex differentials in 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. It has been observed that if gender bias is absent with respect to neonatal and infant mortality and present with respect to child mortality, then factors beyond reproductive health care might be causing excessive girl child mortality (Das Gupta, 1987; Basu, 1989). The disadvantage of female children age one to five is consistent with such differential treatment, although once again the results should be interpreted with caution because of the large sampling errors of the estimates.

For both social and biological reasons, infant and child mortality often exhibit a U-shaped pattern with respect to the mother's age at the time of the birth, with children of both very young and very old mothers being at higher risks of dying than are children whose mothers are in the prime reproductive ages. This pattern is also seen in Himachal Pradesh. Infant mortality is highest for children of mothers under age 20 (81 per 1,000 live births) and age 30-39 (78 per 1,000 live births). The lowest infant mortality rate (59 per 1,000 live births) is for women in the prime childbearing years (20-29 years old).

Similar patterns are observed for the remaining infant and child mortality statistics. The high mortality for the offspring of young mothers (under age 20) and mothers of age 30-39 is particularly evident for neonatal mortality. Infants born to young mothers are more likely to be of low birth weight, which is probably an important factor contributing to their higher neonatal mortality rate.

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, Himachal Pradesh, 1992

| Demographic characteristic | Neonatal mortality (NN) | Postneonatal mortality ¹ (PNN) | Infant mortality (I ₀) | Child mortality (C ₀) | Under-five mortality (U ₀) |
|--------------------------------|-------------------------|---|------------------------------------|-----------------------------------|--|
| Sex of child | | | | | |
| Male | 41.6 | 25.6 | 67.2 | 17.6 | 83.6 |
| Female | 34.4 | 28.5 | 62.9 | 25.3 | 86.6 |
| Mother's age at birth | | | | | |
| < 20 | 49.6 | 31.2 | 30.8 | 18.7 | 98.0 |
| 20-29 | 33.5 | 25.3 | 58.8 | 19.9 | 77.6 |
| 30-39 | (48.7) | (28.9) | (77.6) | (32.2) | (107.3) |
| Birth order | | | | | |
| 1 | 43.4 | 19.4 | 62.8 | 14.8 | 76.7 |
| 2-3 | 32.9 | 25.9 | 58.8 | 20.7 | 78.3 |
| 4-6 | 41.5 | 32.1 | 73.6 | 26.6 | 98.2 |
| Previous birth interval | | | | | |
| < 24 months | 49.0 | 43.9 | 92.9 | 28.6 | 118.9 |
| 24-47 months | 28.0 | 23.2 | 51.2 | 24.3 | 74.2 |
| 48+ months | (28.3) | (23.5) | (51.8) | (9.8) | (61.2) |
| Birth size² | | | | | |
| Average | 24.6 | 23.9 | 48.5 | 9.7 | 57.8 |
| Small | (73.3) | (20.9) | (94.2) | (20.0) | (112.3) |

Note: Rates for children born to mother's age 40-49 at birth, children of birth order 7+ and children whose birth size is large, are not shown separately, because the rates are based on fewer than 250 unweighted births.

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

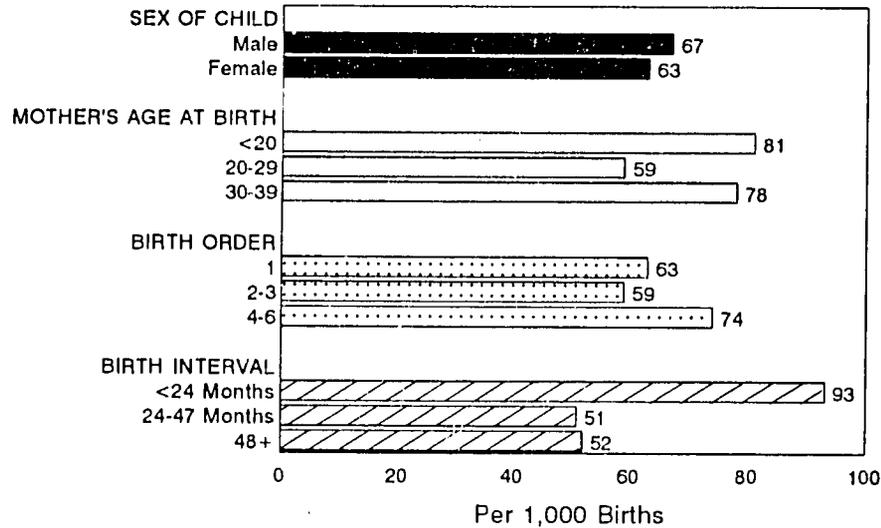
¹Computed as the difference between the infant and neonatal mortality rates

²Birth size as reported by the mother; rates are for the four-year period preceding the survey.

Children born to mothers under age 20 and age 30-39 have a relatively high risk of dying. Differentials by birth order also show the expected 'J-shaped pattern for neonatal mortality but not for postneonatal and child mortality, which increase steadily with birth order. The steady increase in child mortality with birth order may reflect the more intense competition for nutritious food faced by high birth order children once they are weaned.

Childspacing patterns have a powerful effect on the survival chances of children in Himachal Pradesh. Infant mortality risks are sharply higher for children born soon after the previous child. Infant mortality is 80 percent higher for children with a preceding interval of less than 24 months than for children with longer preceding intervals. While there may be a substantial impact of the preceding birth interval as such on mortality risks, a substantial portion of this effect is likely to be due to the association of shorter preceding intervals with other risk factors. Shorter intervals are likely to occur in larger families, for example, and larger families are more likely to reside in rural areas where medical facilities and other survival-enhancing resources are less readily available. Nevertheless, multivariate analyses of birth intervals and child survival commonly find short intervals (less than 24 months) to be damaging to the child's survival chances.

Figure 8.3
Infant Mortality Rates by Selected
Demographic Characteristics



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

NFHS, Himachal Pradesh, 1992

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 most babies in Himachal Pradesh are not weighed at the time of birth, mothers were asked to report the size of their babies at birth, for children born during the four years preceding the interview. Women were asked whether these births were "large, average, or small" in size. The last panel of Table 8.5 shows infant and child mortality statistics for births classified in this way. There are very few children reported as "large" at birth, and hence mortality indicators for this group are not shown separately. Children who are perceived by their mothers to be smaller than average at birth experience much higher mortality rates than children perceived to be average, particularly in their first month of life.

8.4 High-Risk Fertility Behaviour

In theory, the mother's age at first birth, the interval between births, and the birth order of a birth can all be controlled by the parents if there are adequate family planning services and supplies available to them. Understanding the prevalence of high-risk births in Himachal Pradesh is therefore of interest for health and family planning policymakers and programme managers. Table 8.6 shows the percentages of births in the five years preceding the interview that fall into different child survival risk categories, as well as the distribution of all currently married women across these categories. It also shows the relative risks of children dying across the different risk categories. The purpose of this table is to identify areas in which changed

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, Himachal Pradesh, 1992

| 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 | 69.1 | 1.00 | 56.2 ^b |
| Single high-risk category | | | |
| Age<18: Age under 18 years at birth | 1.1 | * | 0.1 |
| Age>34: Age over 34 years at birth | 0.4 | * | 9.7 |
| BI<24 : Birth interval under 24 months | 16.5 | * | 9.1 |
| BO>3 : Birth order higher than 3 | 7.2 | * | 7.3 |
| Subtotal | 25.2 | 1.74 | 26.2 |
| Multiple high-risk category | | | |
| Age<18 & BI<24 ^c | 0.2 | * | 0.1 |
| Age>34 & BI<24 | -- | * | -- |
| Age>34 & BO>3 | 1.1 | * | 13.5 |
| Age>34 & BI<24 & BO>3 | 0.2 | * | 0.4 |
| BI<24 & BO>3 | 4.2 | * | 3.6 |
| Subtotal | 5.7 | 3.29 | 17.6 |
| In any high-risk category | 30.9 | 2.03 | 43.8 |
| Total percent | 100.0 | NA | 100.0 |
| Number | 146 | NA | 276 |
| RURAL | | | |
| Not in any high-risk category | 57.4 | 1.00 | 53.4 ^b |
| Single high-risk category | | | |
| Age<18: Age under 18 years at birth | 2.8 | (1.61) | 0.3 |
| Age>34: Age over 34 years at birth | 0.4 | * | 3.5 |
| BI<24 : Birth interval under 24 months | 17.0 | 1.69 | 10.3 |
| BO>3 : Birth order higher than 3 | 12.7 | 1.07 | 8.1 |
| Subtotal | 32.9 | 1.47 | 22.2 |
| Multiple high-risk category | | | |
| Age<18 & BI<24 ^c | 0.4 | * | 0.1 |
| Age>34 & BI<24 | 0.1 | * | -- |
| Age>34 & BO>3 | 2.9 | (0.52) | 18.0 |
| Age>34 & BI<24 & BO>3 | 0.4 | * | 0.8 |
| BI<24 & BO>3 | 5.9 | 2.55 | 5.5 |
| Subtotal | 9.7 | 2.03 | 24.4 |
| In any high-risk category | 42.6 | 1.60 | 46.6 |
| Total percent | 100.0 | NA | 100.0 |
| Number | 1778 | NA | 2543 |

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, Himachal Pradesh, 1992

| 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 | 58.3 | 1.00 | 53.7 ^b |
| Single high-risk category | | | |
| Age<18: Age under 18 years at birth | 2.7 | (1.61) | 0.3 |
| Age>34: Age over 34 years at birth | 0.4 | * | 4.1 |
| BI<24 : Birth interval under 24 months | 16.9 | 1.69 | 10.2 |
| BO>3 : Birth order higher than 3 | 12.3 | 1.13 | 8.0 |
| Subtotal | 32.3 | 1.50 | 22.6 |
| Multiple high-risk category | | | |
| Age<18 & BI<24 ^c | 0.4 | * | 0.1 |
| Age>34 & BI<24 | 0.1 | * | -- |
| Age>34 & BO>3 | 2.7 | (0.52) | 17.5 |
| Age>34 & BI<24 & BO>3 | 0.4 | * | 0.8 |
| BI<24 & BO>3 | 5.8 | 2.66 | 5.3 |
| Subtotal | 9.4 | 2.10 | 23.7 |
| In any high-risk category | 41.7 | 1.63 | 46.3 |
| Total percent | 100.0 | NA | 100.0 |
| Number | 1924 | NA | 2819 |

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.

NA: Not applicable

() 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 fewer than 50 unweighted births.

-- Less than 0.05 percent

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

^bIncludes sterilized women and women whose husbands are sterilized

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

reproductive behaviour would be likely to effect a reduction in infant and child mortality. Mortality risks are represented here by the proportion of children born during the five years prior to the survey who had died by the time of the survey. The "risk ratio" is the ratio of the proportion of deceased children in the given "high-risk" category to the proportion for children not in any "high-risk" category.

The figures in Table 8.6 may be considered either from the point of view of a prospective mother or from the point of view of the health and family planning policymaker. For the prospective parent, the critical issue is the magnitude of each relative risk, since parents will presumably want to avoid having births under circumstances that are likely to result in the child's death. For policymakers, not only is the magnitude of each risk important; so too, is

the percentage of births or of women in each of the high-risk categories. The latter is important because it determines whether particular types of high-risk births are likely to occur frequently or rarely; presumably policymakers will want to target their efforts toward types of high-risk births that occur most frequently.

In terms of the magnitude of the risks associated with each factor, Table 8.6 suggests that the combination of a short birth interval and high birth order is particularly dangerous (ratio of 2.66). Other high-risk conditions include a birth interval of less than 24 months (risk ratio of 1.69), followed by a maternal age under age 18 (1.61), then by a birth order higher than three (1.13). In terms of the proportion of births or women falling into the different risk categories, however, higher order births, although less risky in absolute terms than births to women under age 18, constitute a far higher proportion of births (and of currently married women) than do births to women under age 18. Thus, from a policy perspective, the combination of convincing women to reduce family size and to space their births in intervals of at least two years will go furthest in lowering infant and child mortality. Individual couples, however, would be well advised to avoid having any children until the wife enters her twenties, as the risks of a child dying if the mother is younger are relatively high.

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. A comprehensive analysis of the determinants of the risk ratios shown in Table 8.6 is beyond the scope of this report.

CHAPTER 9

MATERNAL AND CHILD HEALTH

Recognizing the importance of maternal and child health services, the Ministry of Health, Government of India, took 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 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 thrusts 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, 1992). 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), the establishment 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 Postpartum Programme (Ministry of Health and Family Welfare, 1992).

In Himachal Pradesh, as in other states of India, maternal and child health services are available at the health centres and hospitals run by the Government or they can be obtained in nursing homes and hospitals which are run either by private doctors or by nongovernmental voluntary organizations, charitable trusts, etc. Since the majority of private doctors and hospitals are concentrated in urban areas, government health centres and government programmes play a vital role in the provision of MCH services in rural areas. The Female Health Worker, who is an Auxiliary Nurse Midwife (ANM), not only assists the Medical Officer and the Female Health Assistant in providing these services but she is supposed to visit the households to register pregnant women and give them antenatal care throughout the pregnancy, natal care at the time of delivery and also postnatal care for the mother and the child. She is supposed to refer all the cases with any complications (which are beyond her capacity to treat) to the Primary Health Centre. At the grass-roots level, in addition to the ANM, the Village Health Guide, selected by the community, is a link between the community and the government health functionaries. Since most of the deliveries in rural areas are still conducted at home, *dais* (traditional birth attendants) are important and recognising their role, the government conducts training programmes for them. Apart from these workers, the *Anganwadi* worker under the Integrated Child Health Services Programme (in the blocks which are chosen for Integrated Child Development Services) also renders MCH services and is supposed to work in coordination with the ANM.

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 1988. The information covered behaviour relating to pregnancy and childbirth; infant and child feeding practices, including breastfeeding; immunizations; episodes of illnesses such as acute respiratory infection, fever and diarrhoea and the treatment received; mothers' knowledge and use of Oral Rehydration Salts (ORS); and the level of child nutrition assessed by measuring the weight of children.

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

Although information was obtained for each child born since January 1988, the information presented in this chapter pertains to 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 correct diet and the provision of iron and folic acid tablets to pregnant women. Improved nutritional status, coupled with 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 before the survey was initially asked whether any health worker visited her at home to provide 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. 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, for the purpose of this tabulation only the provider with the highest qualification is considered. For three-fourths of births in Himachal Pradesh during the last four years, mothers received antenatal care. Previous studies conducted in the state also found a high utilization of antenatal care services in Himachal Pradesh (Chand and Sharma, 1993; Population Research Centre, Shimla, 1990; Rao, Chand and Bhati, 1992).

For 32 percent of births, doctors provided antenatal care and for another 42 percent antenatal care was given by other health professionals, such as nurses, midwives, ayurvedic doctors and homoeopathic doctors. For 2 percent of births, the mothers received antenatal care only at home. Note that, in this tabulation, those who receive care outside the home whether they also received care at home from a health worker, are classified as "outside home".

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, Himachal Pradesh, 1992

| Background characteristic | ANC only at home from health worker | Antenatal care provider (outside home) ¹ | | | No ANC | Total percent | Number of births |
|------------------------------|-------------------------------------|---|---------------------------|---|--------|---------------|------------------|
| | | Doctor | Other health professional | Traditional birth attendant, other ² | | | |
| Mother's age at birth | | | | | | | |
| < 20 | 1.6 | 24.8 | 46.4 | 0.5 | 26.6 | 100.0 | 248 |
| 20-34 | 1.8 | 33.9 | 40.7 | 0.7 | 22.8 | 100.0 | 1226 |
| 35+ | 2.2 | 20.0 | 41.9 | -- | 35.9 | 100.0 | 60 |
| Birth order | | | | | | | |
| 1 | 1.7 | 37.6 | 44.2 | 0.6 | 15.8 | 100.0 | 465 |
| 2-3 | 2.3 | 31.3 | 43.6 | 1.0 | 21.8 | 100.0 | 736 |
| 4-5 | 0.5 | 25.8 | 34.8 | 0.1 | 38.7 | 100.0 | 249 |
| 6+ | 1.6 | 23.4 | 30.8 | -- | 44.2 | 100.0 | 84 |
| Residence | | | | | | | |
| Urban | -- | 65.8 | 28.3 | 0.8 | 5.1 | 100.0 | 116 |
| Rural | 1.9 | 29.1 | 42.8 | 0.6 | 25.5 | 100.0 | 1418 |
| Education | | | | | | | |
| Illiterate | 2.2 | 18.8 | 37.3 | 0.3 | 41.4 | 100.0 | 713 |
| Literate, < middle complete | 2.0 | 31.8 | 52.4 | 0.3 | 13.5 | 100.0 | 453 |
| Middle school complete | -- | 45.0 | 47.1 | 4.3 | 3.5 | 100.0 | 159 |
| High school and above | 1.3 | 66.8 | 29.3 | -- | 2.7 | 100.0 | 210 |
| Religion | | | | | | | |
| Hindu | 1.6 | 32.4 | 41.3 | 0.7 | 24.0 | 100.0 | 1469 |
| Muslim | (8.3) | (12.0) | (58.9) | (--) | (20.8) | 100.0 | 32 |
| Sikh | (8.3) | (48.5) | (39.2) | (--) | (3.9) | 100.0 | 16 |
| Caste/tribe | | | | | | | |
| Scheduled caste | 2.1 | 28.9 | 41.4 | -- | 27.6 | 100.0 | 375 |
| Scheduled tribe | 3.8 | 18.1 | 36.4 | -- | 41.6 | 100.0 | 103 |
| Other | 1.5 | 34.3 | 42.3 | 1.0 | 21.0 | 100.0 | 1056 |
| Total ² | 1.8 | 31.9 | 41.7 | 0.7 | 24.0 | 100.0 | 1534 |

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

() Based on 25-49 unweighted cases

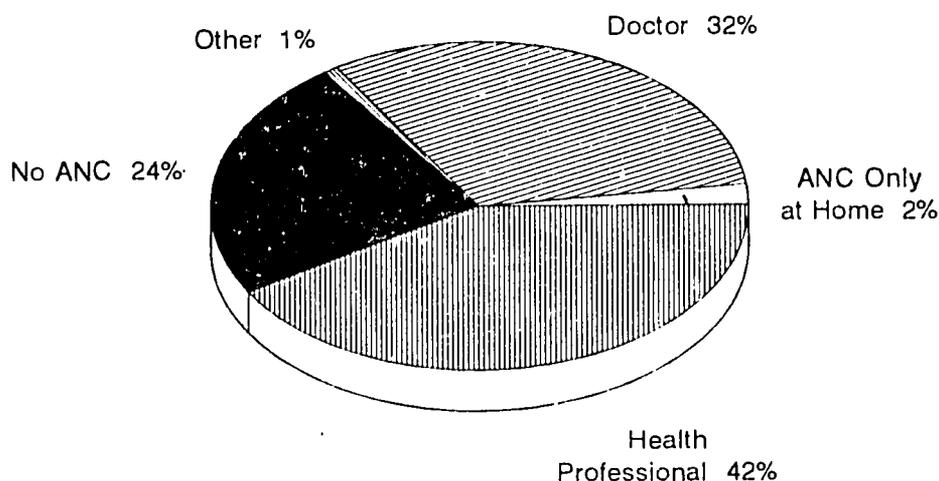
-- Less than 0.05 percent

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

²Births in the period 1-47 months prior to the survey. Total includes 18 births to women belonging to other religions, which are not shown separately.

The coverage of antenatal care is highest (77 percent) among births to mothers age 20-34 and lowest (64 percent) among births to mothers age 35 and over. There is a negative relationship 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 of lower parity. As expected, antenatal care is more common in urban areas (95 percent) than in rural areas (75 percent). The proportion of births whose mothers received antenatal care increases steadily with an increase

Figure 9.1
Sources of Antenatal Care (ANC)
During Pregnancy



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

NFHS, Himachal Pradesh, 1992

in the educational level of the mother, from 59 percent for illiterate mothers to 97 percent for mothers who have completed middle school and beyond. As expected, more educated women are more likely to receive antenatal care from doctors. Sikh mothers are more likely to receive antenatal care than Hindu and Muslim mothers (but the number of observations of Sikh and Muslim mothers is small) and mothers from scheduled tribes are least likely to receive antenatal care.

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 pregnancies, 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 visit an antenatal clinic that often, because they may face a loss of wages. Under these circumstances, a minimum of four antenatal visits is recommended, one each 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. For women who received antenatal care, the median frequency of antenatal care visits is 3.1 for any type of visit (2.2 for home visits and 3.0

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, Himachal Pradesh, 1992

| ANC visits/ months pregnant | Home visits | Outside visits | Any type |
|---|-------------|----------------|----------|
| URBAN | | | |
| Number of ANC visits | | | |
| None | 95.5 | 5.1 | 5.1 |
| 1 visit | 1.6 | 5.6 | 5.1 |
| 2-3 visits | 2.4 | 26.2 | 25.4 |
| 4 or more visits | 0.5 | 63.1 | 64.4 |
| Total percent | 100.0 | 100.0 | 100.0 |
| Median number of visits (for those with ANC) | 2.6 | 5.2 | 5.2 |
| Months pregnant at the time of the first ANC visit | | | |
| No antenatal care | 95.5 | 5.1 | 5.1 |
| First trimester | 1.6 | 58.3 | 59.1 |
| Second trimester | 2.9 | 30.7 | 31.0 |
| Third trimester | -- | 5.9 | 4.8 |
| Total percent | 100.0 | 100.0 | 100.0 |
| Median months pregnant at first visit (for those with ANC) | 4.6 | 3.6 | 3.6 |
| Number of live births ¹ | 116 | 116 | 116 |
| RURAL | | | |
| Number of ANC visits | | | |
| None | 89.4 | 27.5 | 25.5 |
| 1 visit | 4.6 | 14.4 | 13.8 |
| 2-3 visits | 5.0 | 45.5 | 43.0 |
| 4 or more visits | 0.7 | 12.6 | 17.4 |
| Don't know/missing | 0.2 | -- | 0.2 |
| Total percent | 100.0 | 100.0 | 100.0 |
| Median number of visits (for those with ANC) | 2.2 | 2.9 | 3.0 |
| Months pregnant at the time of the first ANC visit | | | |
| No antenatal care | 89.4 | 27.5 | 25.5 |
| First trimester | 3.4 | 21.9 | 24.1 |
| Second trimester | 4.8 | 36.0 | 36.0 |
| Third trimester | 2.2 | 14.7 | 14.4 |
| Don't know/missing | 0.1 | -- | -- |
| Total percent | 100.0 | 100.0 | 100.0 |
| Median months pregnant at first visit (for those with ANC) | 4.8 | 5.1 | 5.0 |
| Number of live births ¹ | 1418 | 1418 | 1418 |

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, Himachal Pradesh, 1992

| ANC visits/ months pregnant | Home visits | Outside visits | Any type |
|---|--------------|----------------|--------------|
| TOTAL | | | |
| Number of ANC visits | | | |
| None | 89.9 | 25.8 | 24.0 |
| 1 visit | 4.4 | 13.7 | 13.2 |
| 2-3 visits | 4.8 | 44.1 | 41.7 |
| 4 or more visits | 0.7 | 16.4 | 21.0 |
| Don't know, missing | 0.2 | -- | 0.2 |
| Total percent | 100.0 | 100.0 | 100.0 |
| Median number of visits (for those with ANC) | 2.2 | 3.0 | 3.1 |
| Months pregnant at the time of the first ANC visit | | | |
| No antenatal care | 89.9 | 25.8 | 24.0 |
| First trimester | 3.3 | 24.6 | 26.8 |
| Second trimester | 4.7 | 35.6 | 35.6 |
| Third trimester | 2.1 | 14.0 | 13.7 |
| Don't know, missing | 0.1 | -- | -- |
| Total percent | 100.0 | 100.0 | 100.0 |
| Median months pregnant at first visit (for those with ANC) | 4.8 | 5.0 | 4.8 |
| Number of live births¹ | 1534 | 1534 | 1534 |

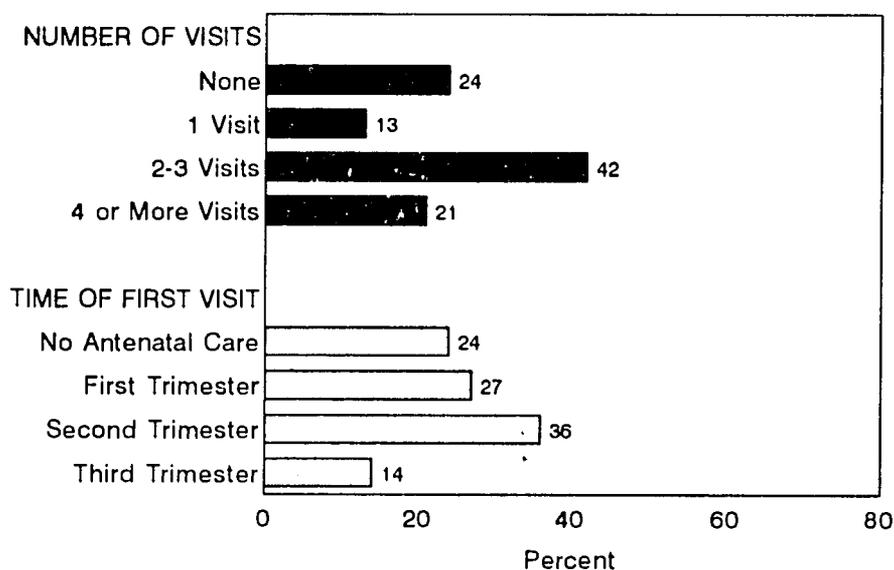
-- Less than 0.05 percent

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

for visits outside the home). It is clear that women in Himachal Pradesh are far behind in following the standards set for antenatal visits. The median number of visits is larger in urban areas (5.2) than in rural areas (3.0), but there is no substantial urban-rural difference regarding the number of home visits by health workers. 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 by pregnant women in urban areas. No home visits were made by health workers to the mothers of 90 percent of births; only 11 percent of births in rural areas and 4 percent of births in urban areas received antenatal care through home visits.

Obstetricians advise that antenatal care should begin at the latest six weeks after the last menstrual period. However, studies undertaken to measure the impact of the initial antenatal visit show that, even when antenatal care is initiated as late as the third trimester, there is a substantial reduction in perinatal mortality (Ramachandran, 1992). In the Himachal Pradesh NFHS, the median gestational age for the first antenatal care visit of any type (home or outside) is 4.8 months, with a median gestational age of 3.6 months in urban areas and 5.0 months in rural areas. The median age of gestation in urban areas is slightly higher for home visits (4.6 months) than outside visits (3.6 months). The difference is only about one week in rural areas. Overall, 36 percent of births were to women who had received antenatal care for the first time

Figure 9.2
Number and Timing of Antenatal Visits



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

NFHS, Himachal Pradesh, 1992

in the second trimester (31 percent of urban births and 36 percent of rural births). In urban areas, 59 percent of births were to women who had received antenatal care for the first time in the first trimester of pregnancy compared with only 24 percent in rural areas.

The majority of pregnant women in Himachal Pradesh receive antenatal care quite late in their pregnancy and 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 (Visaria, 1984; Simmons et al., 1978). Neonatal tetanus is caused by infection of the newborn (usually at the umbilical stump) with tetanus organisms. Neonatal tetanus is most common when the delivery takes place in an unhygienic environment and nonsterilized instruments are used for cutting the umbilical cord. Tetanus typically develops during the first or second week of life and is fatal in 70 to 90 percent of cases (Foster, 1984). Where this disease is most common, such as remote rural areas of Himachal Pradesh, expert medical help is also not available, leading to a fatality rate of nearly 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 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). If the initial doses were received less than three years ago, a single booster injection is recommended (Central Bureau of Health Intelligence, 1991).

In the NFHS, each mother who had a live birth during the past four years was asked whether she was given an injection in the arm to prevent her and her baby from getting tetanus and, if so, how many times. 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-nine percent of births in Himachal Pradesh were to mothers who did not receive a single dose of tetanus toxoid vaccine, 23 percent were to those who received one dose and only 47 percent were to those who received two or more doses. The percentage of births to mothers who received two or more doses of the tetanus vaccine is significantly higher in urban areas (63 percent) than in rural areas (46 percent).

For births in the last four years, tetanus toxoid coverage is lower for older mothers, mothers pregnant with higher order births, illiterate mothers and those belonging to scheduled tribes. 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 52 percent for illiterate mothers to 96 percent for mothers with at least a high school education.

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 Trivandrum to 46 in Baroda (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 women 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. Seventy-two percent of births were to mothers who had

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, Himachal Pradesh, 1992

| Background characteristic | Number of tetanus toxoid injections | | | | Percent given iron/folic tablets | Number of births |
|------------------------------|-------------------------------------|-------------|-------------------|---------------|----------------------------------|------------------|
| | None | One dose | Two doses or more | Total percent | | |
| Mother's age at birth | | | | | | |
| < 20 | 31.9 | 14.4 | 53.7 | 100.0 | 69.5 | 248 |
| 20-34 | 27.7 | 25.0 | 47.3 | 100.0 | 72.7 | 1226 |
| 35+ | 46.8 | 28.7 | 24.5 | 100.0 | 60.9 | 60 |
| Birth order | | | | | | |
| 1 | 19.7 | 9.6 | 70.8 | 100.0 | 80.1 | 465 |
| 2 | 24.6 | 33.0 | 42.4 | 100.0 | 76.5 | 418 |
| 3 | 29.7 | 31.6 | 38.7 | 100.0 | 71.0 | 318 |
| 4 | 40.0 | 27.2 | 32.8 | 100.0 | 60.0 | 170 |
| 5 | 52.4 | 19.0 | 28.5 | 100.0 | 46.8 | 79 |
| 6+ | 58.3 | 18.0 | 23.8 | 100.0 | 51.9 | 84 |
| Residence | | | | | | |
| Urban | 5.6 | 31.8 | 62.6 | 100.0 | 90.4 | 116 |
| Rural | 31.1 | 22.7 | 46.2 | 100.0 | 70.2 | 1418 |
| Education | | | | | | |
| Illiterate | 48.5 | 20.4 | 31.2 | 100.0 | 54.2 | 713 |
| Literate, < middle complete | 18.5 | 25.6 | 55.9 | 100.0 | 81.4 | 453 |
| Middle school complete | 6.4 | 28.4 | 65.2 | 100.0 | 92.4 | 159 |
| High school and above | 3.8 | 25.3 | 70.9 | 100.0 | 95.0 | 210 |
| Religion | | | | | | |
| Hindu | 29.0 | 23.3 | 47.7 | 100.0 | 71.6 | 1469 |
| Muslim | (37.4) | (28.9) | (33.7) | 100.0 | (70.9) | 32 |
| Sikh | (8.3) | (36.8) | (54.9) | 100.0 | (91.7) | 16 |
| Caste/tribe | | | | | | |
| Scheduled caste | 34.9 | 22.7 | 42.4 | 100.0 | 69.0 | 375 |
| Scheduled tribe | 55.6 | 16.9 | 27.4 | 100.0 | 50.8 | 103 |
| Other | 24.5 | 24.3 | 51.2 | 100.0 | 74.8 | 1056 |
| Total¹ | 29.2 | 23.4 | 47.4 | 100.0 | 71.7 | 1534 |

() Based on 25-49 unweighted cases

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

received iron and folic acid tablets. As expected, the receipt of iron and folic acid tablets is substantially higher in urban areas (90 percent) than in rural areas (70 percent). The pattern of distribution of iron and folic acid tablets according to education, religion, and caste/tribe 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 under the supervision of trained health professionals. From the standpoint of child survival and the health of the mother, it is advantageous for the birth of the baby to take

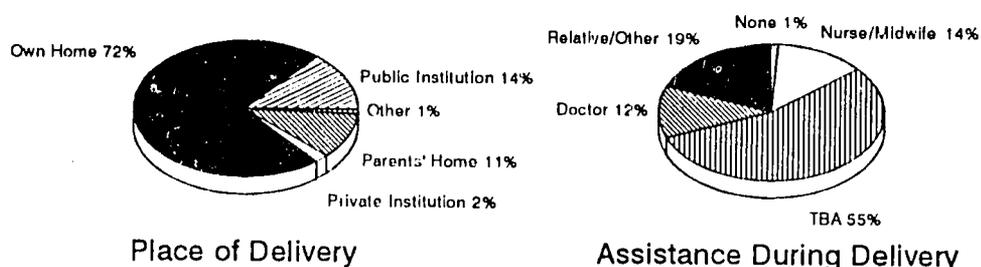
place under proper hygienic conditions with the assistance of a trained medical practitioner. In order to ascertain the situation in Himachal Pradesh in this regard, respondents were asked where they gave birth and who assisted at the delivery for each birth during the four years before the survey.

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. Only 16 percent of deliveries occurred in medical institutions, with 14 percent in public institutions and 2 percent in private medical institutions (Figure 9.3). The percentage of births

| 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, Himachal Pradesh, 1992 | | | | | | | | |
| 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 | 11.8 | 0.5 | 77.1 | 9.4 | 1.2 | -- | 100.0 | 248 |
| 20-34 | 15.4 | 1.9 | 70.1 | 11.2 | 1.3 | 0.1 | 100.0 | 1226 |
| 35+ | 3.7 | -- | 96.3 | -- | -- | -- | 100.0 | 60 |
| Birth order | | | | | | | | |
| 1 | 24.3 | 2.6 | 61.2 | 10.7 | 1.3 | -- | 100.0 | 465 |
| 2-3 | 12.2 | 1.2 | 73.3 | 11.8 | 1.2 | 0.2 | 100.0 | 736 |
| 4-5 | 6.8 | 1.3 | 81.6 | 8.7 | 1.6 | -- | 100.0 | 249 |
| 6+ | 1.1 | -- | 95.8 | 3.1 | -- | -- | 100.0 | 84 |
| Residence | | | | | | | | |
| Urban | 50.8 | 6.4 | 34.2 | 7.0 | 1.6 | -- | 100.0 | 116 |
| Rural | 11.4 | 1.2 | 75.3 | 10.8 | 1.2 | 0.1 | 100.0 | 1418 |
| Education | | | | | | | | |
| Illiterate | 4.6 | 0.2 | 85.6 | 7.6 | 1.8 | 0.2 | 100.0 | 713 |
| Lit., < middle complete | 13.2 | 0.9 | 70.2 | 14.6 | 1.1 | -- | 100.0 | 453 |
| Middle school complete | 20.7 | 3.7 | 61.8 | 13.7 | 0.2 | -- | 100.0 | 159 |
| High school and above | 45.6 | 6.2 | 39.2 | 8.8 | 0.1 | -- | 100.0 | 210 |
| Religion | | | | | | | | |
| Hindu | 14.2 | 1.6 | 72.0 | 10.8 | 1.3 | 0.1 | 100.0 | 1469 |
| Muslim | (4.9) | (--) | (95.1) | (--) | (--) | (--) | 100.0 | 32 |
| Sikh | (60.8) | (--) | (30.9) | (8.3) | (--) | (--) | 100.0 | 16 |
| Caste/tribe | | | | | | | | |
| Scheduled caste | 12.6 | 0.4 | 77.3 | 8.7 | 0.9 | -- | 100.0 | 375 |
| Scheduled tribe | 3.2 | -- | 82.8 | 7.7 | 6.4 | -- | 100.0 | 103 |
| Other | 16.1 | 2.2 | 69.4 | 11.4 | 0.9 | 0.1 | 100.0 | 1056 |
| Antenatal care visits | | | | | | | | |
| None | 2.3 | -- | 87.1 | 7.3 | 2.9 | 0.4 | 100.0 | 368 |
| 1-3 visits | 10.4 | 1.1 | 74.9 | 12.9 | 0.7 | -- | 100.0 | 842 |
| 4+ visits | 38.7 | 4.8 | 48.1 | 7.8 | 0.7 | -- | 100.0 | 322 |
| Total ¹ | 14.4 | 1.6 | 72.2 | 10.5 | 1.2 | 0.1 | 100.0 | 1534 |

() Based on 25-49 unweighted cases
 -- Less than 0.05 percent
¹Births in the period 1-47 months prior to the survey. Total includes 18 births to women belonging to other religions and 3 births with missing information about antenatal care visits, 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, Himachal Pradesh, 1992

that took place in medical institutions is about four times as high in urban areas (57 percent) as in rural areas (13 percent). Information on the percent distribution of births by place of delivery and type of attendance at birth (for home deliveries) is also available from the Sample Registration System (SRS). According to the latest available information from the SRS for 1991, the percentages of institutional births in Himachal Pradesh are 22 percent overall, 49 percent in urban areas and 16 percent in rural areas (Office of the Registrar General, 1993). The SRS estimates are higher than the NFHS estimates overall and for rural areas, but lower for urban areas. The SRS estimates are expected to be higher since they refer to a later period than the NFHS estimates.

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

In Himachal Pradesh, delivery in medical institutions (16 percent) is less common than antenatal care (76 percent). Only 20 percent of births to women who received antenatal care took place in a health facility. The percentage of institutional deliveries is higher among those who had 4 or more antenatal visits (44 percent) than among those who had 1-3 antenatal visits (12 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 and Figure 9.3 provide information on assistance during delivery by 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. However, in Table 9.5 and Figure 9.3 only the most highly qualified attendant is considered if

| 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, Himachal Pradesh, 1992 | | | | | | | |
| 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 | 5.8 | 12.3 | 59.4 | 22.0 | 0.5 | 100.0 | 248 |
| 20-34 | 13.3 | 14.3 | 54.0 | 17.5 | 0.8 | 100.0 | 1226 |
| 35+ | 10.3 | 4.4 | 57.1 | 28.3 | -- | 100.0 | 60 |
| Birth order | | | | | | | |
| 1 | 18.5 | 19.2 | 49.5 | 12.8 | -- | 100.0 | 465 |
| 2-3 | 10.2 | 13.8 | 55.7 | 19.3 | 0.9 | 100.0 | 736 |
| 4-5 | 8.2 | 5.6 | 63.2 | 21.4 | 1.6 | 100.0 | 249 |
| 6+ | 3.1 | 4.2 | 55.1 | 37.6 | -- | 100.0 | 84 |
| Residence | | | | | | | |
| Urban | 41.7 | 25.7 | 29.1 | 3.2 | 0.3 | 100.0 | 116 |
| Rural | 9.6 | 12.6 | 57.1 | 19.9 | 0.7 | 100.0 | 1418 |
| Mother's education | | | | | | | |
| Illiterate | 2.6 | 9.1 | 58.8 | 28.5 | 1.0 | 100.0 | 713 |
| Lit., < middle complete | 12.7 | 14.3 | 58.5 | 13.7 | 0.9 | 100.0 | 453 |
| Middle school complete | 18.0 | 13.8 | 58.0 | 10.1 | -- | 100.0 | 159 |
| High school and above | 37.7 | 27.3 | 32.4 | 2.6 | -- | 100.0 | 210 |
| Religion | | | | | | | |
| Hindu | 11.8 | 13.8 | 55.9 | 17.8 | 0.7 | 100.0 | 1469 |
| Muslim | (3.9) | (2.0) | (55.7) | (38.4) | (--) | 100.0 | 32 |
| Sikh | (56.9) | (22.5) | (20.6) | (--) | (--) | 100.0 | 16 |
| Caste/tribe | | | | | | | |
| Scheduled caste | 8.0 | 14.2 | 56.9 | 20.9 | -- | 100.0 | 375 |
| Scheduled tribe | 3.2 | 8.6 | 55.9 | 31.0 | 1.3 | 100.0 | 103 |
| Other | 14.3 | 13.9 | 54.3 | 16.7 | 0.9 | 100.0 | 1056 |
| Antenatal care | | | | | | | |
| None | 2.0 | 5.2 | 58.7 | 32.6 | 1.5 | 100.0 | 368 |
| 1-3 visits | 8.5 | 12.3 | 61.2 | 17.7 | 0.3 | 100.0 | 842 |
| 4+ visits | 32.6 | 26.4 | 34.7 | 5.5 | 0.8 | 100.0 | 322 |
| Place of delivery | | | | | | | |
| Public health facility | 55.8 | 43.5 | 0.7 | -- | -- | 100.0 | 221 |
| Private health facility | (80.1) | (19.9) | (--) | (--) | (--) | 100.0 | 25 |
| Own home | 2.5 | 8.6 | 64.8 | 23.2 | 1.0 | 100.0 | 1108 |
| Parents' home | 7.6 | 7.9 | 68.0 | 16.6 | -- | 100.0 | 161 |
| Total | 12.0 | 13.6 | 55.0 | 18.7 | 0.7 | 100.0 | 1534 |

() 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 18 births to women belonging to other religions, 3 births with missing information about antenatal care, 19 births with "Other" place of delivery and 1 birth with missing information about place of delivery, which are not shown separately.

there is more than one attendant. In all, 26 percent of the births were attended by a doctor (12 percent) or a nurse/midwife (14 percent). More than one-half of all the births were attended by traditional birth attendants and 19 percent were attended only by relatives, friends or neighbours.

As expected, a higher proportion of deliveries was attended by doctors in urban areas (42 percent) than in rural areas (10 percent). Among the deliveries which took place in private health institutions, 80 percent were attended by doctors and 20 percent by nurse/midwives, whereas among deliveries in public health institutions, 56 percent were attended by doctors and 44 percent by nurse/midwives. Among deliveries taking place in the respondent's home, 23 percent were attended by only relatives or others, 65 percent by traditional birth attendants (TBAs) and only 3 percent by doctors. Assistance at delivery by medical professionals was 16 percent for births to women in their parents' home, where 17 percent of deliveries were attended by only relatives or other nonmedical persons and 68 percent were attended by TBAs. Births to women who had four or more antenatal visits were more likely to be assisted by a doctor at the time of delivery than births to women with fewer visits or no antenatal care.

Thus, in Himachal Pradesh a very large majority of live births (83 percent) were delivered at home, and among home deliveries, the majority (88 percent) were attended by untrained persons. This situation is not conducive to child survival and safe motherhood. These results from the NFHS relating to assistance during delivery and antenatal care are, in fact strongly corroborated by other MCH Programme Evaluation Studies conducted in the state (Population Research Centre, Shimla, 1990; Rao et al., 1992; Chand and Sharma, 1993).

The pattern of 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 their first births and to more educated mothers. Births to non-SC/ST mothers are also more likely to be assisted by medical professionals.

Delivery Characteristics

The percent distribution of live births in the last four years according to complications during delivery, prematurity, birth weight and the mother's estimate of the baby's size at birth are presented in Table 9.6. As reported by mothers, 81 percent of the deliveries had no complications, 14 percent were characterized by a long period of labour, and 2 percent were accompanied by excessive bleeding. Delivery by Caesarian section (C-section), delayed delivery of placenta and use of forceps each were reported for 1 percent of births. C-section deliveries were more than three times as prevalent in urban areas (where institutional deliveries are more common) than in rural areas.

A very small percentage of live births (3 percent) are reported as premature. A large majority of babies were not weighed at birth (53 percent in urban areas and 87 percent in rural areas), which is to be expected since the majority of the deliveries took place at home. Moreover, for 14 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. More than one-quarter of babies whose weight at birth was known had a low birth weight (less than 2.5 kg).

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, Himachal Pradesh, 1992

| Delivery characteristic | Urban | Rural | Total |
|---|-------|-------|-------|
| Complications at delivery¹ | | | |
| No complications | 84.8 | 80.9 | 81.2 |
| Caesarian section | 3.5 | 1.0 | 1.2 |
| Use of forceps | 1.9 | 0.6 | 0.7 |
| Excessive bleeding | 0.5 | 1.8 | 1.7 |
| Long period of labour | 8.6 | 14.8 | 14.4 |
| Delayed delivery of placenta | -- | 0.6 | 0.6 |
| Other | 0.8 | 1.1 | 1.1 |
| Premature birth | | | |
| Yes | 2.7 | 2.5 | 2.5 |
| No | 97.3 | 97.4 | 97.4 |
| Don't know/missing | -- | 0.1 | 0.1 |
| Total percent | 100.0 | 100.0 | 100.0 |
| Birth weight | | | |
| Less than 2.5 kg | 6.1 | 2.5 | 2.8 |
| 2.5 kg or more | 26.5 | 5.6 | 7.1 |
| Don't know/missing | 14.2 | 4.8 | 5.5 |
| Not weighed | 53.2 | 87.1 | 84.5 |
| Total percent | 100.0 | 100.0 | 100.0 |
| Size at birth | | | |
| Large | 5.9 | 7.6 | 7.5 |
| Average | 76.5 | 69.6 | 70.1 |
| Small | 17.6 | 22.3 | 21.9 |
| Don't know/missing | -- | 0.6 | 0.5 |
| Total percent | 100.0 | 100.0 | 100.0 |
| Number of births ² | 116 | 1418 | 1534 |
| -- Less than 0.05 percent | | | |
| ¹ Percentages may sum to more than 100.0 because multiple complications could be recorded. | | | |
| ² Births in the period 1-47 months prior to the survey | | | |

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 (large, average or small) 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. One in five births were reported to be small in size and many of these were undoubtedly of low birth weight.

Table 9.7 shows the relationship between delivery characteristics and antenatal care, birth intervals and mother's age at birth. Complications were more common for births to mothers who had four or more antenatal visits. This suggests that there is a tendency among pregnant women having some complications to obtain antenatal care more often. Even the percentage of premature births is somewhat higher for births to mothers who received antenatal care. The proportion of newborns who were weighed is 5 percent for those whose mothers did not receive antenatal care, 11 percent for those whose mothers had 1-3 antenatal check-ups and 39 percent

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, Himachal Pradesh, 1992

| 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 | 85.2 | 81.7 | 75.1 | 85.9 | 85.6 | 78.1 | 73.1 | 80.8 | 81.5 | 75.5 |
| Caesarian section | 0.4 | 0.8 | 3.2 | 0.1 | 0.6 | 3.1 | 2.3 | 0.5 | 1.3 | 2.7 |
| Use of forceps | -- | -- | 3.1 | -- | 0.3 | 0.2 | 1.7 | -- | 0.8 | -- |
| Excessive bleeding | 1.8 | 1.4 | 2.2 | 2.7 | 1.2 | -- | 2.0 | 2.1 | 1.6 | 2.2 |
| Long period of labour | 13.3 | 14.7 | 14.9 | 10.6 | 12.6 | 17.5 | 18.5 | 14.3 | 14.1 | 19.6 |
| Delayed delivery of placenta | 0.4 | 0.9 | -- | 0.8 | 0.2 | 0.9 | 0.8 | 0.5 | 0.6 | -- |
| Other | -- | 1.1 | 2.2 | 0.4 | 0.2 | 0.2 | 3.0 | 2.2 | 0.9 | -- |
| Premature birth | | | | | | | | | | |
| Yes | 1.4 | 2.9 | 2.7 | 2.9 | 2.4 | 0.2 | 3.1 | 3.0 | 2.5 | -- |
| No | 98.2 | 97.1 | 97.3 | 97.1 | 97.4 | 99.8 | 96.9 | 97.0 | 97.4 | 100.0 |
| Don't know/missing | 0.4 | -- | -- | -- | 0.2 | -- | -- | -- | 0.1 | -- |
| 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 | 2.2 | 7.0 | 2.2 | 1.6 | 2.3 | 4.8 | 2.1 | 3.0 | 0.5 |
| 2.5 kg or more | 1.2 | 4.4 | 21.3 | 6.0 | 4.9 | 8.1 | 10.5 | 5.0 | 7.8 | 2.2 |
| Don't know/missing | 3.7 | 4.6 | 10.2 | 3.8 | 5.3 | 2.7 | 7.9 | 3.5 | 6.0 | 4.9 |
| Not weighed | 94.8 | 88.8 | 61.5 | 87.9 | 88.3 | 86.9 | 76.7 | 89.3 | 83.2 | 92.4 |
| Total percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Size at birth | | | | | | | | | | |
| Large | 7.2 | 6.7 | 9.9 | 7.0 | 7.0 | 10.8 | 7.4 | 9.0 | 6.9 | 13.1 |
| Average | 72.2 | 69.2 | 57.8 | 76.0 | 72.1 | 67.3 | 64.1 | 68.3 | 70.6 | 67.9 |
| Small | 19.6 | 23.6 | 20.3 | 17.1 | 19.7 | 21.8 | 28.2 | 21.7 | 22.1 | 19.0 |
| Don't know/missing | 1.1 | 0.5 | -- | -- | 1.1 | -- | 0.3 | 1.1 | 0.4 | -- |
| Total percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number of births ² | 368 | 842 | 322 | 340 | 589 | 139 | 467 | 248 | 1226 | 60 |

-- Less than 0.05 percent

¹Percentages may sum to more than 100.0 because multiple complications could be recorded.

²Births in the period 1-47 months prior to the survey. Total includes 3 births with missing information on antenatal care, which are not shown separately.

for those whose mothers had four or more antenatal visits. As indicated in Table 9.4, 44 percent of births to mothers who had four or more antenatal visits were delivered in institutions, where the probability of weighing children is very high. There is not much of a relationship between the previous birth interval and complications at delivery, but births to first time mothers had a substantially higher complication rate, especially with respect to the period of labour. C-sections were carried out for more than 2 percent of births to mothers giving birth for the first time and 3 percent of births to mothers with an interval of more than 4 years between births compared to less than 1 percent for other births. First births were also slightly more likely to be premature (3 percent) than other births. First births were more likely to be weighed at birth than other births, but these babies were more likely to have low birth weights and to be small. Differentials by the age of the mother are generally small, although complications were

somewhat more common for births to the oldest mothers. Overall, however, a large majority of all births took place without any reported complications and the babies were at least of average size.

9.2 Child Care Indicators

Immunization of Children

The immunization of children against six serious but preventable diseases (tuberculosis, diphtheria, pertussis, tetanus, polio, and measles) has been a 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 from these six diseases by making free vaccination services easily available to all eligible children. Immunization against polio was introduced 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 has been vaccination against measles, in 1985-86 (Ministry of Health and Family Welfare, 1991).

The Universal Immunization Programme (UIP) was introduced in 1985-86 with the following objectives (Ministry of Health and Family Welfare, 1991): (1) to cover at least 85 percent of all infants by 1990 against six vaccine-preventable diseases, and (2) to achieve self-sufficiency in vaccine production and the manufacture of cold chain equipment. The standard immunization schedule developed for the immunization programme for children specifies the age at which each vaccine is to be 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 the child.

In the NFHS, each mother was asked whether she had a vaccination card for each child born since 1 January 1988. If a card was available, the interviewer was required to copy carefully the dates when the child received vaccinations against each disease. If the mother could not produce the vaccination card, she was asked whether the child had received any vaccinations. If any vaccination had been received, the mother was then asked whether the child had received a vaccination against tuberculosis (BCG); diphtheria, whooping cough (pertussis) and tetanus (DPT); polio; and measles. For DPT and polio, information was obtained on the number of injections or oral doses given.

Table 9.8 presents the percentage of children age 12-23 months who received each vaccine at any time before the interview and the percentage who received each vaccine before 12 months of age, by source of information (i.e., vaccination card or mother's report). The below-12 months age group was chosen for analysis because international guidelines specify that children should be fully immunized by the time they complete their first year of life. The denominator for any given row in the table is the number of children age 12-23 months. The numerator of each entry in the row labelled "Vaccination card" is the number of children who received the specific vaccination or dose any time prior to the survey, as indicated in the vaccination card seen by the interviewer. The numerator for this row also includes those cases where a card was shown and (1) there was an indication on the card that the vaccination was

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, Himachal Pradesh, 1992

| Source of information | Percentage vaccinated among children age 12-23 months | | | | | | | | | | | Number of children | |
|---|---|--------|--------|--------|--------|--------|--------|--------|--------|---------|------------------|--------------------|------|
| | BCG | Polio | | DPT | | | Polio | | | Measles | All ¹ | | None |
| | | 0 | 1 | 2 | 3 | 1 | 2 | 3 | | | | | |
| URBAN | | | | | | | | | | | | | |
| Vaccinated at any time before interview | | | | | | | | | | | | | |
| Vaccination card | 100.0 | -- | 100.0 | 98.1 | 96.2 | 100.0 | 98.1 | 96.2 | 88.7 | 88.7 | -- | 16 | |
| Mother's report | (92.3) | (15.4) | (92.3) | (84.6) | (84.6) | (92.3) | (92.3) | (82.1) | (84.6) | (71.8) | (5.1) | 12 | |
| Either source | 96.7 | 6.5 | 96.7 | 92.4 | 91.3 | 96.7 | 95.7 | 90.2 | 87.0 | 81.5 | 2.2 | 29 | |
| Vaccinated by 12 months of age² | 96.7 | 6.5 | 96.7 | 92.4 | 89.4 | 96.7 | 95.7 | 88.4 | 74.8 | 68.3 | 2.2 | 29 | |
| RURAL | | | | | | | | | | | | | |
| Vaccinated at any time before interview | | | | | | | | | | | | | |
| Vaccination card | 92.4 | -- | 100.0 | 97.0 | 90.9 | 100.0 | 97.0 | 90.9 | 80.3 | 75.0 | -- | 174 | |
| Mother's report | 73.3 | 3.4 | 77.6 | 67.2 | 61.2 | 77.6 | 71.6 | 60.3 | 58.6 | 45.7 | 19.8 | 153 | |
| Either source | 83.5 | 1.6 | 89.5 | 83.1 | 77.0 | 89.5 | 85.1 | 76.6 | 70.2 | 61.3 | 9.3 | 326 | |
| Vaccinated by 12 months of age² | 80.6 | 1.6 | 86.8 | 79.7 | 74.3 | 86.8 | 81.6 | 73.2 | 60.5 | 51.2 | 12.0 | 326 | |
| TOTAL | | | | | | | | | | | | | |
| Vaccinated at any time before interview | | | | | | | | | | | | | |
| Vaccination card | 93.1 | -- | 100.0 | 97.1 | 91.4 | 100.0 | 97.1 | 91.4 | 81.0 | 76.2 | -- | 190 | |
| Mother's report | 74.7 | 4.3 | 78.7 | 68.5 | 62.9 | 78.7 | 73.1 | 61.9 | 60.5 | 47.6 | 18.7 | 165 | |
| Either source | 84.5 | 2.0 | 90.1 | 83.8 | 78.2 | 90.1 | 85.9 | 77.7 | 71.5 | 62.9 | 8.7 | 355 | |
| Vaccinated by 12 months of age² | 81.9 | 2.0 | 87.6 | 80.7 | 75.5 | 87.6 | 82.8 | 74.4 | 61.7 | 52.6 | 11.2 | 355 | |

() 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 vaccines (excluding polio 0).

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

given but the actual date was either missing or inconsistent or (2) there was no record of receipt of the vaccination on the card, but the mother reported that the vaccination was given. The numerator for each entry in the row labelled "Mother's report" is the number of children whose mothers did not show a card to the interviewer but reported that the child had received the vaccination. The numerator for each entry in the row labelled "Either source" is the sum of the numerators in the preceding two rows for the vaccination under consideration. The numerator for each entry in the fourth row, "Vaccinated by 12 months of age", is the sum of two quantities: (1) children vaccinated during the first year of life (0-11 months) as indicated on the vaccination card (including cases where there was no date on the card or the specific vaccine was not recorded on the card) and (2) children vaccinated by 12 months of age according to the mother's report. Because the date of immunization was not asked of the mother if she could not show the card, the proportion of vaccinations given during the first year of life among children

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

Among the 355 children in the age group 12-23 months, vaccination cards were seen by the interviewer for 54 percent of children in Himachal Pradesh (58 percent in urban areas and 53 percent in rural areas). As expected, levels of immunization coverage are much higher for children whose vaccination cards were seen by the interviewer than for children who either did not have a card or whose card was not seen.

Based on the information either recorded on a card or reported by the mother, 63 percent of children age 12-23 months were fully vaccinated¹ and only 9 percent had not received any vaccinations. Thus, the findings on immunization indicate that although Himachal Pradesh has still not achieved the goal of universal immunization of children, it has one of the highest rates of vaccination of children among the states in India.

Analysis of vaccine specific data shows that 85 percent of the children had received the BCG vaccine and 90 percent each the first dose of the DPT and polio vaccines. Slightly more than three-fourths of children had received three doses of the DPT and polio vaccines and 72 percent had been vaccinated against measles. The DPT and polio coverage rates are about the same since both vaccines are normally administered together. Not all children who begin with the DPT and polio series go on to complete it. The continuation rate from the first dose to the third dose of DPT and polio vaccine indicates a considerable dropout (12 percentage points each).

The analysis of the vaccine specific data also indicates higher coverage for each type of vaccine in urban areas than in rural areas. Dropout rates for DPT and polio are lower in urban areas (6 percentage points) than in rural areas (13 percentage points).

According to the immunization schedule, all primary vaccinations, including measles, should be completed by the time a child is 12 months old. The data presented in Table 9.8 indicate that most vaccinations are given within the first year of life. For example, 53 percent of children had been fully vaccinated by age 12 months, whereas 63 percent were fully vaccinated by the time of the survey. The gap is particularly wide for measles, which is supposed to be given when the child is nine months old. Almost 14 percent of children who were vaccinated against measles received the vaccination after their first birthday.

Table 9.9 and Figure 9.4 present vaccination coverage rates among children age 12-23 months by selected background characteristics. The percentage for whom immunization cards were seen is higher for female children (61 percent) than male children (48 percent). However, for every type of vaccination except the polio vaccine at birth, coverage is higher among male

¹ In the NFHS, children who have received BCG, measles, and three doses of DPT and polio (excluding polio 0) are considered to be fully vaccinated. Polio 0 has been introduced only recently and because it is a vaccination given at the time of birth, mothers may not remember whether the first dose of the polio vaccine was given just after birth or later. Therefore, the coverage of polio 0 reported in the NFHS may be subject to response errors.

Table 9.9 Vaccinations by background characteristics

Among children age 12-23 months, the percentage who had received each vaccine by the time of the survey (according to the vaccination card or the mother) and the percentage with a vaccination card which was shown to the interviewer, by selected background characteristics, Himachal Pradesh, 1992

| 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 | 86.7 | 2.0 | 92.2 | 86.0 | 80.3 | 92.2 | 89.3 | 81.0 | 74.6 | 66.4 | 7.8 | 47.5 | 190 |
| Female | 82.1 | 2.0 | 87.6 | 81.3 | 75.7 | 87.6 | 82.1 | 73.9 | 67.9 | 58.9 | 9.8 | 60.6 | 165 |
| Birth order | | | | | | | | | | | | | |
| 1 | 94.7 | 1.6 | 97.4 | 91.8 | 84.9 | 97.4 | 96.0 | 85.9 | 80.3 | 74.4 | 2.6 | 65.9 | 100 |
| 2-3 | 84.4 | 2.1 | 90.9 | 84.0 | 79.7 | 90.2 | 85.1 | 79.0 | 71.7 | 60.3 | 8.2 | 51.4 | 181 |
| 4-5 | 76.6 | 0.5 | 80.8 | 76.1 | 67.8 | 82.9 | 80.3 | 69.9 | 64.7 | 62.7 | 15.1 | 45.5 | 63 |
| Residence | | | | | | | | | | | | | |
| Urban | 96.7 | 6.5 | 96.7 | 92.4 | 91.3 | 96.7 | 95.7 | 90.2 | 87.0 | 81.5 | 2.2 | 57.6 | 29 |
| Rural | 83.5 | 1.6 | 89.5 | 83.1 | 77.0 | 89.5 | 85.1 | 76.6 | 70.2 | 61.3 | 9.3 | 53.2 | 326 |
| Mother's education | | | | | | | | | | | | | |
| Illiterate | 74.0 | 1.6 | 81.4 | 71.5 | 64.9 | 82.2 | 74.0 | 63.3 | 57.4 | 47.3 | 16.0 | 41.6 | 160 |
| Literate, < middle complete | 89.3 | 1.3 | 94.6 | 92.4 | 87.0 | 93.3 | 93.0 | 86.7 | 80.3 | 73.0 | 5.4 | 67.0 | 98 |
| Middle school complete | (96.9) | (0.7) | (100.0) | (93.9) | (87.7) | (100.0) | (100.0) | (90.8) | (81.6) | (72.4) | (--) | (62.6) | 43 |
| High school and above | 97.5 | 5.4 | 100.0 | 97.0 | 93.9 | 100.0 | 97.5 | 93.9 | 89.7 | 83.6 | -- | 57.6 | 53 |
| Caste/tribe | | | | | | | | | | | | | |
| Scheduled caste | 76.9 | -- | 87.6 | 78.3 | 71.2 | 87.6 | 82.3 | 71.2 | 61.9 | 50.8 | 10.6 | 55.3 | 74 |
| Other (Non-SC/ST) | 87.8 | 2.8 | 92.4 | 87.4 | 82.1 | 92.4 | 88.7 | 81.0 | 75.1 | 66.8 | 6.4 | 54.1 | 255 |
| Total | 84.5 | 2.0 | 90.1 | 83.8 | 78.2 | 90.1 | 85.9 | 77.7 | 71.5 | 62.9 | 8.7 | 53.6 | 355 |

Note: Total includes 11 births of birth order 6+ and 26 scheduled tribe births, which are not shown separately.

() Based on 25-49 unweighted cases.

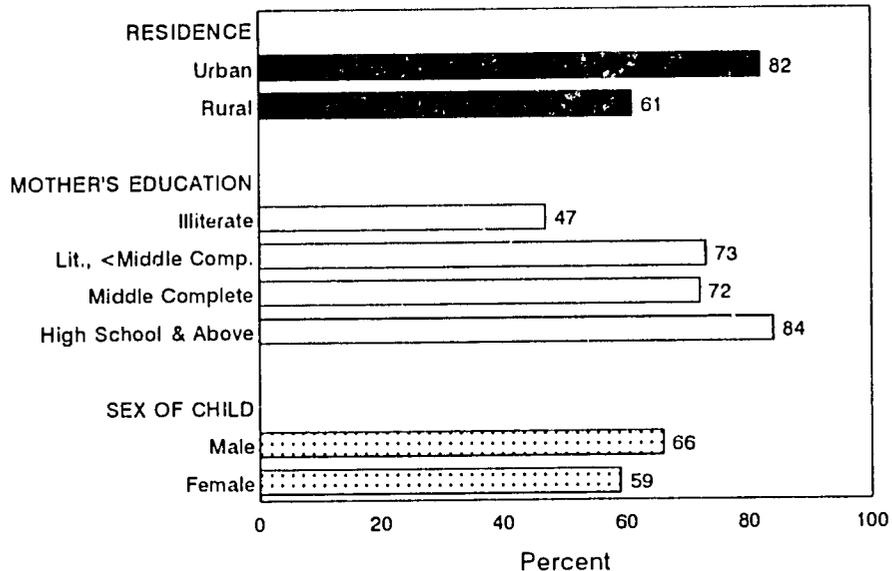
-- Less than 0.05 percent

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

children. For example, 66 percent of male children were fully vaccinated compared to 59 percent of female children. This pattern indicates that female children are somewhat discriminated against in the utilization of immunization services. These differentials could be a factor in the somewhat higher female mortality in childhood observed in Table 8.5.

First-order babies are in an advantageous position with respect to the possession of vaccination cards and vaccination coverage levels. 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 the utilization of maternal health care services, there is a consistent positive relationship between the educational level of the mother and utilization of immunization services. The percentage of children who were fully immunized increases from 47 percent for children

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



NFHS, Himachal Pradesh, 1992

whose mothers are illiterate to 84 percent for children whose mothers have completed high school. Children from scheduled castes are much less likely to have been vaccinated against childhood diseases than other children.

Table 9.10 shows, for children age 1-3 years, the percentage with a vaccination card shown to the interviewer and the percentage receiving various vaccinations during the first year of life, by current age of the child and place of residence. The table illustrates changes in vaccination coverage over time. The method of estimating vaccination coverage by 12 months of age is the same as that used in Table 9.8. Among children without 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 have not received any vaccination by 12 months of age.

In all cases, the percentage of children whose immunization status was determined by seeing a vaccination card declines with the age of the child. This may be a reflection of the increased use of vaccination cards in recent years, as well as the increased overall coverage of vaccinations. In addition, in many cases the vaccination cards of older children are discarded once the children have completed their vaccinations or the cards are lost.

The highest level of vaccination coverage for each vaccine (except polio 0) is observed at age 12-35 months. The coverage is much lower for children age 36-47 months. The same time trend is found in both urban and rural areas.

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, Himachal Pradesh, 1992

| Vaccination status | Current age of child in months | | | Total |
|--|--------------------------------|-------|-------|-------|
| | 12-23 | 24-35 | 36-47 | |
| URBAN | | | | |
| Vaccination card shown to interviewer | 57.6 | 44.6 | 30.2 | 43.4 |
| Percent vaccinated at 0-11 months ¹ | | | | |
| BCG | 96.7 | 97.3 | 90.6 | 94.5 |
| Polio 0 | 6.5 | 6.8 | 14.2 | 9.6 |
| DPT | | | | |
| 1 | 96.7 | 97.3 | 88.6 | 93.7 |
| 2 | 92.4 | 94.6 | 84.0 | 89.7 |
| 3 | 89.4 | 87.2 | 78.5 | 84.6 |
| Polio | | | | |
| 1 | 96.7 | 97.3 | 90.4 | 94.4 |
| 2 | 95.7 | 95.9 | 88.6 | 93.0 |
| 3 | 88.4 | 86.0 | 77.7 | 83.5 |
| Measles | 74.8 | 88.3 | 76.8 | 79.3 |
| All vaccinations ² | 68.3 | 80.3 | 65.2 | 70.3 |
| No vaccinations | 2.2 | 2.7 | 7.7 | 4.5 |
| Number of children | 29 | 23 | 33 | 84 |
| RURAL | | | | |
| Vaccination card shown to interviewer | 53.2 | 34.5 | 28.6 | 38.7 |
| Percent vaccinated at 0-11 months ¹ | | | | |
| BCG | 80.6 | 79.6 | 69.1 | 76.5 |
| Polio 0 | 1.6 | 3.4 | 4.5 | 3.2 |
| DPT | | | | |
| 1 | 86.8 | 86.1 | 76.6 | 83.3 |
| 2 | 79.7 | 81.3 | 71.1 | 77.4 |
| 3 | 74.3 | 72.6 | 65.4 | 70.8 |
| Polio | | | | |
| 1 | 86.8 | 86.5 | 75.2 | 82.9 |
| 2 | 81.6 | 82.9 | 69.8 | 78.2 |
| 3 | 73.2 | 74.0 | 62.7 | 70.1 |
| Measles | 60.5 | 64.1 | 47.7 | 57.6 |
| All vaccinations ² | 51.2 | 53.1 | 39.2 | 47.9 |
| No vaccinations | 12.0 | 12.3 | 24.1 | 16.1 |
| Number of children | 326 | 343 | 322 | 992 |

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, Himachal Pradesh, 1992

| Vaccination status | Current age of child in months | | | Total |
|--|--------------------------------|-------|-------|-------|
| | 12-23 | 24-35 | 36-47 | |
| | TOTAL | | | |
| Vaccination card shown to interviewer | 53.6 | 35.1 | 28.7 | 39.1 |
| Percent vaccinated at 0-11 months¹ | | | | |
| BCG | 81.9 | 80.8 | 70.9 | 77.9 |
| Polio 0 | 2.0 | 3.7 | 5.4 | 3.7 |
| DPT | | | | |
| 1 | 87.6 | 86.9 | 77.7 | 84.1 |
| 2 | 80.7 | 82.1 | 72.3 | 78.4 |
| 3 | 75.5 | 73.5 | 66.6 | 71.9 |
| Polio | | | | |
| 1 | 87.6 | 87.2 | 76.6 | 83.8 |
| 2 | 82.8 | 83.7 | 71.6 | 79.4 |
| 3 | 74.4 | 74.7 | 64.1 | 71.1 |
| Measles | 61.7 | 65.8 | 50.4 | 59.3 |
| All vaccinations ² | 52.6 | 54.9 | 41.6 | 49.7 |
| No vaccinations | 11.2 | 11.7 | 22.6 | 15.1 |
| Number of children | 355 | 366 | 355 | 1076 |

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

This section considers the prevalence and treatment of some of the common childhood diseases, including acute respiratory tract infection (ARI), fever and diarrhoea. Mothers of children born during the four years preceding the survey were asked a series of questions about 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 (symptoms of acute respiratory infection), fever and diarrhoea during the two weeks prior to the survey, as well as the percentage with diarrhoea in the 24 hours before the survey, by selected background characteristics. Acute respiratory tract infection, primarily pneumonia, is a common cause of illness and death in infancy and childhood. Early diagnoses and treatment with antibiotics can prevent a large proportion of these ARI/pneumonia deaths. Fever is a major manifestation of malaria, although it also accompanies various other illnesses.

Table 9.11 Prevalence of acute respiratory infection, fever and diarrhoea

Among all children under four years of age, the percentage who were ill with a cough accompanied by fast breathing, fever and diarrhoea during the two weeks before the survey, and the percentage with diarrhoea in the 24 hours before the survey, according to selected background characteristics, Himachal Pradesh, 1992

| 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 | 8.5 | 14.2 | 22.7 | 1.0 | 11.4 | 166 |
| 6 -11 months | 9.5 | 27.1 | 28.2 | 1.5 | 13.8 | 203 |
| 12-23 months | 7.9 | 23.6 | 22.8 | 4.8 | 9.9 | 355 |
| 24-35 months | 3.5 | 19.0 | 17.7 | 5.1 | 4.8 | 366 |
| 36-47 months | 5.3 | 15.5 | 11.8 | 1.5 | 3.3 | 355 |
| Sex | | | | | | |
| Male | 6.8 | 19.3 | 20.2 | 3.3 | 7.7 | 756 |
| Female | 6.0 | 20.4 | 18.9 | 3.1 | 7.8 | 689 |
| Birth order | | | | | | |
| 1 | 7.2 | 22.5 | 19.6 | 1.9 | 6.8 | 439 |
| 2-3 | 6.2 | 19.0 | 17.1 | 2.6 | 6.6 | 699 |
| 4-5 | 6.5 | 16.6 | 22.1 | 4.6 | 10.3 | 229 |
| 6+ | 3.3 | 22.1 | 33.8 | 10.4 | 15.4 | 79 |
| Residence | | | | | | |
| Urban | 5.3 | 19.3 | 8.1 | 0.8 | 3.4 | 111 |
| Rural | 6.5 | 19.9 | 20.5 | 3.4 | 8.1 | 1334 |
| Mother's education | | | | | | |
| Illiterate | 5.3 | 19.4 | 20.4 | 4.6 | 8.4 | 662 |
| Lit., < middle complete | 6.7 | 20.6 | 19.6 | 2.5 | 7.9 | 426 |
| Middle school complete | 6.2 | 18.7 | 19.8 | 1.9 | 7.2 | 154 |
| High school and above | 9.8 | 20.7 | 16.8 | 0.6 | 5.5 | 203 |
| Religion | | | | | | |
| Hindu | 6.7 | 20.0 | 19.8 | 3.2 | 7.8 | 1382 |
| Muslim | (1.0) | (24.5) | (18.4) | (4.3) | (8.7) | 30 |
| Caste/tribe | | | | | | |
| Scheduled caste | 3.9 | 19.9 | 23.0 | 4.4 | 11.9 | 363 |
| Scheduled tribe | 4.3 | 30.5 | 24.7 | 10.1 | 7.2 | 92 |
| Other | 7.5 | 18.9 | 17.8 | 2.1 | 6.3 | 990 |
| Source of drinking water | | | | | | |
| Piped water | U | U | 18.4 | 2.5 | 6.4 | 813 |
| Well water | U | U | 13.8 | 1.1 | 5.7 | 115 |
| Surface water | U | U | 23.2 | 4.7 | 10.6 | 473 |
| Total | 6.4 | 19.9 | 19.6 | 3.2 | 7.7 | 1445 |

Note: Figures are for children born in the 1-47 months prior to the survey. Total includes 15 Sikh children, 18 children belonging to other religions, 18 children with ground water as the source of drinking water and 26 children with other sources of drinking water, who are not shown separately.

U: Not available

() Based on 25-49 unweighted cases

¹Includes diarrhoea in the past 24 hours

²Includes diarrhoea with blood

Only 1 in 16 children suffered from the symptoms of ARI during the two weeks preceding the survey. The most vulnerable period for ARI is the period from 6 to 11 months in the life of a child. Very small differences are observed according to the gender and birth order of the child, residence and the mother's educational level.

Fever was the most prevalent of the three conditions examined. Nearly one-fifth of the children suffered from fever during the two weeks prior to the survey. Children age 6-23 months were somewhat more prone to fever, as were first birth order children, but the differences are not large. The children of scheduled tribe mothers also had higher rates of fever. No consistent relationship was observed between the prevalence of fever and the education of the mother.

Table 9.11 provides two types of prevalence estimates for diarrhoea including (1) a period prevalence measure, namely the percentage of children under age four whose mothers reported that they had diarrhoea in the two-week period before the interview and (2) a point prevalence measure, namely the percentage of children under four years whose mothers reported that they had diarrhoea in the 24-hour period before the interview. Both of these measures are affected by the reliability of the mother's recall of when the diarrhoeal episode occurred. In addition, the NFHS questions allow estimation of the proportion of children under four years who had bloody diarrhoea, a symptom of dysentery, during the two weeks preceding the survey.

The prevalence of diarrhoea during the two weeks before the survey is 20 percent for any type of diarrhoea and 3 percent for bloody diarrhoea. Only 8 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 was the highest (28 percent) among children age 6-11 months, after which it declined with increasing age. Diarrhoea was also more prevalent among children whose mothers were from scheduled tribes (25 percent) and scheduled castes (23 percent) and among those taking drinking water from surface sources of water, which may be contaminated. Children of birth order six or higher have the highest rate of diarrhoea among all of the categories shown. The prevalence of diarrhoea was lower (17 percent) among children whose mothers had completed high school and above. Substantial variation is observed in the incidence rate of diarrhoea between urban (8 percent) and rural areas (21 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 during the past two weeks were taken to a health facility for treatment or were treated by a doctor or other health professional. Only 9 percent of children with ARI did not receive any treatment. Sick children were most often treated with antibiotic pills or syrup or cough syrup. A home remedy was used in less than 3 percent of the cases. Children age 12-23 months were most likely to receive treatment for ARI. Female children were less likely to be taken to a health facility, but somewhat more likely to receive some type of treatment. Children of the first birth order were less likely to have received treatment for ARI than those of other birth orders.

Table 9.12 Treatment of acute respiratory infection

Among all children under four years of age who had cough accompanied by fast breathing during the two weeks before the survey, the percentage taken to a health facility or provider and the percentage given treatment, according to selected background characteristics, Himachal Pradesh, 1992

| Background characteristic | Among children with cough and fast breathing | | | | | | | Number of children |
|---------------------------|--|--------------------------|-----------|-------------|-----------------------------|--------|--------|--------------------|
| | Percentage taken to a health facility or provider ¹ | Percentage treated with | | | | | None | |
| | | Antibiotic pill or syrup | Injection | Cough syrup | Home remedy/herbal medicine | Other | | |
| Child's age | | | | | | | | |
| < 12 months | (79.4) | (21.5) | (3.9) | (39.1) | -- | (48.1) | (11.8) | 33 |
| 12-23 months | (84.7) | (33.1) | (14.2) | (35.3) | (9.4) | (31.7) | (5.8) | 28 |
| 24+ months | (69.7) | (23.9) | (12.6) | (16.5) | -- | (57.4) | (9.4) | 31 |
| Sex | | | | | | | | |
| Male | (78.8) | (30.1) | (5.1) | (25.6) | -- | (43.6) | (10.9) | 51 |
| Female | (76.4) | (20.5) | (15.8) | (36.1) | (6.3) | (49.7) | (7.1) | 42 |
| Birth order | | | | | | | | |
| 1 | (65.9) | (20.7) | (8.3) | (25.6) | -- | (50.5) | (12.4) | 32 |
| 2+ | 83.9 | 28.4 | 10.8 | 36.1 | 4.3 | 44.2 | 7.5 | 61 |
| Mother's education | | | | | | | | |
| Illiterate | (66.0) | (23.6) | (3.8) | (24.4) | -- | (49.1) | (15.1) | 35 |
| Literate | 84.8 | 27.1 | 13.6 | 33.8 | 4.5 | 44.7 | 5.6 | 58 |
| Total | 77.7 | 25.8 | 9.9 | 30.3 | 2.8 | 46.5 | 9.2 | 93 |

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

Treatment of Fever

Table 9.13 shows treatment patterns for children suffering from fever during the two weeks before the survey. Nearly 82 percent of the children had been taken to a health facility or provider for the treatment of fever. One-quarter of the children were treated with antibiotics in the form of pills or syrup and 16 percent were given injections. Much smaller proportions were given home remedies (4 percent) and antimalarial medication (2 percent). Differentials in the treatment of fever at a health facility or by a health provider reveal the same pattern observed in Table 9.12 concerning the treatment of ARI.

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 dehydration resulting from loss of water and electrolytes (Black, 1984). However, nearly all dehydration-related deaths can be prevented by prompt administration of rehydration solutions. Because deaths from diarrhoea are a significant proportion of all deaths to children, the government has launched the Oral Rehydration Therapy Programme as one of its priority activities for child survival. A major purpose of this programme is to increase awareness among women and in the community about the causes and

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, Himachal Pradesh, 1992

| Background characteristic | Among children with fever | | | | | | | Number of children |
|---------------------------|--|-------------------------|---------------------------|-------------|-----------------------------|-------------|------------|--------------------|
| | Percentage taken to a health facility or provider ¹ | Percentage treated with | | | | | None | |
| | | Anti-malarial | Anti-biotic pill or syrup | Injection | Home remedy/herbal medicine | Other | | |
| Child's age | | | | | | | | |
| < 12 months | 83.8 | 1.7 | 27.1 | 11.7 | 7.1 | 64.6 | 3.7 | 79 |
| 12-23 months | 91.4 | 1.9 | 28.2 | 18.8 | 1.6 | 60.1 | 5.1 | 84 |
| 24-35 months | 73.5 | 1.9 | 17.9 | 23.2 | 5.7 | 59.4 | 13.3 | 70 |
| 36-47 months | 74.5 | 2.4 | 27.1 | 10.1 | -- | 61.4 | 12.5 | 55 |
| Sex | | | | | | | | |
| Male | 87.0 | 1.1 | 26.4 | 13.9 | 0.9 | 68.0 | 5.6 | 146 |
| Female | 76.3 | 2.8 | 24.0 | 18.7 | 6.8 | 54.6 | 10.7 | 141 |
| Birth order | | | | | | | | |
| 1 | 76.1 | 1.3 | 19.2 | 16.0 | 5.6 | 61.2 | 11.0 | 99 |
| 2 + | 84.7 | 2.3 | 28.3 | 16.4 | 2.8 | 61.5 | 6.6 | 188 |
| Residence | | | | | | | | |
| Urban | 88.4 | 1.4 | 30.4 | 2.9 | 1.4 | 73.9 | 4.3 | 21 |
| Rural | 81.2 | 2.0 | 24.8 | 17.3 | 4.0 | 60.4 | 8.4 | 266 |
| Mother's education | | | | | | | | |
| Illiterate | 76.4 | 3.1 | 22.5 | 17.4 | 6.1 | 56.5 | 9.2 | 128 |
| Literate | 86.0 | 1.0 | 27.4 | 15.3 | 1.9 | 65.4 | 7.2 | 159 |
| Caste/tribe | | | | | | | | |
| Scheduled caste | 77.7 | 1.8 | 25.9 | 16.4 | 1.8 | 58.2 | 13.2 | 72 |
| Other (Non-SC/ST) | 82.7 | 1.6 | 22.2 | 15.1 | 4.4 | 66.2 | 6.7 | 187 |
| Total | 81.7 | 1.9 | 25.2 | 16.3 | 3.8 | 61.4 | 8.1 | 287 |

Note: Total includes 28 scheduled tribe children, who are not shown separately.

-- Less than 0.05 percent

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

treatment of diarrhoea. Mothers are instructed how to use Oral Rehydration Salt (ORS) packets, which are made widely available. The programme also promotes use of a home-made solution made from sugar, salt and water, which is known as Recommended Home Solution (RHS). This instruction is provided mostly through the electronic and print media and in adult literacy classes. Documentaries on diarrhoea among children and the use of ORS and preparation of RHS are regularly shown in cinema theatres. 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 knowledge and use of ORS and RHS.

Table 9.14 shows percentages of mothers who know about and have ever used ORS packets. Sixty-nine percent of mothers know about ORS, but only 47 percent have ever used

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, Himachal Pradesh, 1992

| Background characteristic | Know about ORS packets | Have ever used ORS packets | Number of mothers |
|------------------------------------|------------------------|----------------------------|-------------------|
| Mother's age | | | |
| 15-19 | (62.8) | (35.5) | 60 |
| 20-24 | 66.9 | 42.1 | 455 |
| 25-29 | 73.2 | 54.2 | 424 |
| 30-34 | 72.4 | 46.8 | 137 |
| 35+ | 61.0 | 42.2 | 75 |
| Residence | | | |
| Urban | 93.6 | 64.2 | 93 |
| Rural | 67.2 | 45.3 | 1058 |
| Mother's education | | | |
| Illiterate | 53.2 | 34.6 | 513 |
| Literate, < middle school complete | 74.1 | 50.6 | 348 |
| Middle school complete | 90.9 | 68.9 | 119 |
| High school and above | 92.6 | 60.2 | 171 |
| Caste/tribe | | | |
| Scheduled caste | 64.0 | 45.9 | 284 |
| Scheduled tribe | 68.0 | 41.2 | 71 |
| Other | 71.3 | 47.6 | 796 |
| Mother's exposure to media | | | |
| Exposed to media | 77.9 | 53.5 | 726 |
| Watches television weekly | 82.4 | 55.9 | 503 |
| Listens to radio weekly | 77.1 | 53.3 | 586 |
| Visits cinema/theatre monthly | 86.8 | 63.8 | 42 |
| Not exposed to any of the media | 54.6 | 35.3 | 424 |
| Total | 69.3 | 46.8 | 1151 |

() Based on 25-49 unweighted cases

ORS packets. As expected, both knowledge and use of ORS are higher among urban mothers. Levels of knowledge and use of ORS are strongly positively related to the educational attainment of mothers. Mothers from scheduled castes and scheduled tribes are somewhat less likely to have knowledge about ORS or to have used ORS packets. Mass media can evidently play an important role in oral rehydration programmes. Both knowledge and use of ORS are about 50 percent higher among mothers exposed to electronic mass media than among those with no such exposure.

Table 9.15 provides information on whether medical care was sought for diarrhoeal episodes. Nearly 71 percent of all the children who suffered from diarrhoea were taken to a health facility or provider for treatment. Treatment at a health facility or by a health provider was most common for children age 6-11 months, those of first birth order, those living in urban areas, children whose mothers had completed middle school or above, and those from the non-SC/ST category. Female children were slightly less likely to be taken to a health facility.

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, Himachal Pradesh, 1992

| 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 | (60.0) | (22.6) | (18.1) | (32.9) | (40.0) | (39.2) | (15.6) | (3.5) | (54.8) | (18.3) | 38 |
| 6-11 months | (76.4) | (32.8) | (28.1) | (46.5) | (32.8) | (39.7) | (19.5) | (11.5) | (54.1) | (11.5) | 57 |
| 12-23 months | 73.6 | 30.1 | 24.4 | 48.0 | 35.3 | 40.2 | 28.4 | 6.5 | 52.0 | 11.8 | 81 |
| 24-35 months | 73.7 | 35.4 | 29.3 | 54.0 | 48.9 | 24.8 | 22.7 | 18.2 | 65.1 | 4.0 | 65 |
| 36-47 months | (61.7) | (22.7) | (17.1) | (33.5) | (33.5) | (47.7) | (28.9) | (3.1) | (54.7) | (12.5) | 42 |
| Sex | | | | | | | | | | | |
| Male | 72.7 | 35.3 | 27.9 | 52.5 | 40.4 | 33.3 | 21.3 | 9.5 | 60.2 | 8.2 | 153 |
| Female | 68.2 | 23.2 | 20.2 | 36.1 | 35.8 | 42.5 | 26.5 | 9.1 | 51.5 | 14.2 | 130 |
| Birth order | | | | | | | | | | | |
| 1 | 76.0 | 28.6 | 27.5 | 46.2 | 35.5 | 36.3 | 21.4 | 6.1 | 57.2 | 6.8 | 86 |
| 2-3 | 70.8 | 27.2 | 23.3 | 43.9 | 37.3 | 37.1 | 27.2 | 12.1 | 57.2 | 12.1 | 119 |
| 4-5 | (58.4) | (31.8) | (20.8) | (42.2) | (37.0) | (42.2) | (18.8) | (7.8) | (50.0) | (13.0) | 51 |
| Residence | | | | | | | | | | | |
| Urban | (82.8) | (27.6) | (48.3) | (65.5) | (48.3) | (24.1) | (27.6) | (--) | (55.2) | (6.9) | 9 |
| Rural | 70.2 | 29.8 | 23.6 | 44.2 | 38.0 | 38.0 | 23.6 | 9.6 | 56.3 | 11.1 | 274 |
| Mother's education | | | | | | | | | | | |
| Illiterate | 64.8 | 27.8 | 15.3 | 37.0 | 31.0 | 49.8 | 15.6 | 8.8 | 58.0 | 18.6 | 135 |
| Lit., < mid. complete | 72.1 | 20.5 | 27.2 | 39.8 | 44.9 | 31.4 | 20.9 | 7.9 | 59.5 | 7.1 | 83 |
| Middle complete | (87.1) | (53.8) | (37.6) | (68.8) | (46.2) | (18.3) | (49.5) | (21.6) | (39.8) | (--) | 30 |
| High school and above | (74.9) | (38.5) | (41.2) | (67.2) | (44.2) | (21.2) | (39.4) | (3.9) | (55.8) | (--) | 34 |
| Caste/tribe | | | | | | | | | | | |
| Scheduled caste | 66.2 | 29.4 | 21.1 | 40.7 | 47.5 | 38.5 | 16.8 | 7.9 | 59.9 | 14.2 | 84 |
| Other (Non-SC/ST) | 71.9 | 28.5 | 26.8 | 46.0 | 34.4 | 38.8 | 28.3 | 9.7 | 54.2 | 10.8 | 176 |
| Total | 70.6 | 29.7 | 24.3 | 44.9 | 38.3 | 37.5 | 23.7 | 9.3 | 56.2 | 10.9 | 283 |

Note: Figures are for children born in the period 1-47 months prior to the survey. Total includes 27 children of birth order 6+ and 23 scheduled tribe children, 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 9.15 also shows the percentage of children suffering from diarrhoea who received various types of treatment. Thirty percent of children were treated with ORS packets and 24 percent received a Recommended Home Solution. In order to reduce dehydration due to diarrhoea, mothers are also taught to increase the supply of fluids to children with diarrhoea. However, only 38 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. Nearly two-fifths of the children suffering from diarrhoea were not given ORS, RHS or increased fluids. The use of oral rehydration therapy (ORS or RHS) was less common for very

young children (under 6 months old), female children, those of high birth orders, children of illiterate mothers and children residing in rural areas.

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, 24 percent of children with diarrhoea were given antibiotic pills or syrup and 9 percent received injections.

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 (77 percent), the frequency of breastfeeding remained the same during the diarrhoea. Some differences in the frequency of breastfeeding during diarrhoea were observed by the age of the child. Breastfeeding was reduced or stopped for 18 percent of children with diarrhoea. The amount of other fluids given to the sick children was also not likely to be decreased. Only 13 percent of all children with diarrhoea were given less fluids than they received before the diarrhoea began.

| 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, Himachal Pradesh, 1992 | | | |
| Feeding practices during diarrhoea | Age of the child | | |
| | < 1 year ¹ | 1-3 years | Total ² |
| Breastfeeding frequency³ | | | |
| Same as usual | 74.6 | 79.2 | 77.2 |
| Increased | 7.2 | 2.2 | 4.3 |
| Reduced | 16.5 | 16.5 | 16.5 |
| Stopped | 1.4 | 2.2 | 1.9 |
| Don't know/missing | 0.3 | -- | 0.1 |
| Total percent | 100.0 | 100.0 | 100.0 |
| Number of children | 92 | 122 | 213 |
| Amount of fluids given | | | |
| Same as usual | 55.7 | 44.8 | 48.4 |
| More | 24.3 | 38.9 | 37.4 |
| Less | 5.9 | 16.3 | 12.8 |
| Don't know/missing | 4.2 | -- | 1.4 |
| Total percent | 100.0 | 100.0 | 100.0 |
| Number of children with diarrhoea | 95 | 188 | 283 |
| -- Less than 0.05 percent | | | |
| ¹ Children born in the period 1-11 months prior to the survey | | | |
| ² Children born in the period 1-47 months prior to the survey | | | |
| ³ Applies only to children who are still breastfed | | | |

CHAPTER 10

INFANT FEEDING AND CHILD NUTRITION

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

10.1 Breastfeeding and Supplementation

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

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

In the NFHS, data on breastfeeding and supplementation were obtained from a series of questions in Section 4 of the Woman's Questionnaire. These questions pertain to births since January 1988. For any given woman, a maximum of three births was included in the analysis.

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Table 10.1 presents the percentage ever breastfed among all children born during the four years before the survey, by selected background characteristics. Breastfeeding is nearly universal in Himachal Pradesh, with 96 percent of all children having ever been breastfed. This finding is not surprising because breast milk traditionally has been the main source of nutrition for infants and young children in India. The percentage ever breastfed is high in all groups, ranging from 94 to 100 percent.

Table 10.1 Initiation of breastfeeding

Percentage of all children who were ever breastfed and the percentage of last-born children who started breastfeeding within one hour and one day of birth, among children born during the four years preceding the survey, according to selected background characteristics, Himachal Pradesh, 1992

| 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 | 94.8 | 822 | 10.9 | 41.5 | 621 |
| Female | 97.2 | 738 | 13.7 | 43.1 | 534 |
| Residence | | | | | |
| Urban | 94.3 | 119 | 15.4 | 41.6 | 95 |
| Rural | 96.1 | 1441 | 11.9 | 42.3 | 1061 |
| Mother's education | | | | | |
| Illiterate | 96.1 | 723 | 16.2 | 49.8 | 514 |
| Lit., < middle complete | 96.1 | 458 | 8.5 | 33.8 | 349 |
| Middle school complete | 96.6 | 164 | 7.7 | 34.9 | 119 |
| High school and above | 94.6 | 214 | 10.7 | 41.9 | 173 |
| Religion | | | | | |
| Hindu | 95.8 | 1495 | 12.3 | 42.6 | 1114 |
| Muslim | (100.0) | 32 | * | * | 20 |
| Sikh | (98.0) | 16 | * | * | 11 |
| Caste/tribe | | | | | |
| Scheduled caste | 97.0 | 384 | 15.8 | 46.7 | 272 |
| Scheduled tribe | 94.9 | 103 | 19.2 | 50.6 | 73 |
| Other | 95.6 | 1073 | 10.3 | 40.0 | 810 |
| Assistance at delivery | | | | | |
| Health professional | 94.9 | 404 | 8.9 | 44.1 | 308 |
| Traditional birth attendant | 96.7 | 856 | 11.9 | 37.2 | 644 |
| Other or none | 95.1 | 301 | 18.2 | 55.4 | 204 |
| Place of delivery | | | | | |
| Public health facility | 94.4 | 226 | 10.8 | 46.4 | 168 |
| Private health facility | (100.0) | 25 | (13.7) | (56.8) | 19 |
| Own home | 96.1 | 1123 | 13.2 | 43.1 | 818 |
| Parents' home | 97.2 | 163 | 8.5 | 30.1 | 131 |
| Total | 95.9 | 1560 | 12.2 | 42.3 | 1155 |

Note: Table is based on children born in the four years preceding the survey, whether living or dead at the time of interview. Total for all children includes 18 children belonging to other religions, 21 children with "Other" place of delivery and 1 child with missing information on place of delivery, who are not shown separately. Total for last-born children includes 10 children belonging to other religions, 18 children with other place of delivery and 1 child with missing information on place of delivery, who are not shown separately.

() Based on 25-49 unweighted cases

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

¹Includes children who started breastfeeding within one hour of birth

Initiation of breastfeeding immediately after childbirth is important because it benefits both the mother and the infant. As soon as the infant starts suckling at the breast, the hormone oxytocin is released, resulting in uterine contractions that facilitate expulsion of the placenta and reduce the risk of postpartum haemorrhage. Breast milk is sufficient for newborn infants; it is not necessary to feed them anything else. 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 and discarded. The first breast milk contains colostrum, which provides natural immunities to the child. For children who were ever breastfed, Table 10.1 shows how soon after birth breastfeeding was initiated. This information was collected for the most recent birth of each woman who had a birth during the four years before the survey. The timing of initiation of breastfeeding for a sizable proportion of children in Himachal Pradesh is somewhat later than recommended by international authorities. Only 12 percent of children began breastfeeding within one hour of birth and 42 percent began breastfeeding within 24 hours of birth. NFHS data not shown indicate that a substantial majority of women (87 percent) who breastfeed squeeze the first milk from the breast before they begin breastfeeding their babies.

Female children, urban children, and children belonging to scheduled castes and scheduled tribes are more likely to be breastfed within 1 hour of birth. Children of mothers with at least a high school education and children of illiterate mothers are more likely to begin breastfeeding within one hour after birth than children of mothers with other levels of education. Early initiation of breastfeeding is less common for children born in the mother's parental home, and is more common among deliveries which are not assisted by health professionals.

For children currently being breastfed, mothers were asked if the child had been given other liquids or solid foods at any time during the day or night before the interview. 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 either breast milk only or breast milk and plain water only. In Himachal Pradesh, only 36 percent of the children age 0-3 months receive exclusive breastfeeding, and 38 percent receive supplements along with breast milk. Overall, 61 percent of children age 0-3 months receive full breastfeeding. The percentage of infants exclusively breastfed drops off rapidly after three months to only 18 percent at age 4-5 months and to 8 percent at age 6-7 months. The proportion of children receiving supplements along with breast milk steadily increases from 47 percent for children age 2-3 months to 91 percent for children age 8-9 months, and thereafter declines with age. For the majority of children in Himachal Pradesh, breastfeeding continues up to about 22 months of age. The proportion who are not breastfeeding is 17 percent at age 12-13 months, 49 percent at age 22-23 months and 89 percent at age 36-37 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 small number of cases in most of the age categories should be taken into account when interpreting the results. The use of infant formula is not very common in Himachal Pradesh. Only 4 percent of children age 4-5 months and 6 percent of children age 8-9 months are given infant formula as a supplement. Supplementation of breast milk by other milk (such as cow's milk or buffalo's milk) rises steadily with age up to age 8-9 months, when

Table 10.2 Breastfeeding status by child's age

Percent distribution of living children by breastfeeding status, according to child's age in months, Himachal Pradesh, 1992

| Age in months | Percentage among all living children | | | | | | Number of living children |
|---------------|--------------------------------------|----------------------------|-------------------|--------------|-----------------|---------------|---------------------------|
| | Not breast-feeding | Exclusively breast-feeding | Breastfeeding and | | | Total percent | |
| | | | Plain water only | Supple-ments | DK supple-ments | | |
| 0 - 1 | 1.9 | 45.8 | 22.5 | 29.7 | -- | 100.0 | 68 |
| 2 - 3 | 1.0 | 25.7 | 26.7 | 46.5 | -- | 100.0 | 60 |
| 4 - 5 | 3.0 | 17.5 | 17.0 | 62.5 | -- | 100.0 | 64 |
| 6 - 7 | 5.2 | 8.2 | 10.3 | 76.3 | -- | 100.0 | 80 |
| 8 - 9 | 8.8 | -- | -- | 91.2 | -- | 100.0 | 66 |
| 10-11 | 8.7 | 2.3 | 5.8 | 83.2 | -- | 100.0 | 56 |
| 12-13 | 16.6 | -- | 1.7 | 81.7 | -- | 100.0 | 77 |
| 14-15 | (25.1) | (--) | (--) | (74.9) | (--) | 100.0 | 47 |
| 16-17 | 28.0 | -- | 3.2 | 68.8 | -- | 100.0 | 51 |
| 18-19 | 34.2 | -- | -- | 63.9 | 1.9 | 100.0 | 69 |
| 20-21 | (39.9) | (2.8) | (--) | (57.3) | (--) | 100.0 | 48 |
| 22-23 | 49.3 | -- | -- | 50.7 | -- | 100.0 | 64 |
| 24-25 | 55.9 | -- | -- | 44.1 | -- | 100.0 | 57 |
| 26-27 | 63.9 | -- | -- | 36.1 | -- | 100.0 | 64 |
| 28-29 | 62.6 | -- | -- | 37.4 | -- | 100.0 | 68 |
| 30-31 | 71.3 | -- | -- | 28.7 | -- | 100.0 | 63 |
| 32-33 | 71.1 | -- | -- | 28.9 | -- | 100.0 | 59 |
| 34-35 | 87.2 | -- | -- | 12.8 | -- | 100.0 | 56 |
| 36-37 | 89.4 | -- | -- | 10.6 | -- | 100.0 | 65 |
| 38-39 | 88.4 | -- | -- | 11.6 | -- | 100.0 | 57 |
| 40-41 | 88.4 | -- | -- | 11.6 | -- | 100.0 | 68 |
| 42-43 | 92.3 | -- | -- | 7.7 | -- | 100.0 | 59 |
| 44-45 | 95.2 | -- | -- | 4.8 | -- | 100.0 | 55 |
| 46-47 | 97.5 | -- | -- | 2.5 | -- | 100.0 | 52 |

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

DK: Don't know

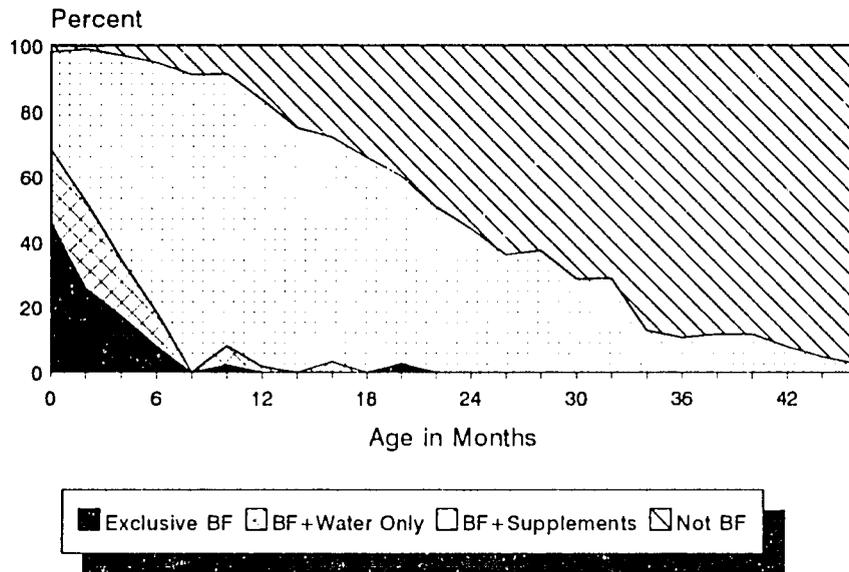
() Based on 25-49 unweighted cases

-- Less than 0.05 percent

the proportion receiving other milk reaches 71 percent, and then stabilizes at about 70-80 percent in most of the older age groups. Supplementation by other liquids such as juice or tea rises rapidly to 90 percent at age 18-19 months and rises slowly thereafter. Infants below three months of age are not generally given solid and mushy food. Supplementation by solid or mushy foods rises from 13 percent at age 4-5 months to 60 percent at 8-9 months. Almost all children (more than 90 percent) above age two years are given solid/mushy food. Less than one-half of children in the age group 6-9 months receive both breast milk and solid foods, as recommended. Seven percent of the infants in this age group do not receive breast milk (see Table 10.2), and 57 percent of those who are breastfeeding do not receive recommended complementary foods.

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 may be shortened when breastfeeding is reduced

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, Himachal Pradesh, 1992

or replaced by bottle feeding. Because it is often difficult to sterilize the nipple properly, the use of bottles with nipples exposes children to an increased risk of developing diarrhoea and other diseases. In Himachal Pradesh, the use of bottles with nipples is the highest at 33 percent at age 4-5 months and 38 percent at age 20-23 months.

The duration of breastfeeding is the most widely studied indicator of breastfeeding. Several statistics describing the length of breastfeeding (such as the median durations of exclusive breastfeeding, full breastfeeding, and breastfeeding of any kind including partial breastfeeding) by selected background characteristics are shown in Table 10.4. Also shown is the percentage of children under 6 months of age who were breastfed six or more times in the 24 hours preceding the interview. The median length of breastfeeding is 22 months or slightly less than two years. Supplementation begins early, however. The median length of exclusive breastfeeding is less than a month, and the median length of full breastfeeding is less than 3 months.

The mean durations of any breastfeeding, exclusive breastfeeding and full breastfeeding are 23.3 months, 2.6 months and 4.1 months, respectively. The mean durations differ slightly from the median durations, because of extremely long durations of breastfeeding for some children. (The mean duration is strongly affected by extreme values, but the median duration is not.) Estimates of both means and medians are based on the current proportions of children breastfeeding in each age group rather than on the mother's recall because current status information is usually more accurate.

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, Himachal Pradesh, 1992

| Age in months | Percentage of breastfeeding children who are: | | | | | Number of breast-feeding children |
|---------------|---|------------|--------------|------------------|----------------------------|-----------------------------------|
| | Receiving supplement | | | | Using bottle with a nipple | |
| | Infant formula | Other milk | Other liquid | Solid/mushy food | | |
| 0 - 1 | 0.5 | 15.1 | 19.1 | -- | 9.3 | 67 |
| 2 - 3 | 3.3 | 28.2 | 23.2 | -- | 15.9 | 59 |
| 4 - 5 | 4.1 | 50.3 | 31.7 | 13.2 | 33.3 | 62 |
| 6 - 7 | 3.0 | 55.4 | 49.7 | 29.0 | 29.4 | 76 |
| 8 - 9 | 5.9 | 70.8 | 72.9 | 60.0 | 16.1 | 61 |
| 10-11 | (6.9) | (68.1) | (82.8) | (71.4) | (22.9) | 51 |
| 12-13 | 5.1 | 69.8 | 75.5 | 85.2 | 25.5 | 64 |
| 14-15 | (1.8) | (68.2) | (88.7) | (80.4) | (25.2) | 35 |
| 16-17 | (4.4) | (63.3) | (81.2) | (74.1) | (16.0) | 37 |
| 18-19 | (6.0) | (74.6) | (90.3) | (84.3) | (16.4) | 44 |
| 20-23 | 3.1 | 81.2 | 91.3 | 87.0 | 37.5 | 61 |
| 24-29 | 9.3 | 79.8 | 94.2 | 94.2 | 8.0 | 73 |
| 30-35 | (--) | (81.2) | (96.9) | (90.6) | (16.4) | 42 |
| 36-47 | (--) | (90.8) | (100.0) | (100.0) | (4.8) | 31 |

Note: Supplementation refers to the last 24 hours. Percents by type of supplement among breastfeeding children may sum to more than 100.0 because children may receive more than one type of supplement.

() Based on 25-49 unweighted cases

-- Less than 0.05 percent

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 about the same as the mean calculated in the conventional manner.

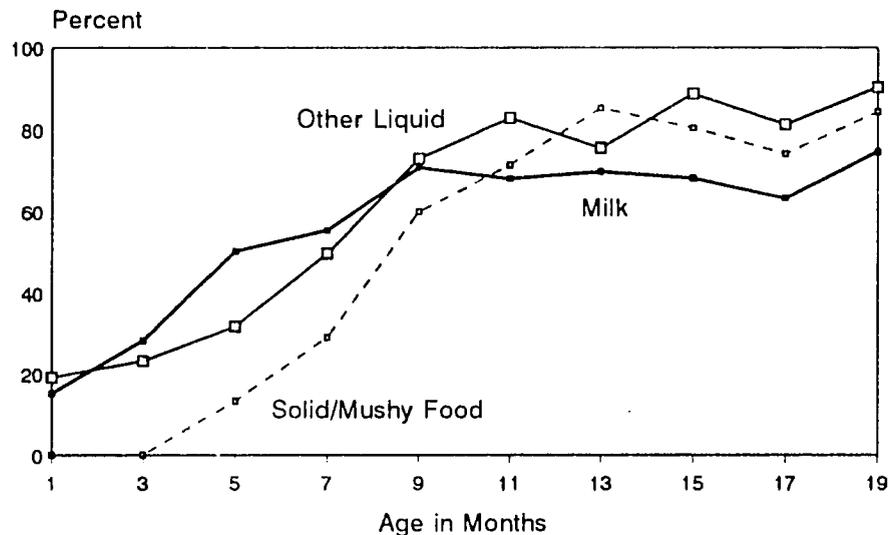
The duration of breastfeeding does not vary much according to most of the characteristics considered in Table 10.4. The median duration is comparatively low for children residing in urban areas (15.8 months), children of mothers who have completed middle school (17.4 months), children of mothers who watch television at least once in a week (18.2 months), and children of mothers who are working for someone outside the family (16.3 months).

Both the frequency of breastfeeding and the length of breastfeeding affect the duration of postpartum amenorrhoea and also the health and nutritional status of the child. A large majority (85 percent) of children under six months of age were breastfed six or more times during the day before the interview. Children in urban areas are less likely than children in rural areas to have been breastfed six or more times in the 24-hour period before the interview.

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 for children under four years of age. In most of the states

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, Himachal Pradesh, 1992

covered by the survey, both weight and height measurements were obtained for each child. However, in the NFHS in Himachal Pradesh, information on only the weight of children was obtained. The nutritional status of children was measured by the weight of each child using a Salter scale, which is a hanging spring balance. The guidelines given in the United Nations Manual, "How to Weigh and Measure Children" (United Nations, 1986), were followed when training the field staff on use of the scale. Weight was measured to the nearest 100 grams. These data are used to calculate weight-for-age as a summary index of nutritional status. The nutritional status of children calculated by weight-for-age 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 weight-for-age index is expressed in standard deviation units (z-scores) from the median for the international reference population. Children who are more than two standard deviations below the reference median are considered to be *underweight*, and children who fall more than three standard deviations below the reference median are considered to be *severely underweight*. Weight-for-age is a composite measure that takes into account both chronic undernutrition (i.e., long-term effects of undernutrition due to either inadequate food intake resulting from poor feeding practices or from lack of sufficient food) and acute undernutrition (associated with either the failure to receive adequate nutrition in the period immediately before

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, Himachal Pradesh, 1992

| Background characteristic | Median durations (months) ¹ | | | Number of children | Children under 6 months | |
|------------------------------------|--|--------------------------|----------------------------------|--------------------|-------------------------------------|--------------------|
| | Any breast-feeding | Exclusive breast-feeding | Full breast-feeding ² | | Breastfed 6+ times in last 24 hours | Number of children |
| Sex of child | | | | | | |
| Male | 22.8 | 0.6 | 2.3 | 822 | 87.9 | 96 |
| Female | 21.3 | 0.7 | 3.0 | 738 | 81.9 | 96 |
| Residence | | | | | | |
| Urban | 15.8 | 0.4 | 0.7 | 119 | 74.0 | 15 |
| Rural | 22.0 | 0.7 | 2.7 | 1441 | 85.8 | 176 |
| Mother's education | | | | | | |
| Illiterate | 20.7 | 1.8 | 3.7 | 723 | 84.0 | 94 |
| Literate, < middle complete | 22.8 | 0.7 | 2.0 | 458 | (91.0) | 48 |
| Middle school complete | 17.4 | 0.5 | 0.7 | 164 | * | 22 |
| High school and above | 21.7 | 0.4 | 0.9 | 214 | (78.2) | 28 |
| Religion | | | | | | |
| Hindu | 21.9 | 0.7 | 2.5 | 1495 | 84.5 | 179 |
| Muslim | (20.8) | (4.9) | (5.1) | 32 | * | 6 |
| Sikh | (16.5) | (1.6) | (1.6) | 16 | * | 2 |
| Caste/tribe | | | | | | |
| Scheduled caste | 18.8 | 0.6 | 3.4 | 384 | 91.7 | 47 |
| Scheduled tribe | 21.4 | 3.2 | 4.2 | 103 | * | 8 |
| Other | 22.9 | 0.7 | 2.3 | 1073 | 81.6 | 137 |
| Mother's work status | | | | | | |
| Not working | 21.2 | 0.6 | 2.6 | 514 | 88.0 | 72 |
| Working in family farm/business | 21.8 | 0.9 | 2.7 | 954 | 83.0 | 108 |
| Employed by someone else | 16.3 | 0.6 | 2.3 | 82 | * | 10 |
| Mother's exposure to media | | | | | | |
| Exposed to media | 21.4 | 0.6 | 2.1 | 982 | 85.7 | 134 |
| Watches television weekly | 18.2 | 0.6 | 1.8 | 658 | 84.0 | 87 |
| Listens to radio weekly | 21.9 | 0.7 | 2.2 | 793 | 85.0 | 111 |
| Visits cinema/theatre monthly | 22.3 | 0.4 | 0.4 | 51 | * | 7 |
| Not exposed to any of the media | 22.0 | 1.5 | 3.8 | 578 | (83.0) | 58 |
| Assistance at delivery | | | | | | |
| Health professional | 20.5 | 0.4 | 0.6 | 404 | 81.2 | 60 |
| Traditional birth attendant | 23.2 | 1.0 | 3.4 | 856 | 84.8 | 100 |
| Other or none | 21.5 | 2.2 | 4.1 | 301 | (92.0) | 32 |
| Total | 21.7 | 0.7 | 2.6 | 1560 | 84.9 | 192 |
| Mean for all children ¹ | 23.3 | 2.6 | 4.1 | 1560 | NA | NA |
| P/I for all children ³ | 23.2 | 2.6 | 3.8 | 1560 | NA | NA |

Note: For children under 4 years, total includes 15 children belonging to other religions and 11 children whose mothers are self-employed; for children under 6 months, total includes 4 children belonging to other religions and 1 child whose mother is self-employed, 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

the survey or a seasonal reduction of food supply or recent episodes of illness, especially diarrhoea).

The validity of this index is determined by many factors, including the coverage of the population of children and the accuracy of the anthropometric measurements. Sometimes, the survey is not able to cover all eligible children for anthropometric measurements usually because the child was not at home or because the mother refused to allow the child to be weighed. In the Himachal Pradesh NFHS, 4 percent of living children under age four were not weighed (see Table B.3 in Appendix B). Also excluded from the analysis are children whose month and year of birth were not reported by the mother, and those with grossly improbable weight measurements. In addition, weight-for-age is sensitive to misreporting of children's ages, including heaping on preferred digits.

Table 10.5 presents the percentage of children classified as undernourished according to weight-for-age, by selected demographic characteristics. Forty-seven percent of children under four years of age in Himachal Pradesh are underweight, and 13 percent are severely underweight. Undernutrition increases with the increase in the child's age, and even during the first six months of life, when most babies are breastfed, 8 percent of children are underweight. This percentage increases three times to 28 percent for children age 6-11 months. The percentage underweight increases again to 60 percent for children age 12-23 months (Figure 10.3). Severe undernourishment also increases dramatically from 2 percent of children less than 6 months old to 19 percent of children age 12-23 months.

Forty-six percent of female children are nutritionally disadvantaged compared with 48 percent of male children. The difference between the percentages of male and female children who are severely undernourished is also small (11 percent of males and 15 percent of females). Undernourishment tends to increase with the birth order of the child and decrease with an increase in the previous birth interval. The percentage of children undernourished and severely undernourished are the highest for children born too close to the previous birth (birth interval of less than 24 months).

Table 10.6 and Figure 10.4 show nutritional status by selected background characteristics. Undernutrition is considerably higher in rural areas (48 percent underweight) than in urban areas (30 percent underweight). The percentage of children severely undernourished is almost three times as high in rural areas (14 percent) as in urban areas (5 percent). Children from scheduled castes and scheduled tribes are somewhat more underweight than other children. The differentials by educational level are much more pronounced than the differentials by any other background variable. Undernutrition declines steadily with increasing educational attainment of the mother. The percentage of children who are underweight is almost twice as high among children of illiterate mothers (53 percent) as among children of mothers with at least a high school education (28 percent). The percentage of children who are severely undernourished is the highest for children of illiterate mothers and lowest for children of mothers with at least a high school education. These findings suggest that mothers need special education about infant feeding practices and nutritional intake, so that the physical and mental growth of their children will not be impaired.

Table 10.5 Nutritional status by demographic characteristics

Among children under four years of age, the percentage classified as undernourished according to weight-for-age, by demographic characteristics, Himachal Pradesh, 1992

| Demographic characteristic | Weight-for-age | | Number of children |
|--|------------------------|-------------------------------------|--------------------|
| | Percentage below -3 SD | Percentage below -2 SD ¹ | |
| Child's age | | | |
| < 6 months | 1.6 | 7.5 | 169 |
| 6-11 months | 6.4 | 27.9 | 189 |
| 12-23 months | 19.2 | 59.8 | 327 |
| 24-35 months | 15.9 | 56.3 | 330 |
| 36-47 months | 13.3 | 56.6 | 314 |
| Sex | | | |
| Male | 11.2 | 47.8 | 699 |
| Female | 14.8 | 46.1 | 631 |
| Birth order | | | |
| 1 | 10.4 | 40.7 | 410 |
| 2-3 | 13.5 | 48.1 | 640 |
| 4-5 | 13.2 | 51.2 | 204 |
| 6+ | 21.4 | 60.3 | 75 |
| Previous birth interval² | | | |
| First birth | 10.4 | 40.6 | 411 |
| < 24 months | 14.9 | 54.2 | 292 |
| 24-47 months | 14.1 | 49.5 | 495 |
| 48+ months | 11.9 | 41.4 | 132 |
| Total | 12.9 | 47.0 | 1330 |

Note: Figures are for children born 1-47 months prior to the survey. Weight-for-age 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 children who are more than 3 standard deviations below 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.

Table 10.6 Nutritional status by background characteristics

Among children under four years of age, the percentage classified as undernourished according to weight-for-age, by selected background characteristics, Himachal Pradesh, 1992

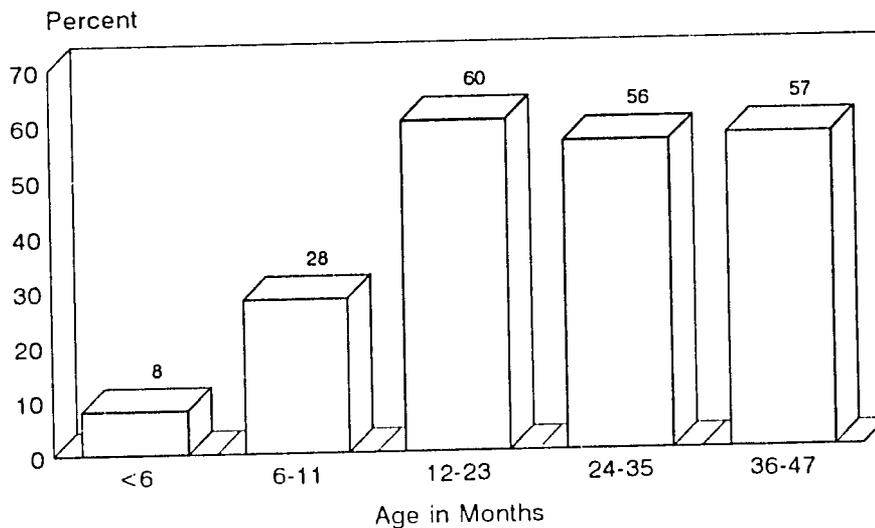
| Background characteristic | Weight-for-age | | Number of children |
|---------------------------|------------------------|-------------------------------------|--------------------|
| | Percentage below -3 SD | Percentage below -2 SD ¹ | |
| Residence | | | |
| Urban | 5.0 | 30.2 | 99 |
| Rural | 13.6 | 48.3 | 1230 |
| Mother's education | | | |
| Illiterate | 18.8 | 52.7 | 590 |
| Lit., < middle complete | 10.4 | 48.8 | 399 |
| Middle school complete | 6.4 | 44.0 | 143 |
| High school and above | 5.4 | 28.4 | 198 |
| Religion | | | |
| Hindu | 12.6 | 47.2 | 1270 |
| Muslim | (16.7) | (41.8) | 27 |
| Caste/tribe | | | |
| Scheduled caste | 17.6 | 53.4 | 329 |
| Scheduled tribe | 29.9 | 56.4 | 79 |
| Other | 9.8 | 43.9 | 921 |
| Total | 12.9 | 47.0 | 1330 |

Note: Figures are for children born 1-47 months prior to the survey. Weight-for-age 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 15 Sikh children and 18 children belonging to other religions, who are not shown separately.

() Based on fewer than 25 unweighted cases

¹Also includes children who are more than 3 standard deviations below the International Reference Population median

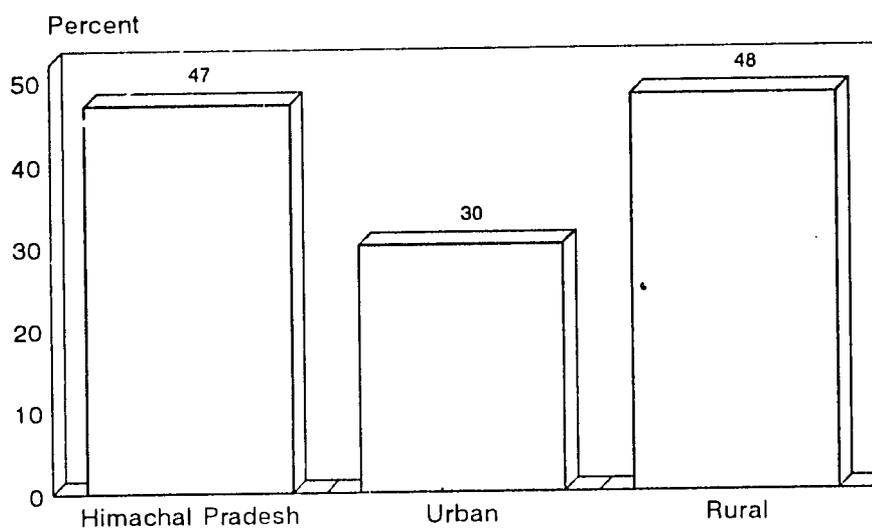
Figure 10.3
 Percentage of Children Under Age Four
 Who Are Underweight by Age



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

NFHS, Himachal Pradesh, 1992

Figure 10.4
 Percentage of Children Under Age Four
 Who Are Underweight by Residence



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

NFHS, Himachal Pradesh, 1992

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 tehsil 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 extension worker (*Gram Sevak*) might be asked about the availability of electricity, irrigation and other production infrastructure. 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 102 villages in the NFHS sample in Himachal Pradesh.

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. Only 12 percent of the villages are within 5 km of the nearest town and 62 percent are more than 10 km away. The median distance to the nearest town is 16 km. The majority of villages (71 percent) are more than 10 km away from the nearest railway station. Because Himachal Pradesh is a hilly state with difficult terrain, the railway network is not well developed. The length of railway lines in Himachal Pradesh is only 256 km, which comes to 4.6 km of railway line per 1,000 square kilometres of area in the state. The median distance to the nearest railway station is 41 km. Bus service is somewhat more accessible to the villages in Himachal Pradesh. Sixty-six percent of the villages are less than 5 km from the nearest bus stand, and only 6 percent are 10 or more km away from it.

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, Himachal Pradesh, 1992

| Distance | Nearest town | Nearest railway station | Nearest bus stand |
|--------------------|--------------|-------------------------|-------------------|
| < 5 km | 11.6 | 4.6 | 66.4 |
| 5-9 km | 23.5 | 5.8 | 22.5 |
| 10+ km | 61.6 | 70.9 | 5.8 |
| Don't know/missing | 3.3 | 18.7 | 5.3 |
| Total percent | 100.0 | 100.0 | 100.0 |
| Median distance | 15.7 | 40.7 | 2.7 |

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.

Most of the sample villages in Himachal Pradesh have access to some form of educational facility (see Table 11.2). The majority of villages (62 percent) have a primary school located within the village, and four-fifths of the villages have a middle school either within the village or within 5 km of the village. The median distance of villages from a secondary school or higher secondary school is 5-8 km. However, colleges are located quite far from the villages, at a median distance of more than 20 km. More than three-fourths of the villages are 10 or more km from the nearest college.

Table 11.2 Distance from nearest educational facility

Percent distribution of villages according to distance from nearest educational facility, Himachal Pradesh, 1992

| Distance | Educational facility | | | | |
|---------------------------|----------------------|---------------|------------------|-------------------------|---------|
| | Primary school | Middle school | Secondary school | Higher secondary school | College |
| Within village | 62.3 | 25.5 | 3.8 | 0.3 | -- |
| < 5 km | 35.0 | 56.5 | 44.7 | 22.9 | 3.0 |
| 5-9 km | 2.7 | 18.0 | 25.2 | 35.1 | 12.9 |
| 10+ km | -- | -- | 26.3 | 41.7 | 78.5 |
| Don't know/missing | -- | -- | -- | 0.1 | 5.6 |
| Total percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Median distance | 0.0 | 2.5 | 5.3 | 8.1 | 20.9 |
| -- Less than 0.05 percent | | | | | |

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. More than one-quarter of all sample villages in Himachal Pradesh have some form of health facility within the village. The most common facility found within the villages is a sub-centre or a dispensary/clinic (15 percent each). Six in 10 villages have a sub-centre located within the village or within 5 km of the village; however, only 1 in 4 have a Primary Health Centre located in the village or within 5 km. The median distance to a sub-centre is 4 km, while the median distance to a Primary Health Centre is 7 km. As expected, the median distance of villages from a hospital is the greatest (16 km), with 64 percent of all villages 10 or more km from the nearest hospital.

The percent distribution of ever-married women according to the distance to the nearest health facility mirrors the distribution of villages. However, since larger villages are more likely to be accessible to health facilities the median distance to each type of facility is slightly less for ever-married women than for villages. Forty-one percent of ever-married women have access to a health facility within their village, the most common facility being a dispensary/clinic or sub-centre. Most women (61 percent) would have to travel 10 or more km to the nearest hospital.

| 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, Himachal Pradesh, 1992 | | | | | | |
| Distance | Health facility | | | | | Any health facility |
| | Primary Health Centre | Sub-centre | Either PHC/or sub-centre | Hospital | Dispensary/clinic | |
| VILLAGES | | | | | | |
| Within village | 3.3 | 14.9 | 17.8 | -- | 14.5 | 28.8 |
| < 5 km | 22.4 | 44.5 | 51.6 | 15.4 | 51.1 | 55.7 |
| 5-9 km | 35.5 | 17.6 | 22.0 | 18.8 | 21.7 | 14.2 |
| 10+ km | 38.6 | 13.5 | 8.4 | 63.9 | 10.6 | 1.3 |
| Don't know/missing | 0.2 | 9.4 | 0.2 | 1.9 | 2.1 | -- |
| Total percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Median distance | 6.9 | 3.5 | 2.9 | 15.9 | 3.5 | 2.2 |
| EVER-MARRIED WOMEN | | | | | | |
| Within village | 7.0 | 21.8 | 25.5 | -- | 25.0 | 41.0 |
| < 5 km | 26.4 | 42.5 | 50.4 | 17.0 | 47.6 | 50.2 |
| 5-9 km | 30.4 | 13.0 | 13.9 | 20.0 | 16.4 | 7.7 |
| 10+ km | 34.8 | 11.6 | 8.6 | 61.4 | 9.0 | 1.2 |
| Don't know/missing | 1.5 | 11.0 | 1.5 | 1.7 | 2.0 | -- |
| Total percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Median distance | 6.7 | 2.7 | 2.5 | 15.7 | 2.9 | 1.7 |
| -- Less than 0.05 percent | | | | | | |

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. One-quarter of the villages have a village health guide, 27 percent have a trained birth attendant, and 14 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. Almost all villages (98 percent) are electrified. Among the government rural development programmes, the most important in the villages of Himachal Pradesh is the Integrated Rural Development Programme, which exists in 73 percent of the villages. Forty percent of villages have an *Anganwadi* centre (a pre-school child care centre, under the Integrated Child Development Scheme) and 14 percent have a youth club. Since the literacy rate in the state is relatively high, only 3 percent of the villages have adult education classes. Forty-three percent of the sample villages have cooperative societies. Shops or markets are also common, but are not available in most villages. Thirty percent of villages have a fair price shop and 41 percent have a market or other type of shop. Only 5 percent have a bank but 34 percent have a post office.

| Facility/service | Percentage |
|---|------------|
| Anganwadi | 40.0 |
| Adult education classes | 2.8 |
| Village health guide | 25.2 |
| Trained birth attendant | 27.2 |
| Mobile health unit | 13.9 |
| Electricity | 98.2 |
| Bank | 5.4 |
| Cooperative society | 42.7 |
| Post office | 34.3 |
| Market/shop | 41.4 |
| Fair price shop | 29.6 |
| Mahila Mandal | 29.4 |
| Youth club | 14.2 |
| Integrated Rural Development Programme (IRDP) | 72.8 |
| National Rural Employment Programme (NREP) | 6.4 |
| Training the Youth for Self-employment (TRYSEM) | 11.9 |

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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. 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, Himachal Pradesh, 1992

| 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 1 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, Himachal Pradesh, 1992

| 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 |
| SEX RATIO (Household <i>de facto</i> population) | | | | | | | | | |
| Urban | 949 | 24.7 | 2444 | 794 | 21.943 | 1.124 | 0.026 | 999.9 | 998.6 |
| Rural | 1076 | 17.6 | 5442 | 7269 | 16.381 | 1.075 | 0.016 | 1040.7 | 1111.1 |
| Total | 1063 | 16.0 | 7886 | 8063 | 13.326 | 1.198 | 0.015 | 1031.5 | 1095.4 |
| ILLITERATE (Household <i>de facto</i> population, age 6 and over) | | | | | | | | | |
| Urban | 0.114 | 0.010 | 4166 | 1354 | 0.006 | 1.609 | 0.086 | 0.095 | 0.134 |
| Rural | 0.343 | 0.011 | 9592 | 12813 | 0.006 | 1.839 | 0.032 | 0.321 | 0.365 |
| Total | 0.321 | 0.010 | 13758 | 14166 | 0.005 | 2.033 | 0.031 | 0.301 | 0.341 |
| PIPED WATER AS SOURCE OF DRINKING WATER (Households) | | | | | | | | | |
| Urban | 0.926 | 0.010 | 1036 | 337 | 0.008 | 1.215 | 0.011 | 0.906 | 0.945 |
| Rural | 0.518 | 0.029 | 2083 | 2782 | 0.011 | 2.655 | 0.056 | 0.460 | 0.577 |
| Total | 0.547 | 0.026 | 3119 | 3119 | 0.496 | 2.965 | 0.047 | 0.509 | 0.615 |
| PUMPED WATER AS SOURCE OF DRINKING WATER (Households) | | | | | | | | | |
| Urban | 0.013 | 0.004 | 1036 | 337 | 0.003 | 1.176 | 0.324 | 0.004 | 0.021 |
| Rural | 0.013 | 0.005 | 2083 | 2782 | 0.003 | 1.787 | 0.335 | 0.004 | 0.022 |
| Total | 0.013 | 0.004 | 3119 | 3119 | 0.002 | 1.969 | 0.303 | 0.005 | 0.021 |
| WELL WATER AS SOURCE OF DRINKING WATER (Households) | | | | | | | | | |
| Urban | 0.013 | 0.006 | 1036 | 337 | 0.003 | 1.799 | 0.496 | 0.000 | 0.025 |
| Rural | 0.102 | 0.024 | 2083 | 2782 | 0.007 | 3.573 | 0.233 | 0.054 | 0.147 |
| Total | 0.092 | 0.021 | 3119 | 3119 | 0.005 | 4.084 | 0.230 | 0.050 | 0.134 |
| SURFACE WATER AS SOURCE OF DRINKING WATER (Households) | | | | | | | | | |
| Urban | 0.047 | 0.009 | 1036 | 337 | 0.007 | 1.427 | 0.199 | 0.028 | 0.066 |
| Rural | 0.363 | 0.033 | 2083 | 2782 | 0.011 | 3.099 | 0.090 | 0.298 | 0.429 |
| Total | 0.329 | 0.029 | 3119 | 3119 | 0.008 | 3.492 | 0.089 | 0.271 | 0.388 |
| ILLITERATE (Ever-married women age 13-49) | | | | | | | | | |
| Urban | 0.177 | 0.018 | 930 | 288 | 0.013 | 1.463 | 0.103 | 0.141 | 0.214 |
| Rural | 0.531 | 0.021 | 2032 | 2674 | 0.011 | 1.902 | 0.040 | 0.489 | 0.573 |
| Total | 0.497 | 0.019 | 2962 | 2962 | 0.009 | 2.076 | 0.038 | 0.458 | 0.535 |
| WITH SECONDARY EDUCATION OR MORE (Ever-married women age 13-49) | | | | | | | | | |
| Urban | 0.497 | 0.025 | 930 | 288 | 0.016 | 1.522 | 0.050 | 0.447 | 0.547 |
| Rural | 0.095 | 0.009 | 2032 | 2674 | 0.007 | 1.308 | 0.089 | 0.078 | 0.113 |
| Total | 0.135 | 0.008 | 2962 | 2962 | 0.006 | 1.320 | 0.062 | 0.118 | 0.151 |
| CURRENTLY MARRIED (Ever-married women age 13-49) | | | | | | | | | |
| Urban | 0.957 | 0.007 | 930 | 288 | 0.007 | 1.075 | 0.007 | 0.943 | 0.971 |
| Rural | 0.951 | 0.006 | 2032 | 2674 | 0.005 | 1.206 | 0.006 | 0.940 | 0.963 |
| Total | 0.952 | 0.005 | 2962 | 2962 | 0.004 | 1.333 | 0.006 | 0.941 | 0.962 |
| MEAN NUMBER OF CHILDREN EVER BORN (Ever-married women age 13-49) | | | | | | | | | |
| Urban | 2.529 | 0.051 | 930 | 288 | 0.049 | 1.034 | 0.020 | 2.427 | 2.631 |
| Rural | 3.033 | 0.044 | 2032 | 2674 | 0.043 | 1.024 | 0.015 | 2.945 | 3.122 |
| Total | 2.984 | 0.040 | 2962 | 2962 | 0.035 | 1.146 | 0.014 | 2.904 | 3.065 |

Table A.2 Sampling errors, Himachal Pradesh, 1992 (Contd.)

| Variable/residence | Value (R) | Standard error (SE) | Number of cases | | Standard error assuming SRS (SER) | Design effect (DEET) | Relative error (SE/R) | Confidence limits | |
|--|-----------|---------------------|-----------------|---------------|-----------------------------------|----------------------|-----------------------|-------------------|-------|
| | | | Unweighted (N) | Weighted (WN) | | | | R-2SE | R+2SE |
| MEAN NUMBER OF CHILDREN SURVIVING (Ever-married women age 13-49) | | | | | | | | | |
| Urban | 2.367 | 0.046 | 930 | 288 | 0.045 | 1.02 | 0.020 | 2.274 | 2.460 |
| Rural | 2.694 | 0.034 | 2032 | 2674 | 0.037 | 0.901 | 0.012 | 2.627 | 2.762 |
| Total | 2.662 | 0.031 | 2962 | 2962 | 0.030 | 1.009 | 0.012 | 2.601 | 2.724 |
| KNOW AT LEAST ONE CONTRACEPTIVE METHOD (Currently married women age 13-49) | | | | | | | | | |
| Urban | 1.000 | 0.000 | 890 | 276 | 0.000 | NC | NC | 1.000 | 1.000 |
| Rural | 0.990 | 0.002 | 1933 | 2544 | 0.002 | 1.067 | 0.002 | 0.985 | 0.995 |
| Total | 0.991 | 0.002 | 2823 | 2819 | 0.002 | 1.223 | 0.002 | 0.987 | 0.995 |
| KNOW SOURCE FOR ANY MODERN METHOD (Currently married women age 13-49) | | | | | | | | | |
| Urban | 0.998 | 0.002 | 890 | 276 | 0.002 | 1.049 | 0.002 | 0.994 | 1.001 |
| Rural | 0.972 | 0.004 | 1933 | 2544 | 0.004 | 1.117 | 0.004 | 0.963 | 0.980 |
| Total | 0.975 | 0.004 | 2823 | 2819 | 0.003 | 1.274 | 0.004 | 0.967 | 0.982 |
| HAVE EVER USED ANY METHOD (Currently married women age 13-49) | | | | | | | | | |
| Urban | 0.812 | 0.012 | 890 | 276 | 0.013 | 0.943 | 0.015 | 0.788 | 0.837 |
| Rural | 0.662 | 0.014 | 1933 | 2544 | 0.011 | 1.303 | 0.021 | 0.634 | 0.690 |
| Total | 0.676 | 0.013 | 2823 | 2819 | 0.009 | 1.450 | 0.019 | 0.651 | 0.702 |
| CURRENTLY USING ANY METHOD (Currently married women age 13-49) | | | | | | | | | |
| Urban | 0.704 | 0.014 | 890 | 276 | 0.015 | 0.947 | 0.021 | 0.676 | 0.733 |
| Rural | 0.571 | 0.015 | 1933 | 2544 | 0.011 | 1.306 | 0.026 | 0.541 | 0.600 |
| Total | 0.584 | 0.013 | 2823 | 2819 | 0.009 | 1.445 | 0.023 | 0.557 | 0.611 |
| CURRENTLY USING ANY MODERN METHOD (Currently married women age 13-49) | | | | | | | | | |
| Urban | 0.630 | 0.017 | 890 | 276 | 0.016 | 1.070 | 0.027 | 0.596 | 0.665 |
| Rural | 0.534 | 0.014 | 1933 | 2544 | 0.011 | 1.223 | 0.026 | 0.507 | 0.562 |
| Total | 0.544 | 0.013 | 2823 | 2819 | 0.009 | 1.349 | 0.023 | 0.518 | 0.569 |
| CURRENTLY USING PILLS (Currently married women age 13-49) | | | | | | | | | |
| Urban | 0.012 | 0.003 | 890 | 276 | 0.004 | 0.761 | 0.228 | 0.007 | 0.018 |
| Rural | 0.005 | 0.002 | 1933 | 2544 | 0.002 | 1.003 | 0.334 | 0.002 | 0.008 |
| Total | 0.005 | 0.001 | 2823 | 2819 | 0.001 | 1.037 | 0.265 | 0.003 | 0.008 |
| CURRENTLY USING COPPER T/IUD (Currently married women age 13-49) | | | | | | | | | |
| Urban | 0.089 | 0.009 | 890 | 276 | 0.010 | 0.966 | 0.104 | 0.070 | 0.107 |
| Rural | 0.020 | 0.004 | 1933 | 2544 | 0.003 | 1.108 | 0.176 | 0.013 | 0.027 |
| Total | 0.027 | 0.003 | 2823 | 2819 | 0.003 | 1.095 | 0.124 | 0.020 | 0.034 |
| CURRENTLY USING CONDOM (Currently married women age 13-49) | | | | | | | | | |
| Urban | 0.143 | 0.016 | 890 | 276 | 0.012 | 1.370 | 0.113 | 0.111 | 0.175 |
| Rural | 0.043 | 0.005 | 1933 | 2544 | 0.005 | 1.154 | 0.123 | 0.033 | 0.054 |
| Total | 0.053 | 0.005 | 2823 | 2819 | 0.004 | 1.201 | 0.095 | 0.043 | 0.063 |
| CURRENTLY USING FEMALE STERILIZATION (Currently married women age 13-49) | | | | | | | | | |
| Urban | 0.291 | 0.016 | 890 | 276 | 0.015 | 1.043 | 0.055 | 0.259 | 0.323 |
| Rural | 0.330 | 0.017 | 1933 | 2544 | 0.011 | 1.597 | 0.052 | 0.296 | 0.364 |
| Total | 0.326 | 0.015 | 2823 | 2819 | 0.009 | 1.754 | 0.047 | 0.295 | 0.357 |
| CURRENTLY USING MALE STERILIZATION (Currently married women age 13-49) | | | | | | | | | |
| Urban | 0.096 | 0.009 | 890 | 276 | 0.010 | 0.932 | 0.096 | 0.077 | 0.114 |
| Rural | 0.136 | 0.013 | 1933 | 2544 | 0.008 | 1.709 | 0.098 | 0.109 | 0.162 |
| Total | 0.132 | 0.012 | 2823 | 2819 | 0.006 | 1.893 | 0.092 | 0.108 | 0.156 |

Table A.2 Sampling errors, Himachal Pradesh, 1992 (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 PERIODIC ABSTINENCE (Currently married women age 13-49) | | | | | | | | | |
| Urban | 0.024 | 0.007 | 890 | 276 | 0.005 | 1.316 | 0.284 | 0.010 | 0.037 |
| Rural | 0.016 | 0.004 | 1933 | 2544 | 0.003 | 1.381 | 0.246 | 0.008 | 0.024 |
| Total | 0.017 | 0.004 | 2823 | 2819 | 0.002 | 1.499 | 0.216 | 0.010 | 0.024 |
| USING PUBLIC SOURCE FOR MODERN METHOD (Current users of modern methods) | | | | | | | | | |
| Urban | 0.752 | 0.023 | 561 | 174 | 0.018 | 1.246 | 0.030 | 0.707 | 0.798 |
| Rural | 0.925 | 0.009 | 1033 | 1359 | 0.008 | 1.074 | 0.009 | 0.908 | 0.943 |
| Total | 0.906 | 0.008 | 1594 | 1533 | 0.007 | 1.117 | 0.009 | 0.889 | 0.922 |
| DO NOT WANT ANY MORE CHILDREN (Currently married women age 13-49) | | | | | | | | | |
| Urban | 0.413 | 0.017 | 890 | 276 | 0.017 | 1.016 | 0.041 | 0.380 | 0.447 |
| Rural | 0.241 | 0.012 | 1933 | 2544 | 0.010 | 1.216 | 0.049 | 0.217 | 0.264 |
| Total | 0.257 | 0.011 | 2823 | 2819 | 0.008 | 1.307 | 0.042 | 0.236 | 0.279 |
| WANT TO DELAY BIRTH AT LEAST TWO YEARS (Currently married women age 13-49) | | | | | | | | | |
| Urban | 0.108 | 0.008 | 890 | 276 | 0.010 | 0.739 | 0.071 | 0.092 | 0.123 |
| Rural | 0.164 | 0.008 | 1933 | 2544 | 0.008 | 0.989 | 0.051 | 0.147 | 0.181 |
| Total | 0.159 | 0.008 | 2823 | 2819 | 0.007 | 1.095 | 0.047 | 0.143 | 0.174 |
| IDEAL NUMBER OF CHILDREN (Ever-married women age 13-49) | | | | | | | | | |
| Urban | 2.027 | 0.024 | 885 | 274 | 0.019 | 1.265 | 0.012 | 1.978 | 2.076 |
| Rural | 2.400 | 0.026 | 1954 | 2571 | 0.016 | 1.672 | 0.011 | 2.347 | 2.453 |
| Total | 2.364 | 0.024 | 2839 | 2845 | 0.013 | 1.810 | 0.010 | 2.316 | 2.411 |
| IDEAL NUMBER OF SONS (Ever-married women age 13-49) | | | | | | | | | |
| Urban | 0.763 | 0.027 | 882 | 273 | 0.024 | 1.133 | 0.036 | 0.708 | 0.818 |
| Rural | 1.332 | 0.023 | 1954 | 2571 | 0.016 | 1.407 | 0.017 | 1.286 | 1.377 |
| Total | 1.277 | 0.021 | 2836 | 2845 | 0.014 | 1.498 | 0.016 | 1.236 | 1.318 |
| IDEAL NUMBER OF DAUGHTERS (Ever-married women age 13-49) | | | | | | | | | |
| Urban | 0.566 | 0.017 | 882 | 273 | 0.017 | 1.005 | 0.031 | 0.531 | 0.601 |
| Rural | 0.857 | 0.015 | 1954 | 2571 | 0.011 | 1.349 | 0.017 | 0.827 | 0.886 |
| Total | 0.829 | 0.013 | 2836 | 2845 | 0.009 | 1.432 | 0.016 | 0.802 | 0.855 |
| RECEIVED NO ANTENATAL CARE (Births in last 4 years) | | | | | | | | | |
| Urban | 0.051 | 0.015 | 374 | 116 | 0.013 | 1.163 | 0.299 | 0.020 | 0.081 |
| Rural | 0.255 | 0.028 | 1078 | 1418 | 0.015 | 1.796 | 0.108 | 0.200 | 0.310 |
| Total | 0.240 | 0.026 | 1452 | 1534 | 0.013 | 2.035 | 0.107 | 0.188 | 0.291 |
| RECEIVED TETANUS TOXOID (2 DOSES) (Births in last 4 years) | | | | | | | | | |
| Urban | 0.626 | 0.018 | 374 | 116 | 0.026 | 0.684 | 0.029 | 0.589 | 0.662 |
| Rural | 0.462 | 0.026 | 1078 | 1418 | 0.016 | 1.585 | 0.056 | 0.410 | 0.514 |
| Total | 0.474 | 0.024 | 1452 | 1534 | 0.014 | 1.760 | 0.051 | 0.426 | 0.523 |
| RECEIVED MEDICAL ASSISTANCE AT DELIVERY (Births in last 4 years) | | | | | | | | | |
| Urban | 0.674 | 0.034 | 374 | 116 | 0.028 | 1.205 | 0.051 | 0.605 | 0.742 |
| Rural | 0.222 | 0.019 | 1078 | 1418 | 0.014 | 1.299 | 0.084 | 0.185 | 0.259 |
| Total | 0.256 | 0.018 | 1452 | 1534 | 0.013 | 1.419 | 0.070 | 0.220 | 0.292 |
| HAD DIARRHOEA IN THE LAST 24 HOURS (Children under 4 years old) | | | | | | | | | |
| Urban | 0.034 | 0.012 | 358 | 111 | 0.010 | 1.150 | 0.350 | 0.010 | 0.057 |
| Rural | 0.081 | 0.010 | 1014 | 1334 | 0.009 | 1.194 | 0.128 | 0.060 | 0.101 |
| Total | 0.077 | 0.010 | 1372 | 1445 | 0.007 | 1.349 | 0.124 | 0.058 | 0.096 |

Table A.2 Sampling errors, Himachal Pradesh, 1992 (Contd.)

| 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 |
| HAD DIARRHOEA IN THE LAST 2 WEEKS (Children under 4 years old) | | | | | | | | | |
| Urban | 0.081 | 0.015 | 358 | 111 | 0.015 | 1.044 | 0.189 | 0.050 | 0.112 |
| Rural | 0.205 | 0.018 | 1014 | 1334 | 0.013 | 1.345 | 0.088 | 0.169 | 0.241 |
| Total | 0.196 | 0.017 | 1372 | 1445 | 0.011 | 1.520 | 0.086 | 0.162 | 0.229 |
| TREATED WITH ORS PACKETS (Children with diarrhoea in the last 2 weeks) | | | | | | | | | |
| Urban | 0.276 | 0.076 | 29 | 9 | 0.084 | 0.907 | 0.277 | 0.123 | 0.429 |
| Rural | 0.298 | 0.029 | 208 | 274 | 0.034 | 0.872 | 0.098 | 0.240 | 0.356 |
| Total | 0.297 | 0.028 | 237 | 283 | 0.029 | 0.989 | 0.095 | 0.241 | 0.354 |
| CONSULTED MEDICAL PERSONNEL FOR DIARRHOEA (Children with diarrhoea in the last 2 weeks) | | | | | | | | | |
| Urban | 0.828 | 0.073 | 29 | 9 | 0.071 | 1.027 | 0.088 | 0.682 | 0.973 |
| Rural | 0.702 | 0.039 | 208 | 274 | 0.033 | 1.176 | 0.056 | 0.624 | 0.780 |
| Total | 0.706 | 0.038 | 237 | 283 | 0.028 | 1.338 | 0.054 | 0.630 | 0.782 |
| SHOWING VACCINATION CARD (Children age 12-23 months) | | | | | | | | | |
| Urban | 0.576 | 0.054 | 92 | 29 | 0.053 | 1.018 | 0.093 | 0.469 | 0.683 |
| Rural | 0.532 | 0.032 | 248 | 326 | 0.032 | 1.000 | 0.060 | 0.468 | 0.596 |
| Total | 0.536 | 0.030 | 340 | 355 | 0.027 | 1.112 | 0.055 | 0.476 | 0.595 |
| RECEIVED BCG VACCINATION (Children age 12-23 months) | | | | | | | | | |
| Urban | 0.967 | 0.021 | 92 | 29 | 0.019 | 1.154 | 0.022 | 0.925 | 1.010 |
| Rural | 0.835 | 0.031 | 248 | 326 | 0.024 | 1.297 | 0.037 | 0.773 | 0.896 |
| Total | 0.845 | 0.028 | 340 | 355 | 0.019 | 1.472 | 0.033 | 0.789 | 0.902 |
| RECEIVED DPT VACCINATION (3 DOSES) (Children age 12-23 months) | | | | | | | | | |
| Urban | 0.913 | 0.029 | 92 | 29 | 0.029 | 0.997 | 0.032 | 0.854 | 0.972 |
| Rural | 0.770 | 0.030 | 248 | 326 | 0.027 | 1.123 | 0.039 | 0.710 | 0.830 |
| Total | 0.782 | 0.028 | 340 | 355 | 0.022 | 1.270 | 0.036 | 0.726 | 0.838 |
| RECEIVED POLIO VACCINATION (3 DOSES) (Children age 12-23 months) | | | | | | | | | |
| Urban | 0.902 | 0.034 | 92 | 29 | 0.031 | 1.108 | 0.038 | 0.833 | 0.971 |
| Rural | 0.766 | 0.029 | 248 | 326 | 0.027 | 1.085 | 0.038 | 0.708 | 0.825 |
| Total | 0.777 | 0.027 | 340 | 355 | 0.022 | 1.224 | 0.035 | 0.723 | 0.831 |
| RECEIVED MEASLES VACCINATION (Children age 12-23 months) | | | | | | | | | |
| Urban | 0.870 | 0.028 | 92 | 29 | 0.035 | 0.808 | 0.033 | 0.813 | 0.927 |
| Rural | 0.702 | 0.037 | 248 | 326 | 0.029 | 1.274 | 0.053 | 0.627 | 0.776 |
| Total | 0.715 | 0.034 | 340 | 355 | 0.024 | 1.431 | 0.048 | 0.646 | 0.784 |
| FULLY VACCINATED (Children age 12-23 months) | | | | | | | | | |
| Urban | 0.815 | 0.034 | 92 | 29 | 0.041 | 0.826 | 0.041 | 0.748 | 0.882 |
| Rural | 0.613 | 0.041 | 248 | 326 | 0.031 | 1.305 | 0.066 | 0.532 | 0.694 |
| Total | 0.629 | 0.038 | 340 | 355 | 0.026 | 1.458 | 0.060 | 0.554 | 0.704 |

Table A.2 Sampling error Himachal Pradesh, 1992 (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 | 2.029 | 0.108 | 0.053 | 1.814 | 2.245 |
| Rural | 3.068 | 0.105 | 0.034 | 2.858 | 3.278 |
| Total | 2.967 | 0.095 | 0.032 | 2.778 | 3.157 |
| TOTAL FERTILITY RATE (Women age 15-44) | | | | | |
| Urban | 2.029 | 0.108 | 0.053 | 1.814 | 2.245 |
| Rural | 3.068 | 0.105 | 0.034 | 2.858 | 3.278 |
| Total | 2.967 | 0.095 | 0.032 | 2.778 | 3.157 |
| AGE-SPECIFIC FERTILITY RATE (Age group 15-19) | | | | | |
| Urban | 0.023 | 0.008 | 0.343 | 0.007 | 0.040 |
| Rural | 0.080 | 0.009 | 0.107 | 0.062 | 0.097 |
| Total | 0.075 | 0.008 | 0.104 | 0.059 | 0.091 |
| AGE-SPECIFIC FERTILITY RATE (Age group 20-24) | | | | | |
| Urban | 0.184 | 0.013 | 0.073 | 0.157 | 0.211 |
| Rural | 0.267 | 0.010 | 0.038 | 0.246 | 0.287 |
| Total | 0.259 | 0.009 | 0.036 | 0.241 | 0.278 |
| AGE-SPECIFIC FERTILITY RATE (Age group 25-29) | | | | | |
| Urban | 0.124 | 0.011 | 0.085 | 0.103 | 0.145 |
| Rural | 0.179 | 0.012 | 0.068 | 0.155 | 0.203 |
| Total | 0.172 | 0.011 | 0.063 | 0.150 | 0.194 |
| AGE-SPECIFIC FERTILITY RATE (Age group 30-34) | | | | | |
| Urban | 0.059 | 0.011 | 0.186 | 0.057 | 0.081 |
| Rural | 0.044 | 0.007 | 0.155 | 0.031 | 0.058 |
| Total | 0.046 | 0.006 | 0.135 | 0.034 | 0.058 |
| AGE-SPECIFIC FERTILITY RATE (Age group 35-39) | | | | | |
| Urban | 0.015 | 0.006 | 0.434 | 0.002 | 0.027 |
| Rural | 0.036 | 0.006 | 0.166 | 0.024 | 0.048 |
| Total | 0.034 | 0.005 | 0.160 | 0.023 | 0.045 |
| AGE-SPECIFIC FERTILITY RATE (Age group 40-44) | | | | | |
| Urban | 0.000 | 0.000 | NC | 0.000 | 0.000 |
| Rural | 0.008 | 0.003 | 0.397 | 0.002 | 0.014 |
| Total | 0.007 | 0.003 | 0.396 | 0.001 | 0.012 |
| NEONATAL MORTALITY (5-year period preceding survey) | | | | | |
| Urban | 37.578 | 10.936 | 0.291 | 15.705 | 59.451 |
| Rural | 33.911 | 5.930 | 0.175 | 22.051 | 45.770 |
| Total | 34.187 | 5.533 | 0.162 | 23.120 | 45.253 |
| INFANT MORTALITY ${}_5q_0$ (5-year period preceding survey) | | | | | |
| Urban | 48.753 | 11.307 | 0.232 | 26.139 | 71.367 |
| Rural | 56.430 | 7.498 | 0.133 | 41.435 | 71.425 |
| Total | 55.843 | 6.979 | 0.125 | 41.884 | 69.801 |
| CHILD MORTALITY ${}_5q_1$ (5-year period preceding survey) | | | | | |
| Urban | 0.000 | 0.000 | NC | 0.000 | 0.000 |
| Rural | 15.404 | 3.115 | 0.202 | 9.174 | 21.634 |
| Total | 14.091 | 2.858 | 0.203 | 8.376 | 19.806 |

Table A.2 Sampling errors, Himachal Pradesh, 1992 (Contd.)

| Variable/Residence | Value (R) | Standard error (SE) | Relative error (SE/R) | Confidence limits | |
|---|--------------|---------------------------|-----------------------------|-------------------|--------|
| | | | | R-2SE | R+2SE |
| UNDER-FIVE MORTALITY ${}_5q_0$ (5-year period preceding survey) | | | | | |
| Urban | 48.753 | 11.307 | 0.232 | 26.139 | 71.367 |
| Rural | 70.965 | 7.783 | 0.110 | 55.400 | 86.530 |
| Total | 69.147 | 7.253 | 0.105 | 54.640 | 83.653 |
| CRUDE BIRTH RATE (Based on Household Questionnaire) | | | | | |
| Urban | 20.814 | 1.415 | 0.068 | 17.984 | 23.644 |
| Rural | 26.971 | 1.266 | 0.047 | 24.439 | 29.503 |
| Total | 26.419 | 1.163 | 0.044 | 24.093 | 28.745 |
| CRUDE DEATH RATE (Based on Household Questionnaire) | | | | | |
| Urban | 6.492 | 1.061 | 0.163 | 4.370 | 8.614 |
| Rural | 8.615 | 0.636 | 0.074 | 7.343 | 9.887 |
| Total | 8.425 | 0.586 | 0.070 | 7.253 | 9.597 |
| CRUDE RATE OF NATURAL INCREASE (Based on Household Questionnaire) | | | | | |
| Urban | 14.322 | 1.763 | 0.123 | 10.796 | 17.848 |
| Rural | 18.356 | 1.392 | 0.076 | 15.572 | 21.140 |
| Total | 17.994 | 1.276 | 0.071 | 15.442 | 20.546 |
| NC: Not calculated because denominator is 0.000 | | | | | |
| SRS: Simple random sample | | | | | |

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 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 age reporting errors are common in developing countries. 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 heaping on ages ending in 2 and 8 is also evident. However, the NFHS age data for females are evidently of considerably better quality than age data from other sources. This can be seen, for example, by comparing the degree of age heaping in the NFHS with the 1981 Census, which is the most recent census that has already published data by single year of age (see Chapter 3, Section 3.1). The age reporting for females appears to be particularly good during the childbearing years, when interviewed women reported their own ages. Another measure of the quality of the NFHS age data is the negligible number of persons whose ages were recorded as not known or missing. In Himachal Pradesh, age was missing for only 2 persons out of a total of 16,638 persons listed on the household schedule.

Table B.2 examines the possibility that some eligible women (that is, ever-married women age 13-49) were not properly identified in the NFHS. In some surveys, interviewers may try to reduce their work load by pushing women out of the eligible age range or recording ever-married women as never married so that they will not have to be interviewed. If such practices were being followed to a noticeable extent, Table B.2 would normally show (1) a shortage of ever-married women in the 45-49 age group and an excess in the 50-54 age group or (2) an unusually low proportion of ever-married women by age. The slight dip in the number of ever-married women age 45-49 suggests the possibility that some women in their late forties may have been recorded in the 50-54 age group. This transference will have almost no effect on the demographic and health estimates, however, because fertility is negligible for women in their forties.

Table B.1 Household age distribution

Single year age distribution of the *de facto* household population by sex (weighted), Himachal Pradesh, 1992

| Age | Male | | Female | | Age | Male | | Female | |
|-----|--------|---------|--------|---------|---------|--------|---------|--------|---------|
| | Number | Percent | Number | Percent | | Number | Percent | Number | Percent |
| <1 | 213 | 2.6 | 224 | 2.6 | 38 | 69 | 0.9 | 88 | 1.0 |
| 1 | 174 | 2.2 | 180 | 2.1 | 39 | 37 | 0.5 | 85 | 1.0 |
| 2 | 233 | 2.9 | 174 | 2.0 | 40 | 175 | 2.2 | 104 | 1.2 |
| 3 | 202 | 2.5 | 206 | 2.4 | 41 | 20 | 0.2 | 87 | 1.0 |
| 4 | 234 | 2.9 | 185 | 2.2 | 42 | 57 | 0.7 | 69 | 0.8 |
| 5 | 239 | 3.0 | 206 | 2.4 | 43 | 22 | 0.3 | 85 | 1.0 |
| 6 | 206 | 2.6 | 228 | 2.7 | 44 | 32 | 0.4 | 100 | 1.2 |
| 7 | 172 | 2.1 | 175 | 2.0 | 45 | 198 | 2.5 | 94 | 1.1 |
| 8 | 216 | 2.7 | 215 | 2.5 | 46 | 43 | 0.5 | 60 | 0.7 |
| 9 | 192 | 2.4 | 164 | 1.9 | 47 | 35 | 0.4 | 57 | 0.7 |
| 10 | 198 | 2.5 | 230 | 2.7 | 48 | 52 | 0.7 | 53 | 0.6 |
| 11 | 185 | 2.3 | 150 | 1.8 | 49 | 18 | 0.2 | 10 | 0.1 |
| 12 | 246 | 3.1 | 225 | 2.6 | 50 | 173 | 2.1 | 102 | 1.2 |
| 13 | 197 | 2.4 | 173 | 2.0 | 51 | 23 | 0.3 | 64 | 0.7 |
| 14 | 189 | 2.3 | 187 | 2.2 | 52 | 56 | 0.7 | 85 | 1.0 |
| 15 | 186 | 2.3 | 222 | 2.6 | 53 | 17 | 0.2 | 34 | 0.4 |
| 16 | 210 | 2.6 | 195 | 2.3 | 54 | 14 | 0.2 | 42 | 0.5 |
| 17 | 147 | 1.8 | 163 | 1.9 | 55 | 136 | 1.7 | 194 | 2.3 |
| 18 | 223 | 2.8 | 232 | 2.7 | 56 | 28 | 0.3 | 32 | 0.4 |
| 19 | 171 | 2.1 | 191 | 2.2 | 57 | 16 | 0.2 | 17 | 0.2 |
| 20 | 174 | 2.2 | 215 | 2.5 | 58 | 44 | 0.5 | 34 | 0.4 |
| 21 | 114 | 1.4 | 153 | 1.8 | 59 | 14 | 0.2 | 8 | 0.1 |
| 22 | 141 | 1.7 | 196 | 2.3 | 60 | 203 | 2.5 | 224 | 2.6 |
| 23 | 112 | 1.4 | 148 | 1.7 | 61 | 9 | 0.1 | 1 | -- |
| 24 | 91 | 1.1 | 166 | 1.9 | 62 | 29 | 0.4 | 33 | 0.4 |
| 25 | 177 | 2.2 | 140 | 1.6 | 63 | 20 | 0.2 | 8 | 0.1 |
| 26 | 107 | 1.3 | 154 | 1.8 | 64 | 13 | 0.2 | 4 | -- |
| 27 | 102 | 1.3 | 158 | 1.8 | 65 | 138 | 1.7 | 107 | 1.3 |
| 28 | 129 | 1.6 | 143 | 1.7 | 66 | 25 | 0.3 | 4 | 0.1 |
| 29 | 60 | 0.7 | 113 | 1.3 | 67 | 21 | 0.3 | 3 | -- |
| 30 | 151 | 1.9 | 131 | 1.5 | 68 | 15 | 0.2 | 18 | 0.2 |
| 31 | 42 | 0.5 | 85 | 1.0 | 69 | 6 | 0.1 | 1 | -- |
| 32 | 112 | 1.4 | 105 | 1.2 | 70+ | 352 | 4.4 | 321 | 3.7 |
| 33 | 55 | 0.7 | 91 | 1.1 | Don't | | | | |
| 34 | 47 | 0.6 | 125 | 1.5 | know/ | | | | |
| 35 | 194 | 2.4 | 134 | 1.6 | missing | 2 | -- | 0 | -- |
| 36 | 75 | 0.9 | 88 | 1.0 | Total | 8063 | 100.0 | 8575 | 100.0 |
| 37 | 39 | 0.5 | 76 | 0.9 | | | | | |

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

-- Less than 0.05 percent

One traditional measure of the quality of data is the extent to which information is missing on key variables. Although completeness of responses does not necessarily indicate that the results are accurate, the existence of missing information for a large number of cases would suggest that the data collection was not carried out with sufficient care. For Himachal Pradesh, the extent of missing information is very low on all of the measures shown except for the measurement of the weight of young children (Table B.3). The data are exceptionally complete for month and year of birth, woman's education, diarrhoea in the last 2 weeks, and age at first marriage. Data on weight are available for more than 95 percent of children, which is also acceptable since in any survey many children cannot be weighed because they are not at home or they are ill at the time of the survey. In some cases when the child was at home, either the child refused to be weighed or the mother refused to allow the child to be weighed because of cultural beliefs, and no amount of persuasion could change their mind. Another factor which

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), Himachal Pradesh, 1992

| Age | All women | Ever-married women | Interviewed women | | Percent interviewed |
|-------|-----------|--------------------|-------------------|---------|---------------------|
| | | | Number | Percent | |
| 10-12 | 606 | 2 | NA | NA | NA |
| 13-14 | 360 | 3 | 1 | -- | 49.3 |
| 15-19 | 1003 | 173 | 152 | 5.1 | 87.6 |
| 20-24 | 878 | 670 | 619 | 20.9 | 92.4 |
| 25-29 | 707 | 682 | 626 | 21.1 | 91.8 |
| 30-34 | 538 | 526 | 479 | 16.2 | 91.2 |
| 35-39 | 471 | 466 | 430 | 14.5 | 92.2 |
| 40-44 | 445 | 442 | 417 | 14.1 | 94.5 |
| 45-49 | 273 | 271 | 238 | 8.0 | 87.9 |
| 50-54 | 328 | 323 | NA | NA | NA |
| 13-49 | 4675 | 3232 | 2962 | 100.0 | 91.7 |

Note: The *de facto* population includes all residents and nonresidents who slept in the household the night before the interview. To allow comparison of distributions, the weights used for both households and interviewed women are household weights. NA: Not applicable
 -- Less than 0.05 percent

Table B.3 Completeness of reporting

Percentage of observations missing information for selected demographic and health questions (weighted), Himachal Pradesh, 1992

| Subject | Reference group | Percentage missing information | Number of cases |
|----------------------------------|-----------------------------------|--------------------------------|-----------------|
| Birth date | Births in last 15 years | | |
| Month only | | 1.23 | 5747 |
| Month and year | | 0.00 | 5747 |
| Age at death | Deaths to births in last 15 years | 1.29 | 511 |
| Age at 1st marriage | Ever-married women | 0.00 | 2962 |
| Woman's education | Ever-married women | 0.00 | 2962 |
| Child's size at birth | Births in last 0-47 months | 0.25 | 1560 |
| Anthropometry¹ | | | |
| Weight | Living children age 0-47 months | 4.33 | 1472 |
| Diarrhoea in last 2 weeks | Living children age 0-47 months | 0.02 | 1472 |

¹Child not weighed

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), Himachal Pradesh, 1992

| 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 | I | D | T | L | D | T |
| 1992 | 260 | 8 | 268 | 100.0 | 100.0 | 100.0 | 1118 | 507 | 1093 | NA | NA | NA |
| 1991 | 373 | 26 | 399 | 99.9 | 95.0 | 99.6 | 929 | 335 | 875 | NA | NA | NA |
| 1990 | 364 | 18 | 382 | 99.3 | 100.0 | 99.3 | 766 | 809 | 768 | 99 | 74 | 97 |
| 1989 | 362 | 24 | 386 | 100.0 | 94.4 | 99.7 | 807 | 1480 | 838 | 102 | 98 | 102 |
| 1988 | 348 | 30 | 378 | 99.4 | 100.0 | 99.5 | 1152 | 686 | 1106 | 88 | 108 | 90 |
| 1987 | 426 | 32 | 458 | 99.7 | 95.9 | 99.4 | 755 | 589 | 742 | 122 | 100 | 120 |
| 1986 | 350 | 33 | 383 | 99.0 | 88.2 | 98.0 | 888 | 1171 | 910 | 88 | 109 | 89 |
| 1985 | 366 | 35 | 401 | 98.8 | 96.3 | 98.6 | 1144 | 502 | 1066 | 103 | 94 | 102 |
| 1984 | 358 | 42 | 401 | 99.2 | 93.8 | 98.6 | 999 | 1695 | 1055 | 104 | 116 | 105 |
| 1983 | 326 | 37 | 364 | 99.6 | 92.1 | 98.8 | 1002 | 1073 | 1009 | 93 | 87 | 93 |
| 1982 | 342 | 43 | 385 | 98.5 | 97.0 | 98.3 | 822 | 1399 | 872 | 105 | 116 | 106 |
| 1987-1991 | 1873 | 130 | 2002 | 99.7 | 97.0 | 99.5 | 865 | 685 | 853 | NA | NA | NA |
| 1982-1986 | 1743 | 192 | 1935 | 99.0 | 93.7 | 98.5 | 967 | 1113 | 980 | NA | NA | NA |
| 1977-1981 | 1580 | 211 | 1791 | 98.4 | 94.9 | 98.0 | 948 | 1184 | 973 | NA | NA | NA |
| 1972-1976 | 1332 | 192 | 1524 | 98.9 | 90.9 | 97.9 | 924 | 1086 | 943 | NA | NA | NA |
| 1971 or earlier | 1099 | 221 | 1320 | 97.9 | 91.1 | 96.7 | 1093 | 831 | 1044 | NA | NA | NA |
| All | 7986 | 953 | 8840 | 98.9 | 93.3 | 98.3 | 951 | 977 | 954 | 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

led to incomplete anthropometric measurements (weight) in Himachal Pradesh was the cold weather in some parts of the state during the fieldwork, which made mothers reluctant to remove their children's clothes for the weight measurements.

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. Overall, 99 percent of living children listed in the birth history had complete birth dates recorded as did 93 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 estimated 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 Himachal Pradesh, the cutoff date for asking the health questions was 1 January 1988. An examination of Table B.4 indicates that there is little displacement across this boundary for living or dead children. 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 Himachal Pradesh, since the ratios of deaths under seven days to all neonatal deaths are quite high (a ratio of less than 25 percent is often used as a guideline to indicate underreporting of early neonatal deaths). The ratios are similar for 0-4 years (65) and 5-9 years (68) prior to the survey. However, the ratio for the period 10-14 years prior to the survey is lower (55). Although there was no severe underreporting in Himachal Pradesh, there was some misreporting of age at death due to a preference for reporting the age at death at 5, 10, and 15 days.

| 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), Himachal Pradesh, 1992 | | | | |
| Age at death (days) | Years preceding survey | | | |
| | 0-4 | 5-9 | 10-14 | 0-14 |
| < 1 | 24 | 24 | 21 | 69 |
| 1 | 6 | 8 | 4 | 18 |
| 2 | 2 | 10 | 5 | 16 |
| 3 | 2 | 6 | 6 | 13 |
| 4 | 3 | 3 | 0 | 6 |
| 5 | 4 | 6 | 0 | 10 |
| 6 | 1 | 1 | 1 | 3 |
| 7 | 5 | 1 | 1 | 8 |
| 8 | 3 | 3 | 6 | 11 |
| 9 | 1 | 0 | 0 | 1 |
| 10 | 1 | 4 | 3 | 8 |
| 11 | 3 | 0 | 3 | 5 |
| 12 | 0 | 0 | 1 | 1 |
| 13 | 0 | 1 | 4 | 6 |
| 14 | 0 | 1 | 1 | 3 |
| 15 | 4 | 4 | 1 | 10 |
| 18 | 0 | 3 | 1 | 5 |
| 19 | 1 | 1 | 0 | 3 |
| 20 | 1 | 3 | 3 | 7 |
| 21 | 0 | 1 | 0 | 1 |
| 22 | 0 | 0 | 3 | 3 |
| 23 | 0 | 0 | 1 | 1 |
| 25 | 1 | 3 | 0 | 4 |
| 28 | 0 | 0 | 1 | 1 |
| 30 | 0 | 0 | 1 | 1 |
| 0-30 | 64 | 82 | 67 | 214 |
| Percent early neonatal ¹ | 65 | 68 | 55 | 63 |

¹0-6 days/0-30 days

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 slight increase over time from 47 to 62. One problem that is inherent in most retrospective surveys is heaping of the age at death on certain digits, e.g., 6, 12 and 18 months. Misreporting of age at death will bias estimates of the age pattern of mortality if the net result of misreporting is the transference of deaths between age segments for which the rates are calculated; for example, an overestimate of child mortality relative to infant mortality may result if children dying during the first year of life are reported as having died at age one or 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.

| 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), Himachal Pradesh, 1992 | | | | |
| Age at death (months) | Years preceding survey | | | |
| | 0-4 | 5-9 | 10-14 | 0-14 |
| < 1 | 64 | 82 | 67 | 214 |
| 1 | 7 | 5 | 10 | 22 |
| 2 | 6 | 7 | 8 | 21 |
| 3 | 5 | 11 | 7 | 23 |
| 4 | 8 | 7 | 11 | 25 |
| 5 | 3 | 3 | 4 | 10 |
| 6 | 4 | 6 | 3 | 12 |
| 7 | 2 | 4 | 7 | 12 |
| 8 | 3 | 7 | 14 | 24 |
| 9 | 3 | 3 | 4 | 9 |
| 10 | 0 | 3 | 5 | 8 |
| 11 | 0 | 0 | 4 | 4 |
| 12 | 3 | 9 | 11 | 22 |
| 13 | 0 | 1 | 1 | 3 |
| 14 | 1 | 1 | 0 | 3 |
| 15 | 1 | 0 | 0 | 1 |
| 16 | 0 | 3 | 0 | 3 |
| 18 | 0 | 8 | 6 | 14 |
| 19 | 0 | 1 | 0 | 1 |
| 21 | 0 | 0 | 1 | 1 |
| 22 | 0 | 3 | 0 | 3 |
| 23 | 1 | 0 | 0 | 1 |
| 0-11 | 104 | 137 | 143 | 384 |
| Percent neonatal ¹ | 62 | 60 | 47 | 56 |

¹Under 1 month/under 1 year

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 Himachal Pradesh as a whole are not likely to be understated by more than 2 percent due to age misreporting. There was some heaping on 8, 12 and 18 months at death. Due to strong emphasis during training, there were no deaths reported at age "one year", making any adjustment of infant and child mortality rates unnecessary.

This brief check on internal consistency of the Himachal Pradesh 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.

APPENDIX C

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Ministry of Health and Family Welfare
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Department of Family Welfare
Ministry of Health and Family Welfare

Joint Secretary
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Ministry of Health and Family Welfare

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Department of Family Welfare
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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 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| PSU NUMBER..... | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NAME OF DISTRICT _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NAME OF TEHSIL/TALUK _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| URBAN/RURAL. (urban=1, rural=2)..... | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NAME OF TOWN AND TOWN BLOCK OR VILLAGE _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LARGE CITY/SMALL CITY/TOWN/RURAL AREA..... (large city=1, small city=2, town=3, rural area=4) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| HOUSEHOLD NUMBER..... | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NAME OF HOUSEHOLD HEAD _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ADDRESS OF HOUSEHOLD _____ _____ _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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

| NAME DATE | SPOT-CHECKED BY | FIELD EDITED BY | OFFICE EDITED BY | KEYED BY | KEYED BY |
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| 1 | RECORD THE TIME. | HOUR..... <table border="1" style="display: inline-table; width: 40px; height: 20px; vertical-align: middle;"></table> |
| | | MINUTES..... <table border="1" style="display: inline-table; width: 40px; height: 20px; vertical-align: middle;"></table> |

| LINE NO. | USUAL RESIDENTS AND VISITORS | RELATIONSHIP TO HEAD OF HOUSEHOLD* | RESIDENCE | | SEX | AGE | IF AGED 6 YEARS OR OLD | | | | |
|----------|---|--|------------------------------------|--------------------------------------|-----|-----|---|----------------------------|---------------------------------|--|--|
| | | | Does (NAME) usually live here? (5) | Did (NAME) stay here last night? (6) | | | Is (NAME) male or female? (7) | How old is (NAME)? (8) | MARITAL STATUS** | EDUCATION | |
| (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (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? | | | | | 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 | | | M F | IN YEARS | CM S W D NM | YES NO | YES NO |
| 01 | | | 1 2 | 1 2 | 1 2 | | 1 2 3 4 5 | 1 2 | 1 2 | | |
| 02 | | | 1 2 | 1 2 | 1 2 | | 1 2 3 4 5 | 1 2 | 1 2 | | |
| 03 | | | 1 2 | 1 2 | 1 2 | | 1 2 3 4 5 | 1 2 | 1 2 | | |
| 04 | | | 1 2 | 1 2 | 1 2 | | 1 2 3 4 5 | 1 2 | 1 2 | | |
| 05 | | | 1 2 | 1 2 | 1 2 | | 1 2 3 4 5 | 1 2 | 1 2 | | |
| 06 | | | 1 2 | 1 2 | 1 2 | | 1 2 3 4 5 | 1 2 | 1 2 | | |
| 07 | | | 1 2 | 1 2 | 1 2 | | 1 2 3 4 5 | 1 2 | 1 2 | | |
| 08 | | | 1 2 | 1 2 | 1 2 | | 1 2 3 4 5 | 1 2 | 1 2 | | |

Now I would like some information about the people who usually live in your household or who are staying with you now.

| ED SCHOOL | | OCCUPATION | Does (NAME) suffer from | | | Does (NAME) suffer from any physical impairment of limbs? | Did (NAME) suffer from malaria any time during the last THREE months? | ELIGIBILITY |
|---------------------------------|--|--|-------------------------|---------------|---|---|--|-------------|
| IF AGED LESS THAN 15 YEARS | What kind of work does (NAME) do most of the time? | | EACH PERSON | EACH PERSON | FOR EACH PERSON | | | |
| Is (NAME) still in school? (13) | (14) | Blindness? (15) | Tuberculosis? (16) | Leprosy? (17) | (18) | (19) | CIRCLE LINE NUMBER OF WOMEN ELIGIBLE FOR INDIVIDUAL INTERVIEW (EVER MARRIED FEMALES AGED 13-49) (20) | |
| YES NO 1 2 | <input type="checkbox"/> <input type="checkbox"/> | YES YES NO PART COMP NO IAL COM P 1 2 3 | YES NO 1 2 | YES NO 1 2 | YES YES YES NO HAN LEGS BO DS TH 1 2 3 4 | YES NO 1 2 | 01 | |
| 1 2 | <input type="checkbox"/> <input type="checkbox"/> | 1 2 3 | 1 2 | 1 2 | 1 2 3 4 | 1 2 | 02 | |
| 1 2 | <input type="checkbox"/> <input type="checkbox"/> | 1 2 3 | 1 2 | 1 2 | 1 2 3 4 | 1 2 | 03 | |
| 1 2 | <input type="checkbox"/> <input type="checkbox"/> | 1 2 3 | 1 2 | 1 2 | 1 2 3 4 | 1 2 | 04 | |
| 1 2 | <input type="checkbox"/> <input type="checkbox"/> | 1 2 3 | 1 2 | 1 2 | 1 2 3 4 | 1 2 | 05 | |
| 1 2 | <input type="checkbox"/> <input type="checkbox"/> | 1 2 3 | 1 2 | 1 2 | 1 2 3 4 | 1 2 | 06 | |
| 1 2 | <input type="checkbox"/> <input type="checkbox"/> | 1 2 3 | 1 2 | 1 2 | 1 2 3 4 | 1 2 | 07 | |
| 1 2 | <input type="checkbox"/> <input type="checkbox"/> | 1 2 3 | 1 2 | 1 2 | 1 2 3 4 | 1 2 | 08 | |

HOUSEHOLD SCHEDULE (CONTINUED)

| (2) | (3) | (4) | (5) | | (6) | | (7) | (8) | (9) | | | | | (10) | | (11) | | (12) | | |
|-----|-----|----------------------|-----|----|-----|----|-----|-----|----------------------|---|---|---|---|------|----|------|----|------|----|----------------------|
| | | | YES | NO | YES | NO | M | F | IN YEARS | C | M | S | W | D | NM | YES | NO | YES | NO | GRADE |
| 09 | | <input type="text"/> | 1 | 2 | 1 | 2 | 1 | 2 | <input type="text"/> | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 1 | 2 | <input type="text"/> |
| 10 | | <input type="text"/> | 1 | 2 | 1 | 2 | 1 | 2 | <input type="text"/> | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 1 | 2 | <input type="text"/> |
| 11 | | <input type="text"/> | 1 | 2 | 1 | 2 | 1 | 2 | <input type="text"/> | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 1 | 2 | <input type="text"/> |
| 12 | | <input type="text"/> | 1 | 2 | 1 | 2 | 1 | 2 | <input type="text"/> | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 1 | 2 | <input type="text"/> |
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| 14 | | <input type="text"/> | 1 | 2 | 1 | 2 | 1 | 2 | <input type="text"/> | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 1 | 2 | <input type="text"/> |
| 15 | | <input type="text"/> | 1 | 2 | 1 | 2 | 1 | 2 | <input type="text"/> | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 1 | 2 | <input type="text"/> |
| 16 | | <input type="text"/> | 1 | 2 | 1 | 2 | 1 | 2 | <input type="text"/> | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 1 | 2 | <input type="text"/> |
| 17 | | <input type="text"/> | 1 | 2 | 1 | 2 | 1 | 2 | <input type="text"/> | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 1 | 2 | <input type="text"/> |
| 18 | | <input type="text"/> | 1 | 2 | 1 | 2 | 1 | 2 | <input type="text"/> | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 1 | 2 | <input type="text"/> |

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 | |
| | <input type="checkbox"/> | | | | | | 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 |
|-----|--|--|------------|
| 22 | <p>What is the main source of water your household uses for bathing and washing?</p> | <p>PIPED WATER PIPED INTO RESIDENCE/YARD/PLOT.....11 → 24 PUBLIC TAP.....12</p> <p>GROUND WATER HANDPUMP IN YARD/PLOT.....21 → 24 PUBLIC HANDPUMP.....22</p> <p>WELL WATER WELL IN RESIDENCE/YARD/PLOT...23 → 24 PUBLIC WELL.....24</p> <p>SURFACE WATER SPRING.....31 RIVER/STREAM.....32 POND/LAKE.....33 DAM.....34</p> <p>RAINWATER.....41 TANKER TRUCK.....51 OTHER _____ 81 (SPECIFY)</p> | |
| 23 | <p>How long does it take to go there, get water, and come back in one trip?</p> | <p>MINUTES..... <input type="text"/> <input type="text"/> <input type="text"/></p> | |
| 24 | <p>Does your household get drinking water from this same source?</p> | <p>YES.....1 → 26 NO.....2</p> | |
| 25 | <p>What is the main source of drinking water for members of your household?</p> | <p>PIPED WATER PIPED INTO RESIDENCE/YARD/PLOT.....11 PUBLIC TAP.....12</p> <p>GROUND WATER HANDPUMP IN YARD/PLOT.....21 PUBLIC HANDPUMP.....22</p> <p>WELL WATER WELL IN RESIDENCE/YARD/PLOT...23 PUBLIC WELL.....24</p> <p>SURFACE WATER SPRING.....31 RIVER/STREAM.....32 POND/LAKE.....33 DAM.....34</p> <p>RAINWATER.....41 TANKER TRUCK.....51 BOTTLED WATER.....61 OTHER _____ 81 (SPECIFY)</p> | |
| 26 | <p>What kind of toilet facility does your household have?</p> | <p>FLUSH TOILET OWN FLUSH TOILET.....11 SHARED FLUSH TOILET.....12 PUBLIC FLUSH TOILET.....13</p> <p>PIT TOILET/LATRINE OWN PIT TOILET/LATRINE.....21 SHARED PIT TOILET/LATRINE....22 PUBLIC PIT TOILET/LATRINE....23 NO FACILITY/BUSH/FIELD.....31 OTHER _____ 41 (SPECIFY)</p> | |

| 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? | <table border="0"> <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> </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 | |
| | 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 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP TO |
|-----|---|--|---------|
| 43 | <p>Now I would like to ask you about the births that have taken place to any member of your household or visitor during the last two years.</p> <p>Did any usual resident of this household give birth to a child since (Pongal/Makar Sankranti/January) 1990 in this (city/town/village) or outside?</p> | <p>YES.....1</p> <p>NO.....2</p> | →45 |
| 44 | How many births took place? | TOTAL BIRTHS..... <input type="text"/> | |
| 45 | Did any visitor to this household give birth to a child since (Pongal/Makar Sankranti/January) 1990? | <p>YES.....1</p> <p>NO.....2</p> | →47 |
| 46 | How many births took place? | TOTAL BIRTHS..... <input type="text"/> | |
| 47 | CHECK 44 AND 46: | <p>ONE OR MORE BIRTHS <input type="text"/></p> <p>NO BIRTHS <input type="text"/></p> | →58 |

RECORD NAMES OF BIRTHS SINCE JANUARY 1990 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. | How old was the mother at the time of birth of (NAME)? RECORD AGE IN COMPLETED YEARS. | RECORD SINGLE OR MULTIPLE BIRTH STATUS. | Is (NAME) a boy or a girl? | In what month and year was (NAME) born? PROBE: What is his/her birthday? OR: In what season was he/she born? | Is (NAME) still alive? | IF DEAD: How old was he/she when he/she died? IF "1 YEAR", PROBE: How many months old was (NAME)? RECORD DAYS IF LESS THAN ONE MONTH |

| | | | | | | | | |
|------------------|-----------------------------|---|------------------------------------|------------------------|--------------------|--|---------------------------------------|---|
| 01 (NAME) | RESIDENT...1 VISITOR...2 | LINE NUMBER <input type="text"/> 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 MONTHS..2 <input type="text"/> |
| 02 (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 MONTHS..2 <input type="text"/> |
| 03 (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 MONTHS..2 <input type="text"/> |
| 04 (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 MONTHS..2 <input type="text"/> |
| 05 (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 MONTHS..2 <input type="text"/> |
| 06 (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 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>YES.....1 NO.....2</p> | 60 |
| 59 | <p>How many persons died?</p> | <p>TOTAL DEATHS..... <input type="text"/></p> | |
| 60 | <p>Did any visitor to this household die since (Pongal/Makar Sankranti/January) 1990?</p> | <p>YES.....1 NO.....2</p> | 62 |
| 61 | <p>How many deaths took place?</p> | <p>TOTAL DEATHS..... <input type="text"/></p> | |
| 62 | <p>CHECK 59 AND 61:</p> | <p>ONE OR MORE DEATHS <input type="checkbox"/> NO DEATHS <input type="checkbox"/></p> | 75 |

RECORD NAMES OF DEATHS SINCE JANUARY 1990 IN 63.

| 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 |
|--|--|--------------------------------|---|--|---|------------------------------------|-----------------------------------|--|---|---|
| What (was/were) the name(s) of the person(s) who died? | Was (NAME) a usual resident of the household or a visitor? | Was (NAME) a male or a female? | How old was he/she when he/she died? RECORD DAYS IF LESS THAN ONE MONTH, MONTHS IF LESS THAN TWO YEARS, OR YEARS | In what month and year did (NAME) die? | CHECK 65 AND 66: DECEASED WAS FEMALE AGED 13-49 AT THE TIME OF DEATH | Was (NAME) pregnant when she died? | Did (NAME) die during childbirth? | Did (NAME) die within two months after the end of a pregnancy or childbirth? | Was the death of (NAME) due to a complication of the pregnancy or childbirth? | What were the major symptoms observed before the death of (NAME)? |

| | | | | | | | | | | |
|-------------------------|----------------------------|--------------------------|-------------------------------------|--------------------|--------------------------------------|--------------------------------------|--|--------------------------------------|--|----------------------------|
| 01 _____ (NAME) | RESIDENT..1 VISITOR...2 | MALE.....1 FEMALE...2 | DAYS....1 MONTHS..2 YEARS...3 | MONTH.. YEAR... | YES.....1 NO.....2 (GO TO 73)← | YES.....1 (GO TO 72)← NO.....2 | YES.....1 (GO TO NEXT DEATH)← NO.....2 | YES.....1 (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 NUMBERS ARE DIFFERENT → PROBE AND RECONCILE

75 RECORD THE TIME.

HOUR.....
MINUTES.....

230

**NATIONAL FAMILY HEALTH SURVEY
(MCH AND FAMILY PLANNING)
WOMAN'S QUESTIONNAIRE**

**CONFIDENTIAL
For Research
Purposes Only**

INDIA 1992-1993

| IDENTIFICATION | | | | | | | | | | | | | | | | | | | | | | |
|--|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| NAME OF STATE _____ | <table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr> </table> | | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | | | |
| PSU NUMBER..... | | | | | | | | | | | | | | | | | | | | | | |
| NAME OF DISTRICT _____ | | | | | | | | | | | | | | | | | | | | | | |
| NAME OF TEHSIL/TALUK _____ | | | | | | | | | | | | | | | | | | | | | | |
| URBAN/RURAL (urban=1, rural=2)..... | | | | | | | | | | | | | | | | | | | | | | |
| NAME OF TOWN AND TOWN BLOCK OR VILLAGE _____ | | | | | | | | | | | | | | | | | | | | | | |
| LARGE CITY/SMALL CITY/TOWN/RURAL AREA..... (large city=1, small city=2, town=3, rural area=4) | | | | | | | | | | | | | | | | | | | | | | |
| HOUSEHOLD NUMBER..... | | | | | | | | | | | | | | | | | | | | | | |
| NAME AND LINE NUMBER OF WOMAN _____ | <table border="1" style="width: 20px; height: 20px; border-collapse: collapse;"> <tr><td style="width: 10px; height: 10px;"></td><td style="width: 10px; height: 10px;"></td></tr> </table> | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| ADDRESS OF HOUSEHOLD _____ | <table border="1" style="width: 20px; height: 20px; border-collapse: collapse;"> <tr><td style="width: 10px; height: 10px;"></td><td style="width: 10px; height: 10px;"></td></tr> </table> | | | | | | | | | | | | | | | | | | | | | |
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| 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**.....

LANGUAGE OF INTERVIEW**.....

NATIVE LANGUAGE OF RESPONDENT**.....

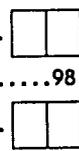
TRANSLATOR USED..... YES...1 NO...2

**LANGUAGE CODES:

- | | | | |
|--------------------------|--------------|-------------|-----------|
| 01 Assamese | 05 Hindi | 09 Marathi | 13 Sindhi |
| 02 Bengali | 06 Kannada | 10 Oriya | 14 Tamil |
| 03 English | 07 Kashmiri | 11 Punjabi | 15 Telugu |
| 04 Gujarati | 08 Malayalam | 12 Sanskrit | 16 Urdu |
| 17 Other (SPECIFY) _____ | | 18 Konkani | |

| NAME DATE | SPOT- CHECKED BY | FIELD EDITED BY | OFFICE EDITED BY | KEYED BY | KEYED BY | | |
|--------------|---------------------|--------------------|---------------------|----------|---|--|--|
| _____ | _____ | _____ | _____ | _____ | <table border="1" style="width: 20px; height: 20px; border-collapse: collapse;"> <tr><td style="width: 10px; height: 10px;"></td><td style="width: 10px; height: 10px;"></td></tr> </table> | | |
| | | | | | | | |

SECTION 1. RESPONDENT'S BACKGROUND

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP TO |
|-----|--|--|--|
| 101 | RECORD THE TIME. | HOUR..... MINUTES..... |  |
| 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..... ALWAYS.....95 VISITOR.....96 |  → 105 |
| 104 | Just before you moved here, did you live in a city or in a village? | CITY/TOWN.....1 VILLAGE.....2 | |
| 105 | In what month and year were you born? | MONTH..... DK MONTH.....98 YEAR..... 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..... |  |
| 107 | What is your current marital status? | CURRENTLY MARRIED.....1 SEPARATED.....2 WIDOWED.....3 DIVORCED.....4 NEVER MARRIED.....5 | → 111 → END |
| 108 | Are you living with your husband now or is he staying elsewhere? | LIVING WITH HIM.....1 STAYING ELSEWHERE.....2 | → 111 |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP TO |
|-----|--|--|--|
| 109 | During the last four weeks, did you stay with your husband at any time? | YES.....1 NO.....2 | →111 |
| 110 | For how long have you and your husband not been living together? RECORD MONTHS OR YEARS. | MONTHS.....1 YEARS.....2 | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> |
| 111 | How I would like to ask you some questions on your marriage. Have you been married only once or more than once? | ONCE.....1 MORE THAN ONCE.....2 | →115 |
| 112 | How old were you at the time of your <u>first</u> marriage? | AGE IN COMPLETED YEARS..... | <input type="text"/> <input type="text"/> |
| 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 | <input type="text"/> <input type="text"/> |
| 114 | How old were you when your first marriage dissolved? | AGE IN COMPLETED YEARS..... | <input type="text"/> <input type="text"/> |
| 115 | How old were you at the time of your [current] marriage? | AGE IN COMPLETED YEARS..... | <input type="text"/> <input type="text"/> |
| 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 0-5 <input type="text"/> | GRADE 6-12 <input type="text"/> GRADE 13+ <input type="text"/> | 126 125 |
| 124 | Can you read and write? | YES.....1 NO.....2 | 126 |
| 125 | What is the highest degree you have obtained? | DEGREE NOT COMPLETED.....01 NON-TECHNICAL DEGREE BACHELOR'S DEGREE.....02 MASTER'S DEGREE.....03 Ph.D.....04 TECHNICAL DEGREE BACHELOR'S DEGREE.....05 MASTER'S DEGREE.....06 TECHNICAL DIPLOMA/CERTIFICATE NOT EQUIVALENT TO DEGREE.....07 NON-TECHNICAL DIPLOMA/CERTIF. NOT EQUIVALENT TO DEGREE.....08 OTHER DEGREE.....09 (SPECIFY) | |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP TO |
|-----|--|---|---------|
| 126 | Do you usually listen to a radio at least once a week? | YES.....1 NO.....2 | |
| 127 | Do you usually watch television at least once a week? | YES.....1 NO.....2 | |
| 128 | Do you usually go to a Cinema Hall or Theatre to see a movie at least once a month? | YES.....1 NO.....2 | |
| 129 | CHECK Q.5 IN THE HOUSEHOLD SCHEDULE: THE WOMAN INTERVIEWED IS NOT A <input type="checkbox"/> USUAL RESIDENT ↓ v | THE WOMAN INTERVIEWED IS A USUAL RESIDENT <input type="checkbox"/> → 201 | |
| 130 | How long have you been visiting in this house? | DAYS.....1 <input type="checkbox"/> <input type="checkbox"/> MONTHS.....2 <input type="checkbox"/> <input type="checkbox"/> YEARS.....3 <input type="checkbox"/> <input type="checkbox"/> | |
| 131 | How much longer do you intend to stay here? | DAYS.....1 <input type="checkbox"/> <input type="checkbox"/> MONTHS.....2 <input type="checkbox"/> <input type="checkbox"/> YEARS.....3 <input type="checkbox"/> <input type="checkbox"/> DK.....998 | |
| 132 | What is the main reason for your visiting this household? | VISITING FOR DELIVERY PURPOSE..1 VISITING FOR OTHER PURPOSE.....2 | |
| 133 | Now I would like to ask about the place in which you usually live. Do you usually live in a city, in a town, or in a village? IF CITY: In which city do you live? _____ | LARGE CITY (1 MILLION +).....1 SMALL CITY.....2 TOWN.....3 VILLAGE.....4 | |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP TO |
|-----|---|--|------------|
| 134 | In which state do you usually live? | ANDHRA PRADESH.....01 ARUNACHAL PRADESH.....02 ASSAM.....03 BIHAR.....04 GOA.....05 GUJARAT.....06 HARYANA.....07 HIMACHAL PRADESH.....08 JAMMU & KASHMIR.....09 KARNATAKA.....10 KERALA.....11 MADHYA PRADESH.....12 MAHARASHTRA.....13 MANIPUR.....14 MEGHALAYA.....15 MIZORAM.....16 NAGALAND.....17 ORISSA.....18 PUNJAB.....19 RAJASTHAN.....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 | Now I would like to ask about the household in which you usually live. What is the main source of water your household uses for bathing and washing? | 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"/> | |
| 137 | Does your household get drinking water from this same source? | YES.....1 → 139 NO.....2 | |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP TO |
|-----|--|---|---------|
| 138 | What is the main source of drinking water for members of your household? | PIPED WATER PIPED INTO RESIDENCE/YARD/PLOT.....11 PUBLIC TAP.....12 GROUND WATER HANDPUMP IN YARD/PLOT.....21 PUBLIC HANDPUMP.....22 WELL WATER WELL IN RESIDENCE/YARD/PLOT...23 PUBLIC WELL.....24 SURFACE WATER SPRING.....31 RIVER/STREAM.....32 POND/LAKE.....33 DAM.....34 RAINWATER.....41 TANKER TRUCK.....51 BOTTLED WATER.....61 OTHER _____ 81 (SPECIFY) | |
| 139 | What kind of toilet facility does your household have? | FLUSH TOILET OWN FLUSH TOILET.....11 SHARED FLUSH TOILET.....12 PUBLIC FLUSH TOILET.....13 PIT TOILET/LATRINE OWN PIT TOILET/LATRINE.....21 SHARED PIT TOILET/LATRINE....22 PUBLIC PIT TOILET/LATRINE....23 NO FACILITY/BUSH/FIELD.....31 OTHER _____ 41 (SPECIFY) | |
| 140 | What is the main source of lighting for your household? | ELECTRICITY.....1 KEROSENE.....2 GAS.....3 OIL.....4 OTHER _____ 5 (SPECIFY) | |
| 141 | How many rooms are there in your household? | ROOMS..... <input type="text" value=""/> <input type="text" value=""/> | |
| 142 | Do you have a separate room which is used as a kitchen? | YES.....1 NO.....2 | |
| 143 | What type of fuel does your household mainly use for cooking? | WOOD.....01 COW DUNG CAKES.....02 COAL/COKE/LIGNITE.....03 CHARCOAL.....04 KEROSENE.....05 ELECTRICITY.....06 LIQUID PETROLEUM GAS.....07 BIO-GAS.....08 OTHER _____ 09 (SPECIFY) | |

| 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="0"> <thead> <tr> <th></th> <th>YES</th> <th>NO</th> </tr> </thead> <tbody> <tr> <td>SEWING MACHINE.....1</td> <td>1</td> <td>2</td> </tr> <tr> <td>CLOCK/WATCH.....1</td> <td>1</td> <td>2</td> </tr> <tr> <td>SOFA SET.....1</td> <td>1</td> <td>2</td> </tr> <tr> <td>FAN.....1</td> <td>1</td> <td>2</td> </tr> <tr> <td>RADIO/TRANSISTOR.....1</td> <td>1</td> <td>2</td> </tr> <tr> <td>REFRIGERATOR.....1</td> <td>1</td> <td>2</td> </tr> <tr> <td>TELEVISION.....1</td> <td>1</td> <td>2</td> </tr> <tr> <td>VCR/VCP.....1</td> <td>1</td> <td>2</td> </tr> <tr> <td>BICYCLE.....1</td> <td>1</td> <td>2</td> </tr> <tr> <td>MOTORCYCLE/SCOOTER.....1</td> <td>1</td> <td>2</td> </tr> <tr> <td>CAR.....1</td> <td>1</td> <td>2</td> </tr> </tbody> </table> | | YES | NO | SEWING MACHINE.....1 | 1 | 2 | CLOCK/WATCH.....1 | 1 | 2 | SOFA SET.....1 | 1 | 2 | FAN.....1 | 1 | 2 | RADIO/TRANSISTOR.....1 | 1 | 2 | REFRIGERATOR.....1 | 1 | 2 | TELEVISION.....1 | 1 | 2 | VCR/VCP.....1 | 1 | 2 | BICYCLE.....1 | 1 | 2 | MOTORCYCLE/SCOOTER.....1 | 1 | 2 | CAR.....1 | 1 | 2 | |
| | YES | NO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SEWING MACHINE.....1 | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CLOCK/WATCH.....1 | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SOFA SET.....1 | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FAN.....1 | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RADIO/TRANSISTOR.....1 | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| REFRIGERATOR.....1 | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TELEVISION.....1 | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| VCR/VCP.....1 | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BICYCLE.....1 | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MOTORCYCLE/SCOOTER.....1 | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAR.....1 | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 156 | How many people are there in your household? | NUMBER OF PERSONS..... <input type="text"/> <input type="text"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

SECTION 2. REPRODUCTION

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP TO |
|-----|--|---|--|
| 201 | How 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..... | <input type="text"/> <input type="text"/> |
| 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..... | <input type="text"/> <input type="text"/> |
| 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..... | <input type="text"/> <input type="text"/> |
| 208 | SUM ANSWERS TO 203, 205, AND 207, AND ENTER TOTAL. IF NONE RECORD '00'. | TOTAL..... | <input type="text"/> <input type="text"/> |

| 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: 20px;">↓</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 <p style="margin-left: 20px;">↓</p> | | |

215

Now I would like to talk to you about all the births in your lifetime, whether currently alive or not, starting with the first one you had.
 RECORD NAMES OF ALL THE BIRTHS IN 216. RECORD TWINS AND TRIPLETS ON SEPARATE LINES.

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

| | | | | | | | |
|--|---|----------------------------|--|------------------------|--|----------------------------|--|
| 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.. <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 <input type="text"/> |
| 09 _____ (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 <input type="text"/> |
| 10 _____ (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 <input type="text"/> |
| 11 _____ (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 <input type="text"/> |
| 12 _____ (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 <input type="text"/> |

| | | |
|-----|--|--|
| 224 | COMPARE 208 WITH NUMBER OF BIRTHS IN HISTORY ABOVE AND MARK: NUMBERS ARE SAME <input type="checkbox"/> ↓ 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"/> | NUMBERS ARE DIFFERENT <input type="checkbox"/> → (PROBE AND RECONCILE) |
| 225 | CHECK 219 AND ENTER THE NUMBER OF BIRTHS SINCE JANUARY 1988. IF NONE, RECORD '0'. <input type="text"/> | |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP TO |
|-----|--|--|------------|
| 226 | CHECK 107: | WIDOWED DIVORCED SEPARATED | 232 |
| 227 | Are you pregnant now? | YES.....1 NO.....2 UNSURE.....8 | 230 |
| 228 | How many months pregnant are you? | MONTHS..... | |
| 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? | YES.....1 NO IN MENOPAUSE.....2 NO IN AMENORRHOEA.....3 NEVER MENSTRUATED.....4 | 232 301 |
| 231 | When did your last menstrual period start? | MONTH..... YEAR..... | |
| 232 | How old were you when you experienced your first monthly period? | AGE IN YEARS..... | |

SECTION 3. CONTRACEPTION

301

How 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] <u>Pill</u> Women can take a pill every day. | YES/SPONTANEOUS.....1 YES/PROBED.....2 NO.....3 | YES.....1 NO.....2 | YES.....1 NO.....2 |
| 02] <u>Loop or Copper I</u> Women can have a loop or coil placed inside them by a doctor or a nurse. | YES/SPONTANEOUS.....1 YES/PROBED.....2 NO.....3 | YES.....1 NO.....2 | YES.....1 NO.....2 |
| 03] <u>Injections</u> Women can have an injection given by a doctor or nurse which stops them from becoming pregnant for several months. | YES/SPONTANEOUS.....1 YES/PROBED.....2 NO.....3 | YES.....1 NO.....2 | YES.....1 NO.....2 |
| 04] <u>Condom or Nirodh</u> Men can use a rubber sheath during sexual intercourse. | YES/SPONTANEOUS.....1 YES/PROBED.....2 NO.....3 | YES.....1 NO.....2 | YES.....1 NO.....2 |
| 05] <u>Female sterilization</u> Women can have an operation to avoid having any more children. | YES/SPONTANEOUS.....1 YES/PROBED.....2 NO.....3 | Have you ever had an operation to avoid having any more children? YES.....1 NO.....2 | YES.....1 NO.....2 |

| | 302 | 303 | 304 |
|---|--|---|---|
| | Have you ever heard of (METHOD)? READ DESCRIPTION OF EACH METHOD. | Have you ever used (METHOD)? | Do you know where a person could go to get (METHOD)? |
| 06 | <p>Male sterilization Men can have an operation to avoid having any more children.</p> <p>YES/SPONTANEOUS.....1 YES/PROBED.....2 NO.....3</p> | <p>Has your husband ever had an operation to avoid having any more children?</p> <p>YES.....1 NO.....2</p> | <p>YES.....1 NO.....2</p> |
| 07 | <p>Rhythm or Periodic abstinence Couples can avoid having sexual intercourse on certain days of the month when the women is more likely to become pregnant.</p> <p>YES/SPONTANEOUS.....1 YES/PROBED.....2 NO.....3</p> | <p>YES.....1 NO.....2</p> | <p>Do you know where a person can obtain advice on how to practice periodic abstinence?</p> <p>YES.....1 NO.....2</p> |
| 08 | <p>Withdrawal Men can be careful and pull out before climax.</p> <p>YES/SPONTANEOUS.....1 YES/PROBED.....2 NO.....3</p> | <p>YES.....1 NO.....2</p> | |
| 09 | <p>Have you heard of any other ways or methods that women or men can use to avoid pregnancy?</p> <p>1 _____ (SPECIFY)</p> <p>2 _____ (SPECIFY)</p> <p>3 _____ (SPECIFY)</p> | <p>YES/SPONTANEOUS.....1 NO.....3</p> <p>YES.....1 NO.....2</p> <p>YES.....1 NO.....2</p> <p>YES.....1 NO.....2</p> | |
| 305 CHECK 303: NOT A SINGLE "YES" (NEVER USED) <input type="checkbox"/> | | AT LEAST ONE "YES" (EVER USED) <input type="checkbox"/> → SKIP TO 308 | |

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

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP TO |
|------|---|--|--------------------------------------|
| 313 | Which method are you using? | PILL.....01 LOOP/COPPER T.....02 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 |
|-----|---|---|---------|
| 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 |
|-----|--|--|---------|
| 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 border="0"> <tr> <td>CURRENTLY MARRIED</td> <td><input type="checkbox"/></td> <td>WIDOWED DIVORCED SEPARATED</td> <td><input type="checkbox"/></td> <td>→352</td> </tr> </table> | | CURRENTLY MARRIED | <input type="checkbox"/> | WIDOWED DIVORCED SEPARATED | <input type="checkbox"/> | →352 |
| CURRENTLY MARRIED | <input type="checkbox"/> | WIDOWED DIVORCED SEPARATED | <input type="checkbox"/> | →352 | | | | |
| 345 | Do you intend to use a method to delay or avoid pregnancy at any time in the future? | YES.....1 →347 NO.....2 DK.....8 →352 | | | | | | |
| 346 | What is the main reason you do not intend to use a method? | WANTS CHILDREN.....01 WANTS A SON.....02 WANTS A DAUGHTER.....19 LACK OF KNOWLEDGE.....03 AFRAID OF STERILIZATION.....04 CAN'T WORK AFTER STERILIZATION.....05 COST TOO MUCH.....06 WORRY ABOUT SIDE EFFECTS.....07 HARD TO GET METHODS.....08 AGAINST RELIGION.....09 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 GOVT./MUNICIPAL HOSPITAL.....11 PRIMARY HEALTH CENTRE.....12 SUB-CENTRE.....13 FAMILY PLANNING CLINIC.....14 MOBILE CLINIC.....15 GOVERNMENT PARAMEDIC.....16</p> <p>PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL OR CLINIC....21 PHARMACY/DRUGSTORE.....22 PRIVATE DOCTOR.....23 MOBILE CLINIC.....24 FIELD WORKER.....25</p> <p>OTHER PRIVATE SECTOR SHOP.....31 FRIENDS/RELATIVES.....32 OTHER.....41 (SPECIFY)</p> <p>DK.....98</p> | <p>→352</p> | | | | | | | | | |
| 350 | <p>Do you know of a place where you can obtain a method of family planning?</p> | <p>YES.....1 NO.....2</p> | <p>→352</p> | | | | | | | | | |
| 351 | <p>Where is that?</p> <p>_____ (NAME OF HOSPITAL IF CODE 11 OR 21)</p> | <p>PUBLIC SECTOR GOVT./MUNICIPAL HOSPITAL.....11 PRIMARY HEALTH CENTRE.....12 SUB-CENTRE.....13 FAMILY PLANNING CLINIC.....14 MOBILE CLINIC.....15 GOVERNMENT PARAMEDIC.....16</p> <p>PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL OR CLINIC....21 PHARMACY/DRUGSTORE.....22 PRIVATE DOCTOR.....23 MOBILE CLINIC.....24 FIELD WORKER.....25</p> <p>OTHER PRIVATE SECTOR SHOP.....31 FRIENDS/RELATIVES.....32 OTHER.....41 (SPECIFY)</p> | | | | | | | | | | |
| 352 | <p>In the last month, have you heard a message about family planning on:</p> <p>the radio? television?</p> | <table border="0"> <tr> <td></td> <td style="text-align: center;">YES</td> <td style="text-align: center;">NO</td> </tr> <tr> <td>RADIO.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>TELEVISION.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> </table> | | YES | NO | RADIO..... | 1 | 2 | TELEVISION..... | 1 | 2 | |
| | YES | NO | | | | | | | | | | |
| RADIO..... | 1 | 2 | | | | | | | | | | |
| TELEVISION..... | 1 | 2 | | | | | | | | | | |
| 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 NOT ACCEPTABLE.....2 DK.....8</p> | | | | | | | | | | |

SECTION 4A. PREGNANCY AND BREASTFEEDING

401 CHECK 225:
 ONE OR MORE BIRTHS SINCE JAN. 1988 NO BIRTHS SINCE JAN. 1988 (SKIP TO 501)

402 ENTER THE LINE NUMBER, NAME, AND SURVIVAL STATUS OF EACH BIRTH SINCE JANUARY 1988 IN THE TABLE. ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS. BEGIN WITH THE LAST BIRTH. (IF THERE ARE MORE THAN 3 BIRTHS, RECORD ONLY THE LAST 3 BIRTHS).

Now I would like to ask you some more questions about the health of all your children born in the past four years. (We will talk about one child at a time.)

| | | | |
|-------------------------|----------------------|----------------------|----------------------|
| LINE NUMBER FROM q. 216 | <input type="text"/> | <input type="text"/> | <input type="text"/> |
|-------------------------|----------------------|----------------------|----------------------|

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

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) ← |

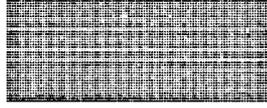
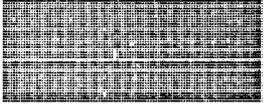
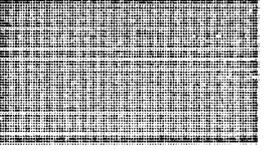
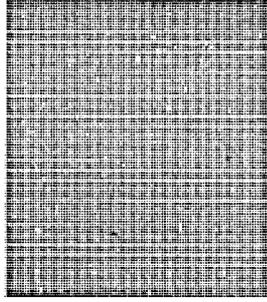
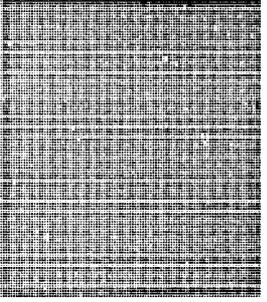
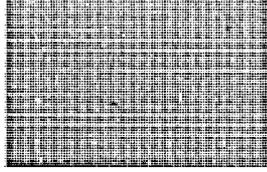
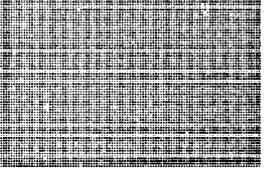
406

| | | | |
|---|----------------------------------|----------------------------------|----------------------------------|
| 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 PROFESSIONAL...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 PROFESSIONAL...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 PROFESSIONAL...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="checkbox"/> DK.....8</p> | <p>TIMES..... <input type="checkbox"/> DK.....8</p> | <p>TIMES..... <input type="checkbox"/> DK.....8</p> |
| 416 | <p>Where did you give birth to (NAME)?</p> <p>HOME YOUR HOME.....11 PARENTS' HOME.....12 OTHER HOME.....13</p> <p>PUBLIC SECTOR GVT./MUNICIPAL HOSPITAL..21 PRIMARY HEALTH CENTRE..22 SUB-CENTRE.....23</p> <p>PRIVATE SECTOR PRIVATE HOSPITAL/ CLINIC/MATERNITY HOME..31 OTHER.....41 (SPECIFY)</p> | <p>HOME YOUR HOME.....11 PARENTS' HOME.....12 OTHER HOME.....13</p> <p>PUBLIC SECTOR GVT./MUNICIPAL HOSPITAL..21 PRIMARY HEALTH CENTRE..22 SUB-CENTRE.....23</p> <p>PRIVATE SECTOR PRIVATE HOSPITAL/ CLINIC/MATERNITY HOME..31 OTHER.....41 (SPECIFY)</p> | <p>HOME YOUR HOME.....11 PARENTS' HOME.....12 OTHER HOME.....13</p> <p>PUBLIC SECTOR GVT./MUNICIPAL HOSPITAL..21 PRIMARY HEALTH CENTRE..22 SUB-CENTRE.....23</p> <p>PRIVATE SECTOR PRIVATE HOSPITAL/ CLINIC/MATERNITY HOME..31 OTHER.....41 (SPECIFY)</p> |

| | LAST BIRTH NAME _____ | NEXT-TO-LAST BIRTH NAME _____ | SECOND-FROM-LAST BIRTH NAME _____ | |
|-----|--|--|--|--|
| 417 | <p>Who assisted with the delivery of (NAME)?</p> <p>Anyone else?</p> <p>PROBE FOR THE TYPE OF PERSON AND RECORD ALL PERSONS ASSISTING.</p> | <p>HEALTH PROFESSIONAL</p> <p>DOCTOR.....A</p> <p>AYURVEDIC DOCTOR/VAID...B</p> <p>NURSE/MIDWIFE.....C</p> <p>ANM/LHV.....D</p> <p>OTHER PERSON</p> <p>TRAINED (TRADITIONAL) BIRTH ATTENDANT.....E</p> <p>TRADITIONAL BIRTH ATTENDANT.....F</p> <p>RELATIVE/FRIEND.....G</p> <p>OTHER.....H</p> <p>(SPECIFY)</p> <p>NO ONE.....I</p> | <p>HEALTH PROFESSIONAL</p> <p>DOCTOR.....A</p> <p>AYURVEDIC DOCTOR/VAID...B</p> <p>NURSE/MIDWIFE.....C</p> <p>ANM/LHV.....D</p> <p>OTHER PERSON</p> <p>TRAINED (TRADITIONAL) BIRTH ATTENDANT.....E</p> <p>TRADITIONAL BIRTH ATTENDANT.....F</p> <p>RELATIVE/FRIEND.....G</p> <p>OTHER.....H</p> <p>(SPECIFY)</p> <p>NO ONE.....I</p> | <p>HEALTH PROFESSIONAL</p> <p>DOCTOR.....A</p> <p>AYURVEDIC DOCTOR/VAID...B</p> <p>NURSE/MIDWIFE.....C</p> <p>ANM/LHV.....D</p> <p>OTHER PERSON</p> <p>TRAINED (TRADITIONAL) BIRTH ATTENDANT.....E</p> <p>TRADITIONAL BIRTH ATTENDANT.....F</p> <p>RELATIVE/FRIEND.....G</p> <p>OTHER.....H</p> <p>(SPECIFY)</p> <p>NO ONE.....I</p> |
| 418 | <p>Was (NAME) born on time or prematurely?</p> | <p>ON TIME.....1</p> <p>PREMATURELY.....2</p> <p>DK.....8</p> | <p>ON TIME.....1</p> <p>PREMATURELY.....2</p> <p>DK.....8</p> | <p>ON TIME.....1</p> <p>PREMATURELY.....2</p> <p>DK.....8</p> |
| 419 | <p>Were there any complications in the delivery of (NAME)?</p> | <p>YES.....1</p> <p>NO.....2</p> <p>(SKIP TO 421) ←</p> | <p>YES.....1</p> <p>NO.....2</p> <p>(SKIP TO 421) ←</p> | <p>YES.....1</p> <p>NO.....2</p> <p>(SKIP TO 421) ←</p> |
| 420 | <p>What were the complications?</p> <p>RECORD ALL MENTIONED.</p> | <p>CAESARIAN SECTION.....A</p> <p>USE OF FORCEPS.....B</p> <p>EXCESSIVE BLEEDING.....C</p> <p>LONG PERIOD OF LABOR.....D</p> <p>DELAYED DELIVERY OF PLACENTA.....E</p> <p>OTHER.....F</p> <p>(SPECIFY)</p> | <p>CAESARIAN SECTION.....A</p> <p>USE OF FORCEPS.....B</p> <p>EXCESSIVE BLEEDING.....C</p> <p>LONG PERIOD OF LABOR.....D</p> <p>DELAYED DELIVERY OF PLACENTA.....E</p> <p>OTHER.....F</p> <p>(SPECIFY)</p> | <p>CAESARIAN SECTION.....A</p> <p>USE OF FORCEPS.....B</p> <p>EXCESSIVE BLEEDING.....C</p> <p>LONG PERIOD OF LABOR.....D</p> <p>DELAYED DELIVERY OF PLACENTA.....E</p> <p>OTHER.....F</p> <p>(SPECIFY)</p> |
| 421 | <p>When (NAME) was born, was he/she: large, average or small?</p> | <p>LARGE.....1</p> <p>AVERAGE.....2</p> <p>SMALL.....3</p> <p>DK.....8</p> | <p>LARGE.....1</p> <p>AVERAGE.....2</p> <p>SMALL.....3</p> <p>DK.....8</p> | <p>LARGE.....1</p> <p>AVERAGE.....2</p> <p>SMALL.....3</p> <p>DK.....8</p> |
| 422 | <p>Was (NAME) weighed at birth?</p> | <p>YES.....1</p> <p>NO.....2</p> <p>(SKIP TO 424) ←</p> | <p>YES.....1</p> <p>NO.....2</p> <p>(SKIP TO 425) ←</p> | <p>YES.....1</p> <p>NO.....2</p> <p>(SKIP TO 425) ←</p> |

| | LAST BIRTH NAME _____ | NEXT-TO-LAST BIRTH NAME _____ | SECOND-FROM-LAST BIRTH NAME _____ |
|-----|--|--|--|
| 423 | <p>How much did (NAME) weigh?</p> <p>GRAMS.....1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p> <p>POUNDS OUNCES</p> <p>POUNDS....2 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p> <p>DK.....99998</p> | <p>GRAMS.....1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p> <p>POUNDS OUNCES</p> <p>POUNDS....2 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p> <p>DK.....99998</p> | <p>GRAMS.....1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p> <p>POUNDS OUNCES</p> <p>POUNDS....2 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p> <p>DK.....99998</p> |
| 424 | <p>Has your period returned since the birth of (NAME)?</p> <p>YES1 (SKIP TO 426) ←</p> <p>NO2 (SKIP TO 427) ←</p> |  |  |
| 425 |  | <p>YES1</p> <p>NO2 (SKIP TO 429) ←</p> | <p>YES1</p> <p>NO2 (SKIP TO 429) ←</p> |
| 426 | <p>For how many months after the birth of (NAME) did you <u>not</u> have a period?</p> <p>MONTHS..... <input type="text"/> <input type="text"/></p> <p>DK.....98</p> | <p>MONTHS..... <input type="text"/> <input type="text"/></p> <p>DK.....98</p> | <p>MONTHS..... <input type="text"/> <input type="text"/></p> <p>DK.....98</p> |
| 427 | <p>CHECK 227: RESPONDENT PREGNANT?</p> <p>NOT PREGNANT <input type="checkbox"/></p> <p>PREGNANT OR UNSURE <input type="checkbox"/></p> <p>(SKIP TO 429)</p> |  |  |
| 428 | <p>Have you resumed sexual relations since the birth of (NAME)?</p> <p>YES.....1</p> <p>NO2 (SKIP TO 430) ←</p> |  |  |
| 429 | <p>For how many months after the birth of (NAME) did you <u>not have</u> sexual relations?</p> <p>MONTHS..... <input type="text"/> <input type="text"/></p> <p>DK.....98</p> | <p>MONTHS..... <input type="text"/> <input type="text"/></p> <p>DK.....98</p> | <p>MONTHS..... <input type="text"/> <input type="text"/></p> <p>DK.....98</p> |

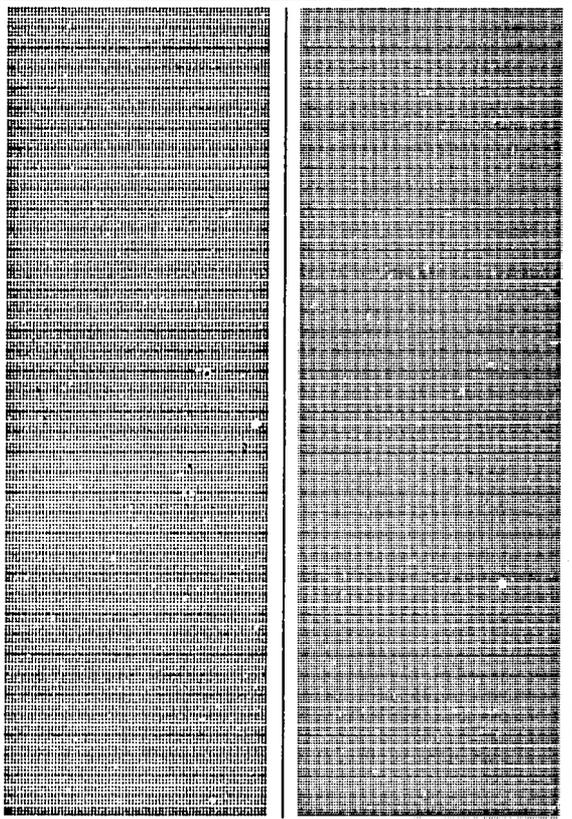
| | LAST BIRTH NAME _____ | NEXT-TO-LAST BIRTH NAME _____ | SECOND-FROM-LAST BIRTH NAME _____ |
|---|--|--|--|
| 430 | YES.....1 (SKIP TO 432)← NO.....2 | YES.....1 (SKIP TO 440)← NO.....2 | YES.....1 (SKIP TO 440)← NO.....2 |
| Did you ever breastfeed (NAME)? | | | |
| 431 | MOTHER ILL/WEAK.....01 CHILD 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)← |
| Why did you not breastfeed (NAME)? | | | |
| 432 | IMMEDIATELY.....000 HOURS.....1 <input type="text"/> <input type="text"/> DAYS.....2 <input type="text"/> <input type="text"/> IF LESS THAN 1 HOUR, RECORD '00' HOURS. IF LESS THAN 24 HOURS, RECORD HOURS. OTHERWISE, RECORD DAYS. | | |
| How long after birth did you first put (NAME) to the breast? | | | |
| 433 | YES.....1 NO.....2 | | |
| Did you squeeze out the milk from the breast before you first put (NAME) to the breast? | | | |
| 434 | CHECK 220: CHILD ALIVE? | ALIVE <input type="checkbox"/> DEAD <input type="checkbox"/> (SKIP TO 440) | |
| Are you still breastfeeding (NAME)? | | | |
| 435 | YES.....1 NO.....2 (SKIP TO 440)← | | |
| Are you still breastfeeding (NAME)? | | | |
| 436 | NUMBER OF NIGHTTIME FEEDINGS <input type="text"/> | | |
| How many times did you breastfeed last night between sunset and sunrise? | | | |
| IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE ANSWER. | | | |
| 437 | NUMBER OF DAYTIME FEEDINGS <input type="text"/> | | |
| How many times did you breastfeed yesterday during the daylight hours? | | | |
| IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE ANSWER. | | | |

| | 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? | BAP. FORMULA.....1 | 2 |
| Fresh milk? | FRESH MILK.....1 | 2 |
| Tinned/powdered milk? | TINNED/POWDERED MILK.1 | 2 |
| Other liquids? | OTHER LIQUIDS.....1 | 2 |
| Any solid or mushy food? | SOLID/MUSHY FOOD....1 | 2 |



439

CHECK 438: FOOD OR LIQUID GIVEN YESTERDAY?

"YES" TO ONE OR MORE "NO" TO ALL
 ↓ ↓
 (SKIP TO 444) (SKIP TO 443)

440

For how many months did you breastfeed (NAME)?

MONTHS.....
 UNTIL DIED.....96-
 (SKIP TO 443) ←

MONTHS.....
 UNTIL DIED.....96-
 (SKIP TO 443) ←

MONTHS.....
 UNTIL DIED.....96-
 (SKIP TO 443) ←

441

Why did you stop breastfeeding (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
 WEANING AGE.....08
 BECAME PREGNANT.....09
 STARTED USING CONTRACEPTION.....10
 OTHER.....11
 (SPECIFY)

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

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

442

CHECK 220: CHILD ALIVE?

ALIVE DEAD
 ↓ ↓
 (SKIP TO 444)

ALIVE DEAD
 ↓ ↓
 (SKIP TO 444)

ALIVE DEAD
 ↓ ↓
 (SKIP TO 444)

SECTION 4B. IMMUNIZATION AND HEALTH

448 ENTER THE LINE NUMBER AND NAME OF EACH BIRTH SINCE JANUARY 1968 IN THE TABLE. ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS. BEGIN WITH THE LAST BIRTH. (IF THERE ARE MORE THAN 3 BIRTHS, RECORD ONLY THE LAST 3 BIRTHS).

| LINE NUMBER FROM Q. 216 | □ □ | □ □ | □ □ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|--|---|--|-----|----|----|-----|---|---|---|----|---|---|---|----|---|---|---|----|---|---|---|----|---|---|---|----|---|---|---|----|---|---|---|----|---|---|---|-----|---|---|---|---|--|-----|----|----|-----|---|---|---|----|---|---|---|----|---|---|---|----|---|---|---|----|---|---|---|----|---|---|---|----|---|---|---|----|---|---|---|-----|---|---|---|
| FROM Q. 216 AND Q. 220 | LAST BIRTH NAME _____ ALIVE <input type="checkbox"/> DEAD <input type="checkbox"/> | NEXT-TO-LAST BIRTH NAME _____ ALIVE <input type="checkbox"/> DEAD <input type="checkbox"/> | SECOND-FROM-LAST BIRTH NAME _____ ALIVE <input type="checkbox"/> DEAD <input type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 449 | Do you have a card where (NAME'S) vaccinations are written down? IF YES: May I see it, please? | YES, SEEN.....1 (SKIP TO 451)← YES, NOT SEEN.....2 (SKIP TO 453)← NO CARD.....3 | YES, SEEN.....1 (SKIP TO 451)← YES, NOT SEEN.....2 (SKIP TO 453)← NO CARD.....3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 450 | Did you ever have a vaccination card for (NAME)? | YES.....1 (SKIP TO 453)← NO.....2 | YES.....1 (SKIP TO 453)← NO.....2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 451 | (1) COPY VACCINATION DATES FOR EACH VACCINE FROM THE CARD. (2) WRITE '44' IN 'DAY' COLUMN IF CARD SHOWS THAT A VACCINATION WAS GIVEN, BUT NO DATE RECORDED. | <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align:center;">DAY</th> <th style="text-align:center;">MO</th> <th style="text-align:center;">YR</th> </tr> </thead> <tbody> <tr><td>BCG</td><td>□</td><td>□</td><td>□</td></tr> <tr><td>P0</td><td>□</td><td>□</td><td>□</td></tr> <tr><td>D1</td><td>□</td><td>□</td><td>□</td></tr> <tr><td>D2</td><td>□</td><td>□</td><td>□</td></tr> <tr><td>D3</td><td>□</td><td>□</td><td>□</td></tr> <tr><td>P1</td><td>□</td><td>□</td><td>□</td></tr> <tr><td>P2</td><td>□</td><td>□</td><td>□</td></tr> <tr><td>P3</td><td>□</td><td>□</td><td>□</td></tr> <tr><td>MEA</td><td>□</td><td>□</td><td>□</td></tr> </tbody> </table> | | DAY | MO | YR | BCG | □ | □ | □ | P0 | □ | □ | □ | D1 | □ | □ | □ | D2 | □ | □ | □ | D3 | □ | □ | □ | P1 | □ | □ | □ | P2 | □ | □ | □ | P3 | □ | □ | □ | MEA | □ | □ | □ | <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align:center;">DAY</th> <th style="text-align:center;">MO</th> <th style="text-align:center;">YR</th> </tr> </thead> <tbody> <tr><td>BCG</td><td>□</td><td>□</td><td>□</td></tr> <tr><td>P0</td><td>□</td><td>□</td><td>□</td></tr> <tr><td>D1</td><td>□</td><td>□</td><td>□</td></tr> <tr><td>D2</td><td>□</td><td>□</td><td>□</td></tr> <tr><td>D3</td><td>□</td><td>□</td><td>□</td></tr> <tr><td>P1</td><td>□</td><td>□</td><td>□</td></tr> <tr><td>P2</td><td>□</td><td>□</td><td>□</td></tr> <tr><td>P3</td><td>□</td><td>□</td><td>□</td></tr> <tr><td>MEA</td><td>□</td><td>□</td><td>□</td></tr> </tbody> </table> | | DAY | MO | YR | BCG | □ | □ | □ | P0 | □ | □ | □ | D1 | □ | □ | □ | D2 | □ | □ | □ | D3 | □ | □ | □ | P1 | □ | □ | □ | P2 | □ | □ | □ | P3 | □ | □ | □ | MEA | □ | □ | □ |
| | DAY | MO | YR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BCG | □ | □ | □ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P0 | □ | □ | □ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D1 | □ | □ | □ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D2 | □ | □ | □ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D3 | □ | □ | □ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P1 | □ | □ | □ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P2 | □ | □ | □ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P3 | □ | □ | □ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MEA | □ | □ | □ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | DAY | MO | YR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BCG | □ | □ | □ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P0 | □ | □ | □ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D1 | □ | □ | □ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D2 | □ | □ | □ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D3 | □ | □ | □ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P1 | □ | □ | □ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P2 | □ | □ | □ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P3 | □ | □ | □ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MEA | □ | □ | □ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | LAST BIRTH NAME _____ | NEXT-TO-LAST BIRTH NAME _____ | SECOND-FROM-LAST BIRTH NAME _____ | |
|-----|---|---|---|---|
| 452 | <p>Has (NAME) received any vaccinations that are not recorded on this card?</p> <p>RECORD 'YES' ONLY IF RESPONDENT MENTIONS BCG, DPT 1-3, POLIO 0-3 AND/OR MEASLES VACCINE(S).</p> | <p>YES.....1 (PROBE FOR VACCINATIONS AND WRITE '66' IN THE CORRESPONDING DAY COLUMN IN 451) _____ (SKIP TO 455) ←</p> <p>NO.....2</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> |

| | NAME _____ | LAST BIRTH | NAME _____ | NEXT-TO-LAST BIRTH | NAME _____ | SECOND-FROM-LAST BIRTH |
|-----|--|---|---|---|---|---|
| 455 | Was a dose of vitamin A liquid ever given to (NAME) to protect him/her from night blindness? | YES.....1 | YES.....1 | YES.....1 | YES.....1 | YES.....1 |
| | | NO.....2 | NO.....2 | NO.....2 | NO.....2 | NO.....2 |
| | | DK.....8 | DK.....8 | DK.....8 | DK.....8 | DK.....8 |
| 456 | Did (NAME) ever have: | YES NO |
| | Whooping cough? | WHOOPING COUGH.... 1 2 |
| | Measles? | MEASLES..... 1 2 |
| | Polio? | POLIO..... 1 2 |
| | Diphtheria? | DIPHTHERIA..... 1 2 |
| | Chicken pox? | CHICKEN POX..... 1 2 |
| | Rickets? | 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) | ALIVE <input type="checkbox"/> DEAD <input type="checkbox"/> (SKIP TO 459) | ALIVE <input type="checkbox"/> DEAD <input type="checkbox"/> (SKIP TO 459) |
| 458 | → GO BACK TO 449 FOR NEXT BIRTH; OR, IF NO MORE BIRTHS, SKIP TO 489. | | | | | |
| 459 | Has (NAME) been ill with a fever at any time in the last 2 weeks? | YES.....1 | YES.....1 | YES.....1 | YES.....1 | YES.....1 |
| | | NO.....2 | NO.....2 | NO.....2 | NO.....2 | NO.....2 |
| | | DK.....8 | DK.....8 | DK.....8 | DK.....8 | DK.....8 |
| 460 | Has (NAME) been ill with a cough at any time in the last 2 weeks? | YES.....1 | YES.....1 | YES.....1 | YES.....1 | YES.....1 |
| | | NO.....2 (SKIP TO 464) ← |
| | | DK.....8 | DK.....8 | DK.....8 | DK.....8 | DK.....8 |
| 461 | Has (NAME) been ill with a cough in the last 24 hours? | YES.....1 | YES.....1 | YES.....1 | YES.....1 | YES.....1 |
| | | NO.....2 | NO.....2 | NO.....2 | NO.....2 | NO.....2 |
| | | DK.....8 | DK.....8 | DK.....8 | DK.....8 | DK.....8 |

| | NAME _____ LAST BIRTH | NAME _____ NEXT-TO-LAST BIRTH | NAME _____ SECOND-FROM-LAST BIRTH | |
|-----|---|---|---|---|
| 462 | For how many days (has the cough lasted/did the cough last)? IF LESS THAN 1 DAY, RECORD '00' | DAYS..... <input type="text"/> <input type="text"/> | DAYS..... <input type="text"/> <input type="text"/> | DAYS..... <input type="text"/> <input type="text"/> |
| 463 | When (NAME) was ill with a cough, did he/she breathe faster than usual with short, rapid breaths? | YES.....1 NO.....2 DK.....8 | YES.....1 NO.....2 DK.....8 | YES.....1 NO.....2 DK.....8 |
| 464 | CHECK 459 AND 460: FEVER OR COUGH? | "YES" IN EITHER 459 OR 460 <input type="checkbox"/> OTHER (SKIP TO 469) | "YES" IN EITHER 459 OR 460 <input type="checkbox"/> OTHER (SKIP TO 469) | "YES" IN EITHER 459 OR 460 <input type="checkbox"/> OTHER (SKIP TO 469) |
| 465 | Did you seek advice or treatment for the fever/cough? | YES.....1 NO.....2 (SKIP TO 467)← | YES.....1 NO.....2 (SKIP TO 467)← | YES.....1 NO.....2 (SKIP TO 467)← |
| 466 | 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 (SPECIFY) N | 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 (SPECIFY) N | 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 (SPECIFY) N |
| 467 | Was anything given to treat the fever/cough? | YES.....1 NO.....2 (SKIP TO 469)← DK.....8 | YES.....1 NO.....2 (SKIP TO 469)← DK.....8 | YES.....1 NO.....2 (SKIP TO 469)← DK.....8 |

| | LAST BIRTH NAME _____ | NEXT-TO-LAST BIRTH NAME _____ | SECOND-FROM-LAST BIRTH NAME _____ |
|-----|---|---|---|
| 468 | INJECTION.....A ANTIBIOTIC (PILL OR SYRUP).....B ANTIMALARIAL (PILL OR SYRUP).....C COUGH SYRUP.....D OTHER PILL OR SYRUP.....E UNKNOWN PILL OR SYRUP...F HOME REMEDY/ HERBAL MEDICINE.....G OTHER _____ H (SPECIFY) | INJECTION.....A ANTIBIOTIC (PILL OR SYRUP).....B ANTIMALARIAL (PILL OR SYRUP).....C COUGH SYRUP.....D OTHER PILL OR SYRUP.....E UNKNOWN PILL OR SYRUP...F HOME REMEDY/ HERBAL MEDICINE.....G OTHER _____ H (SPECIFY) | INJECTION.....A ANTIBIOTIC (PILL OR SYRUP).....B ANTIMALARIAL (PILL OR SYRUP).....C COUGH SYRUP.....D OTHER PILL OR SYRUP.....E UNKNOWN PILL OR SYRUP...F HOME REMEDY/ HERBAL MEDICINE.....G OTHER _____ H (SPECIFY) |
| 469 | Has (NAME) had diarrhoea in the last two weeks? YES.....1 (SKIP TO 471)← NO.....2 DK.....8 | YES.....1 (SKIP TO 471)← NO.....2 DK.....8 | YES.....1 (SKIP TO 471)← NO.....2 DK.....8 |
| 470 | → GO BACK TO 449 FOR NEXT BIRTH; OR, IF NO MORE BIRTHS, SKIP TO 489. | | |
| 471 | Has (NAME) had diarrhoea in the last 24 hours? YES.....1 NO.....2 DK.....8 | YES.....1 NO.....2 DK.....8 | YES.....1 NO.....2 DK.....8 |
| 472 | For how many days (has the diarrhoea lasted/did the diarrhoea last)? 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 | Was there any blood in the stools? YES.....1 NO.....2 DK.....8 | YES.....1 NO.....2 DK.....8 (SKIP TO 477) | YES.....1 NO.....2 DK.....8 (SKIP TO 477) |
| 474 | CHECK 430/435: LAST CHILD STILL BREASTFEEDING? YES <input type="checkbox"/> NO <input type="checkbox"/> ↓ (SKIP TO 477) | | |
| 475 | During (NAME)'s diarrhoea, did you change the frequency of breastfeeding? YES.....1 NO.....2 (SKIP TO 477)← | | |
| 476 | Did you <u>increase</u> the number of breastfeeds or <u>reduce</u> them, or did you <u>stop completely</u> ? INCREASED.....1 REDUCED.....2 STOPPED COMPLETELY.....3 | | |

| | 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 | |
| 478 | Did you seek advice or treatment for the diarrhoea? | YES.....1 NO.....2 (SKIP TO 480)← | YES.....1 NO.....2 (SKIP TO 480)← | |
| 479 | Where did you seek advice or treatment? Anywhere else? RECORD ALL MENTIONED. | PUBLIC SECTOR GVT/MUNICIPAL HOSPITAL..A PRIMARY HEALTH CENTRE..B SUB-CENTRE.....C MOBILE CLINIC.....D VILLAGE HEALTH GUIDE...E GOVERNMENT PARAMEDIC...F PRIVATE MEDICAL SECTOR PVT. HOSPITAL/CLINIC...G PHARMACY/DRUGSTORE...H PRIVATE DOCTOR.....I MOBILE CLINIC.....J COMMUNITY HEALTH WORKER..K OTHER PRIVATE SECTOR SHOP.....L TRADITIONAL PRACTITIONER.....M OTHER.....N (SPECIFY) | PUBLIC SECTOR GVT/MUNICIPAL HOSPITAL..A PRIMARY HEALTH CENTRE..B SUB-CENTRE.....C MOBILE CLINIC.....D VILLAGE HEALTH GUIDE...E GOVERNMENT PARAMEDIC...F PRIVATE MEDICAL SECTOR PVT. HOSPITAL/CLINIC...G PHARMACY/DRUGSTORE...H PRIVATE DOCTOR.....I MOBILE CLINIC.....J COMMUNITY HEALTH WORKER..K OTHER PRIVATE SECTOR SHOP.....L TRADITIONAL PRACTITIONER.....M OTHER.....N (SPECIFY) | PUBLIC SECTOR GVT/MUNICIPAL HOSPITAL..A PRIMARY HEALTH CENTRE..B SUB-CENTRE.....C MOBILE CLINIC.....D VILLAGE HEALTH GUIDE...E GOVERNMENT PARAMEDIC...F PRIVATE MEDICAL SECTOR PVT. HOSPITAL/CLINIC...G PHARMACY/DRUGSTORE...H PRIVATE DOCTOR.....I MOBILE CLINIC.....J COMMUNITY HEALTH WORKER..K OTHER PRIVATE SECTOR SHOP.....L TRADITIONAL PRACTITIONER.....M OTHER.....N (SPECIFY) |
| 480 | Was anything given to treat the diarrhoea? | YES.....1 NO.....2 (SKIP TO 482)← DK.....8 | YES.....1 NO.....2 (SKIP TO 482)← DK.....8 | |
| 481 | What was given to treat the diarrhoea? Anything else? RECORD ALL MENTIONED. | ORS FLUID FROM PACKET...A RECOMMENDED HOME FLUID...B ANTIBIOTIC (PILL OR SYRUP).....C OTHER PILL OR SYRUP.....D INJECTION.....E (I.V.) INTRAVENOUS.....F HOME REMEDIES/ HERBAL MEDICINES.....G OTHER.....H (SPECIFY) | ORS FLUID FROM PACKET...A RECOMMENDED HOME FLUID...B ANTIBIOTIC (PILL OR SYRUP).....C OTHER PILL OR SYRUP.....D INJECTION.....E (I.V.) INTRAVENOUS.....F HOME REMEDIES/ HERBAL MEDICINES.....G OTHER.....H (SPECIFY) | ORS FLUID FROM PACKET...A RECOMMENDED HOME FLUID...B ANTIBIOTIC (PILL OR SYRUP).....C OTHER PILL OR SYRUP.....D INJECTION.....E (I.V.) INTRAVENOUS.....F HOME REMEDIES/ HERBAL MEDICINES.....G OTHER.....H (SPECIFY) |

| | | LAST BIRTH NAME _____ | NEXT-TO-LAST BIRTH NAME _____ | SECOND-FROM-LAST BIRTH NAME _____ | | | |
|-----|--|--|--|--|--|--|--|
| 482 | CHECK 481: ORS FLUID FROM PACKET MENTIONED? | YES, ORS FLUID MENTIONED <input type="checkbox"/> (SKIP TO 484) | NO, ORS FLUID NOT MENTIONED <input type="checkbox"/> | YES, ORS FLUID MENTIONED <input type="checkbox"/> (SKIP TO 484) | NO, ORS FLUID NOT MENTIONED <input type="checkbox"/> | YES, ORS FLUID MENTIONED <input type="checkbox"/> (SKIP TO 484) | NO, ORS FLUID NOT MENTIONED <input type="checkbox"/> |
| 483 | Was (NAME) given fluid made from an ORS packet when he/she had the diarrhoea? | YES.....1 NO.....2 DK.....8 (SKIP TO 485) ← | YES.....1 NO.....2 DK.....8 (SKIP TO 485) ← | YES.....1 NO.....2 DK.....8 (SKIP TO 485) ← | YES.....1 NO.....2 DK.....8 (SKIP TO 485) ← | YES.....1 NO.....2 DK.....8 (SKIP TO 485) ← | YES.....1 NO.....2 DK.....8 (SKIP TO 485) ← |
| 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 DK.....8 (SKIP TO 488) ← | YES.....1 NO.....2 DK.....8 (SKIP TO 488) ← | YES.....1 NO.....2 DK.....8 (SKIP TO 488) ← | YES.....1 NO.....2 DK.....8 (SKIP TO 488) ← | YES.....1 NO.....2 DK.....8 (SKIP TO 488) ← | YES.....1 NO.....2 DK.....8 (SKIP TO 488) ← |
| 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 | CHECK 481 AND 483 (ALL COLUMNS): | | |
| | ORS FLUID FROM PACKET GIVEN TO ANY CHILD <input type="checkbox"/> | ORS FLUID FROM PACKET NOT GIVEN TO ANY CHILD OR 481 AND 483 NOT ASKED <input type="checkbox"/> | 492 |
| 490 | Have you ever heard of a special product called ORS you can get for the treatment of diarrhoea? | YES.....1 NO.....2 | 492 |
| 491 | Have you ever seen a packet like one of these before? SHOW BOTH THE W.H.O. AND A COMMERCIAL PACKET. | YES.....1 NO.....2 | 496 |
| 492 | Have you ever prepared a solution with one of these packets to treat diarrhoea for yourself or someone else? SHOW BOTH THE W.H.O. AND A COMMERCIAL PACKET. | YES.....1 NO.....2 | 495 |
| 493A | 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)? | FREE WHO PACKET.....1 ALTERNATIVE COMMERCIAL PACKET....2 | |
| 493 | The last time you prepared the ORS, did you prepare the whole packet at once or only part of the packet? | WHOLE PACKET AT ONCE.....1 PART OF PACKET.....2 DK.....8 | 495 |
| 494 | How much water did you use to prepare ORS the last time you made it? | 200 ML. GLASSES.....1 <input type="checkbox"/> <input type="checkbox"/> 1 1/2 LITER.....901 1 LITER.....902 1 1/2 LITERS.....903 2 LITERS.....904 FOLLOWED PACKAGE INSTRUCTIONS.905 OTHER.....906 (SPECIFY) DK.....998 | |
| 495 | Where can you get the ORS packet? PROBE: Anywhere else? RECORD ALL PLACES MENTIONED. | PUBLIC SECTOR GVT/MUNICIPAL HOSPITAL.....A PRIMARY HEALTH CENTRE.....B SUB-CENTRE.....C MOBILE CLINIC.....D VILLAGE HEALTH GUIDE.....E GOVERNMENT PARAMEDICF 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) | |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP TO |
|-----|--|---|---------|
| 496 | CHECK 481 AND 486 (ALL COLUMNS): | | |
| | HOME-MADE FLUID GIVEN TO ANY CHILD | HOME-MADE FLUID NOT GIVEN TO ANY CHILD OR 481 AND 486 NOT ASKED | 501 |
| 497 | Where did you learn to prepare the recommended home fluid made from sugar, salt and water given to (NAME) when he/she had diarrhoea? | <p>PUBLIC SECTOR</p> <p>GVT/MUNICIPAL HOSPITAL.....11</p> <p>PRIMARY HEALTH CENTRE.....12</p> <p>SUB-CENTRE.....13</p> <p>MOBILE CLINIC.....14</p> <p>VILLAGE HEALTH GUIDE.....15</p> <p>GOVERNMENT PARAMEDIC16</p> <p>PRIVATE MEDICAL SECTOR</p> <p>PVT. HOSPITAL/CLINIC.....21</p> <p>PHARMACY/DRUGSTORE.....22</p> <p>PRIVATE DOCTOR.....23</p> <p>MOBILE CLINIC.....24</p> <p>COMMUNITY HEALTH WORKER.....25</p> <p>OTHER PRIVATE SECTOR</p> <p>SHOP.....31</p> <p>TRADITIONAL PRACTITIONER.....32</p> <p>MASS MEDIA</p> <p>TELEVISION.....41</p> <p>RADIO.....42</p> <p>PRINTED MATERIAL.....43</p> <p>OTHER _____ 51</p> <p>(SPECIFY)</p> | |

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> | | 514 |
| 502 | <p>CHECK 313:</p> <p>NEITHER STERILIZED <input type="checkbox"/> HE OR SHE STERILIZED <input type="checkbox"/></p> | | 508 |
| 503 | <p>CHECK 227:</p> <p>NOT PREGNANT OR UNSURE <input type="checkbox"/> PREGNANT <input type="checkbox"/></p> <p>Now I have some questions about the future. Would you like to have (a/another) child or would you prefer not to have any (more) children?</p> <p>Now I have some questions about the future. After the child you are expecting, would you like to have another child or would you prefer not to have any more children?</p> | <p>HAVE A (ANOTHER) CHILD.....1 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>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 OTHER.....5 (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 | |

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 style="text-align: center;">↓</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"/> | |
| 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"/> | |
| 605 | <p>CHECK 604:</p> <p>GRADE 0-5 <input type="checkbox"/> GRADE 6-12 <input type="checkbox"/></p> <p style="text-align: center;">↓</p> <p>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 (st) husband mainly do? | <div style="border: 1px solid black; width: 40px; height: 20px; margin: 0 auto;"></div> <hr/> <hr/> <hr/> | |
| 609 | <p>CHECK 608:</p> <p>WORKS (WORKED) IN AGRICULTURE <input type="checkbox"/></p> <p>DOES (DID) NOT WORK IN AGRICULTURE <input type="checkbox"/></p> | | 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? | <p>HIS/FAMILY LAND.....1</p> <p>RENTED LAND.....2</p> <p>SOMEONE ELSE'S LAND.....3</p> | |
| 611 | Aside from your own housework, are you currently working? | <p>YES.....1</p> <p>NO.....2</p> | 613 |
| 612 | <p>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.</p> <p>Are you currently doing any of these things or any other work?</p> | <p>YES.....1</p> <p>NO.....2</p> | 620 |
| 613 | What is your occupation, that is, what kind of work do you do? | <div style="border: 1px solid black; width: 40px; height: 20px; margin: 0 auto;"></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? | <p>FAMILY FARM/BUSINESS.....1</p> <p>EMPLOYED BY SOMEONE ELSE.....2</p> <p>SELF-EMPLOYED.....3</p> | |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP TO | | | | | | | | | | | | | | | | | | |
|------------------------|--|--|---------|-----|----|------------------------|---|---|--------------|---|---|--------------------|---|---|------------------|---|---|--------------------|---|---|--|
| 615 | Do you earn cash for this work? PROBE: Do you make money for working? | YES.....1 NO.....2 | | | | | | | | | | | | | | | | | | | |
| 616 | Do you do this work at home or away from home? | HOME.....1 AWAY.....2 | | | | | | | | | | | | | | | | | | | |
| 617 | CHECK 219/220/222: HAS CHILD BORN SINCE JAN. 1988 AND LIVING AT HOME? YES NO <input type="checkbox"/> <input type="checkbox"/> | | 620 | | | | | | | | | | | | | | | | | | |
| 618 | While you are working, do you <u>usually</u> have (NAME OF YOUNGEST CHILD AT HOME) with you, <u>sometimes</u> have him/her with you, or <u>never</u> have him/her with you? | USUALLY.....1 SOMETIMES.....2 NEVER.....3 | 620 | | | | | | | | | | | | | | | | | | |
| 619 | Who usually takes care of (NAME OF YOUNGEST CHILD AT HOME) while you are working? | HUSBAND.....01 OLDER CHILD(REN).....02 OTHER RELATIVES.....03 NEIGHBORS.....04 FRIENDS.....05 SERVANTS/HIRED HELP.....06 CHILD IS IN SCHOOL.....07 INSTITUTIONAL CHILDCARE.....08 OTHER.....09 (SPECIFY) | | | | | | | | | | | | | | | | | | | |
| 620 | RECORD THE TIME | HOUR..... <table border="1"><tr><td></td><td></td></tr><tr><td></td><td></td></tr></table> MINUTES..... <table border="1"><tr><td></td><td></td></tr><tr><td></td><td></td></tr></table> | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
| 621 | PRESENCE OF OTHERS DURING MOST OF THE INTERVIEW TIME. | <table border="1"> <thead> <tr> <th></th> <th>YES</th> <th>NO</th> </tr> </thead> <tbody> <tr> <td>CHILDREN UNDER 10.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>HUSBAND.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>MOTHER-IN-LAW.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>OTHER MALES.....</td> <td>1</td> <td>2</td> </tr> <tr> <td>OTHER FEMALES.....</td> <td>1</td> <td>2</td> </tr> </tbody> </table> | | YES | NO | CHILDREN UNDER 10..... | 1 | 2 | HUSBAND..... | 1 | 2 | MOTHER-IN-LAW..... | 1 | 2 | OTHER MALES..... | 1 | 2 | OTHER FEMALES..... | 1 | 2 | |
| | YES | NO | | | | | | | | | | | | | | | | | | | |
| CHILDREN UNDER 10..... | 1 | 2 | | | | | | | | | | | | | | | | | | | |
| HUSBAND..... | 1 | 2 | | | | | | | | | | | | | | | | | | | |
| MOTHER-IN-LAW..... | 1 | 2 | | | | | | | | | | | | | | | | | | | |
| OTHER MALES..... | 1 | 2 | | | | | | | | | | | | | | | | | | | |
| OTHER FEMALES..... | 1 | 2 | | | | | | | | | | | | | | | | | | | |

SECTION 7. WEIGHT

| | | | | |
|-----|----------------|---|--|--------------------------------|
| 701 | CHECK 219/220: | <input type="checkbox"/> ONE OR MORE LIVING CHILDREN BORN SINCE JAN. 1988 | <input type="checkbox"/> NO LIVING CHILDREN BORN SINCE JAN. 1988 | <input type="checkbox"/> → END |
|-----|----------------|---|--|--------------------------------|

INTERVIEWER: IN 702 (COLUMNS 1-3) RECORD THE LINE NUMBER FOR EACH CHILD BORN SINCE JANUARY 1988 AND STILL ALIVE. IN 703 AND 704 RECORD THE NAME AND BIRTH DATE FOR ALL LIVING CHILDREN BORN SINCE JANUARY 1988. IN 705 RECORD THE WEIGHT OF THE LIVING CHILDREN. (NOTE: IF THERE ARE MORE THAN 3 LIVING CHILDREN BORN SINCE JANUARY 1988, 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 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"/> |
| 706 DATE WEIGHED | 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"/> |
| 707 RESULT | CHILD WEIGHED..1 CHILD SICK.....2 CHILD NOT PRESENT.....3 CHILD REFUSED..4 MOTHER REFUSED.5 OTHER.....6 _____ (SPECIFY) | CHILD WEIGHED..1 CHILD SICK.....2 CHILD NOT PRESENT.....3 CHILD REFUSED..4 MOTHER REFUSED.5 OTHER.....6 _____ (SPECIFY) | CHILD WEIGHED..1 CHILD SICK.....2 CHILD NOT PRESENT.....3 CHILD REFUSED..4 MOTHER REFUSED.5 OTHER.....6 _____ (SPECIFY) |
| 708 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 SCHEDULE

CONFIDENTIAL
For Research
Purpose only

INDIA 1992-1993

| IDENTIFICATION | | | | | | | | | | | | | | | | | | | | | |
|--|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| NAME OF STATE _____ | <table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr><td> </td><td> </td><td> </td><td> </td></tr> </table> | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
| PSU NUMBER..... | | | | | | | | | | | | | | | | | | | | | |
| NAME OF DISTRICT _____ | | | | | | | | | | | | | | | | | | | | | |
| NAME OF TEHSIL/TALUK _____ | | | | | | | | | | | | | | | | | | | | | |
| NAME OF THE VILLAGE _____ | | | | | | | | | | | | | | | | | | | | | |
| TOTAL POPULATION OF THE VILLAGE ACCORDING TO THE 1981 CENSUS..... | <table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr><td> </td><td> </td><td> </td><td> </td></tr> </table> | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |

1. Current population of the village:

| | | | | |
|--|--|--|--|--|
| | | | | |
|--|--|--|--|--|

2. Area of the village (in Hectares):

| | | |
|--|--|--|
| | | |
|--|--|--|

3. Total number of households in the village:

| | | |
|--|--|--|
| | | |
|--|--|--|

4. Total arable land in the village (in Hectares):
(1) Irrigated land.....1

| | |
|--|--|
| | |
|--|--|

(2) Non-irrigated land.....2

| | |
|--|--|
| | |
|--|--|

5. Main sources of irrigation in the village: RAIN WATER.....A
TANK/POND.....B
STREAM/RIVER.....C
CANAL.....D
WELL.....E
TUBE WELL.....F
OTHERS _____ G
(SPECIFY)

6. Distance from the nearest town (in kilometers):

| | |
|--|--|
| | |
|--|--|

7. Distance from the Block Headquarters (in kilometers):

| | |
|--|--|
| | |
|--|--|

8. Distance from the Tehsil Headquarters (in kilometers):

| | |
|--|--|
| | |
|--|--|

9. Distance from the nearest railway station (in kilometers):

| | |
|--|--|
| | |
|--|--|

10. Distance from the nearest bus stand (in kilometers):

| | |
|--|--|
| | |
|--|--|

11. Whether the village is connected by all-weather road: YES.....1
(SKIP TO 13) }
NO.....2

12. Distance from the nearest pucca road (in kilometers):

| | |
|--|--|
| | |
|--|--|

13. Main sources of drinking water in the village: PIPED WATER.....A
OPEN WELL.....B
TUBE WELL/BORE WELL.....C
RIVER/SPRING/POND/LAKE.....D
OTHERS _____ E
(SPECIFY)

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"/> |

1. Name of the village
 2. Name of the Panchayat
 3. Name of the Block
 4. Name of the District
 5. Name of the State
 6. Name of the Country

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 Attendant | 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
 NO.....2
 (SKIP TO 29) ↙

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: | <input type="text"/> | <input type="text"/> |
| 2. Number of exhibitions held: | <input type="text"/> | <input type="text"/> |
| 3. Number of drama / song performances held: | <input type="text"/> | <input type="text"/> |
| 4. Number of group meetings held: | <input type="text"/> | <input type="text"/> |
| 5. Number of times family welfare/health worker visited the village in a month: | <input type="text"/> | <input type="text"/> |

31. Any family welfare / health posters distributed? YES.....1
 NO.....2

32. Any Leader's Orientation Training Camp held? YES.....1
 NO.....2
 (SKIP TO 34) ↙

33. Number of local leaders trained at the camp:

34. Rural Development Programmes :

| Programme | Whether there are any beneficiaries in the village: | Total number of beneficiaries |
|---|---|---|
| Integrated Rural Development Programme (IRDP) | YES.....1 | <input type="text"/> <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.....? | |

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:
