

DLHS -2

SIKKIM

Reproductive and Child Health

District Level Household Survey
2002-04



International Institute for
Population Sciences,
(Deemed University)
Mumbai – 400 088



Ministry of Health & Family
Welfare, Government of India,
New Delhi – 110 011



Development & Research
Services Pvt. Ltd.
New Delhi-110029

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PREFACE AND ACKNOWLEDGEMENT

Government of India had launched the Reproductive and Child Health (RCH) program to ensure that couples have access to adequate information and services for reproductive health care. As a first step, family planning target has been withdrawn and an effort is being made to provide a package of reproductive services at different levels of health care centres.

Monitoring of the services is also being improved. New indicators are being added to assess quality of services and provision of an integrated reproductive health care service. The District Level Household Survey (DLHS) was initiated by Government of India and financed by the World Bank covering all the districts in the country. For the second time, district level estimates will be available for most of the critical reproductive health indicators. These important initiatives are certainly quite satisfying for all those who are concerned with taking ICPD reproductive health agenda ahead. The project is being coordinated by International Institute for Population Sciences, Mumbai and implemented by a number of consulting agencies.

For the purpose of data collection, uniform questionnaires, sampling design and field procedures were used throughout the country. The survey thus provided comparable data for all the districts in the state. The present report provides salient findings of Sikkim and covered all the districts. The findings of selected indicators of reproductive and child health services from the state of Sikkim are presented in the report.

It is believed that the data generated through the survey will meet the requirements of the Programme Administrators and Policy Makers for making effective interventions for providing quality services and achieving multiple objectives.

The DLHS-RCH 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 acknowledge everyone involved in the survey, several organizations and individuals deserve special mention.

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KEY INDICATORS, SIKKIM

DISTRICT LEVEL HOUSEHOLD SURVEY- REPRODUCTIVE AND CHILD HEALTH, (DLHS-RCH), 2002-04

Sample size			
Households surveyed.....	4,214		
Currently married women age 15-44.....	4,039		
Husband's of eligible women.....	3,060		
Characteristics of households			
Percent rural.....	87.6		
Percent Hindu.....	65.0		
Percent Buddhist.....	28.0		
Percent other religion (Christian).....	5.6		
Percent scheduled caste.....	6.3		
Percent scheduled tribe.....	29.2		
Percent with electricity.....	88.2		
Percent with flush toilet.....	32.3		
Percent with no toilet facility.....	14.7		
Percent living in <i>Kachcha</i> houses.....	25.0		
Percent living in <i>Pucca</i> houses.....	29.0		
Percent with low standard of living.....	34.2		
Percent with high standard of living.....	21.6		
Percent with iodized salt (15+ppm).....	60.9		
Characteristics of currently married women age 15-44 years			
Percent below age 30.....	47.6		
Percent with age at first cohabitation below age 18.....	30.4		
Percent Non-literate.....	26.1		
Percent having 10 or more years of schooling.....	19.6		
Percent with Non-literate husband.....	12.3		
Percent with husband 10+ years of schooling.....	32.4		
Marriage			
Mean age at marriage for boys.....	24.5		
Mean age marriage for girls.....	21.9		
Percent of boys married below age 21.....	17.5		
Percent of girls married below age 18.....	12.0		
Fertility			
Mean children ever born women age 40-44 years.....	3.4		
Percent of births of order 3 and above ¹	30.5		
Current use of family planning method			
Any method.....	65.3		
Any modern method.....	55.3		
Pill.....	16.4		
IUD.....	5.7		
Condom.....	5.9		
Female sterilization.....	23.0		
Male sterilization.....	2.5		
Any traditional method.....	10.1		
Rhythm/safe period.....	6.8		
Withdrawal.....	3.1		
Unmet need for family planning			
Percent with unmet need for spacing.....	5.2		
Percent with unmet need for limiting.....	12.9		
Percent with total unmet need.....	18.2		
Maternal care²			
Percent of women received antenatal check-ups.....	89.5		
Antenatal check-up at home.....	0.3		
Antenatal check-up in first trimester.....	50.7		
Three or more visit for ANC.....	67.9		
Two or more tetanus toxoid injections.....	77.5		
Adequate Iron folic acid tablets/syrup ³		30.3	
Full antenatal check-up ⁴		23.5	
Delivery characteristics²			
Delivery at home.....		40.9	
Delivery at government health institutions.....		53.4	
Delivery at private health institutions.....		5.2	
Delivery attendant by skilled persons ⁵		61.9	
Child health			
Percent of children whose mother squeezed out milk from her breast ⁶		58.4	
Percent of children ⁷ with diarrhoea ⁸ who received ORS.....		48.0	
Percentage of women whose child with pneumonia ⁸ sought treatment.....		78.4	
Percent of children who received vaccinations⁹			
BCG.....		93.6	
DPT (3 injections).....		77.8	
Polio (3 drops).....		60.3	
Measles.....		83.2	
All vaccinations ¹⁰		53.1	
No vaccination at all.....		0.8	
Percentage of women who had			
Pregnancy complication ²		46.4	
Delivery complication ²		49.3	
Post delivery complication ²		39.7	
Symptoms of RTI/STI.....		39.5	
Problems of vaginal discharge.....		5.0	
Menstruation related problem.....		10.0	
Awareness of RTI/STI and HIV/AIDS			
Percent of women who have heard of RTI/STI.....		34.5	
Percent of women who have heard of HIV/AIDS.....		72.1	
Utilization of government health services			
Antenatal care.....		80.9	
Treatment for pregnancy complication.....		77.3	
Treatment for post-delivery complication.....		79.7	
Treatment for vaginal discharge.....		69.8	
Treatment for children with diarrhoea.....		64.4	
Treatment for children with pneumonia.....		59.8	
Quality of family planning services			
Percent non-users ever advised to adopt the family planning method.....		22.4	
Percent users told about side effects of any modern method.....		39.5	
Percent users who received follow-up services.....		4.8	
Characteristics of husband of eligible women			
Percent of husband knowing NSV.....		51.2	
Percent of men who have heard of RTI/STI.....		25.9	
Percent of men who have heard of HIV/AIDS.....		82.2	
Percentage who had any symptoms of RTI/STI.....		8.9	
Sought treatment for RTI/STI.....		33.0	

¹ For births in past three years, ² For live/still births during three years preceding the survey, ³ 100 or more IFA tablets/Syrup, ⁴ A minimum of three visits for ANC, at least one TT injections and 100 or more IFA tablets/syrup, ⁵ Either institutional delivery or home delivery assisted by Doctor/ANM/nurse, ⁶ Children age below 3 years, ⁷ Last but one living children below age 3 years, ⁸ Last two weeks preceding the survey, ⁹ Last but one living children (age 12-23 months) born during three years preceding the survey, ¹⁰ BCG, three injections of DPT, three drops of polio and measles.

SALIENT FINDINGS

For the assessment of district level Reproductive and Child Health indicators, Government of India proposed to undertake district level household surveys through non-governmental agencies on an annual basis. The District Level Household Survey (DLHS) was the result of government's initiative. In Sikkim, DRS, India was entrusted the work of carrying out of the survey. The survey for Phase-1 of the DLHS covering 2 districts of the state was conducted during June 2002 to August 2002. The survey for Phase-2 covering the remaining districts of the state was carried out during April 2004 to June 2004. The focus of the survey was on: i) Coverage on ante natal care (ANC) and immunization services, ii) Extent of safe deliveries, iii) Contraceptive prevalence rate and unmet need for family planning, iv) Awareness about RTI/STI and HIV/AIDS and v) Utilization of government health services and users' satisfaction. The salient findings of the survey are presented here.

For both the phases together, the data was collected from 4,214 households in Sikkim. From these households, 4,039 eligible women (usual resident or visitors who stayed in the sample household the night before the interview, currently married aged 15-44 years whose marriage was consummated) and 3,060 husbands of eligible women were interviewed.

Of the total households interviewed in Sikkim, nearly 88 percent were from rural areas. There were 65 percent Hindu households, 28 percent Buddhist and 6 percent came under other category in the sample. Twenty nine percent of the households belonged to scheduled tribes and only six percent to scheduled castes. Twenty five percent of the households lived in *Kachcha* and about 29 percent were in *pucca* houses. The majority of the households belonged to low economic status (34 percent in low SLI)

About 77 percent of population aged seven and above are literate. Percent literate among females is 72 where as it is 82 percent for male. Proportion of non-literate is much higher among the older cohort compared to the younger ones. Nearly 23 percent of eligible women in the state are non-literate, and 21 percent have completed 10 or more years of schooling. In Sikkim the level of literacy among the eligible women and their husbands are not very low. As regards distribution of non-literate women, lesser proportion of younger women's below age 30 are illiterate compared to older women age 30 and above, but in case of non-literate husbands across age is more or less uniform, though it is marginally more for husbands below 30 years.

The reporting of the marriages during three years prior to survey gives the mean age at marriage among the boys and girls in the state as 24.5 and 21.9 years respectively. Eighteen percent of boys and 12 percent of girls in the state got married before attaining the minimum legal age at marriage of 21 and 18 years respectively. In all the districts, except South district nearly 17 to 29 percent of boys got married below the legal minimum age at marriage. Except in East district, in all the districts nearly 18 to over 32 percent of the girls got married below the legal minimum age at marriage.

More than half of the households (61 percent) use cooking salt that is iodized at the recommended level of 15 parts per million or higher level of iodine content whereas 10 percent of households used salts that are not iodized at all. Lowest proportion of households (3 percent)

in East district is using non-iodized salt whereas in West district the highest proportion of households (23 percent) used non-iodized salt. While more than 83 percent of households in East district consume adequately iodized salt, only 35 percent of households in West district do so.

On an average, women on the verge of completion of reproductive period have given birth to 3.4 children. The completed fertility in the states varies from the lowest of 2.9 children ever born per women in a South Sikkim to the highest of 4.3 children in North Sikkim.

The share of births of order 3 and above in the total births that occurred three years prior to survey is 31 percent. In most of the district, proportion of higher order births is quite high, ranging from the lowest of around 26 percent in South Sikkim, to the highest of about 47 percent in North Sikkim.

The data collected on the utilization of ANC services for the women who had their last live/ still birth during three years prior to survey shows that the ANC coverage in the state is high as 90 percent of the women received at least one ante-natal care during pregnancy. About 0.3 percent of the women during their pregnancy were visited by health worker at their residence for providing ANC. Nine percent of the women visited private health facilities and 81 percent received ANC from government health facilities. The percent of women who got some kind of ANC during pregnancy range between 72 percent in North Sikkim to 94 percent in East Sikkim. In 3 districts out of 4, 85 percent or more women got some antenatal care.

Though 90 percent of the women in Sikkim received ANC, only 73, 82 and 73 percent women had check-up of weight, blood pressure and abdomen respectively. Thirty percent women received Iron and Folic Acid (IFA) tablets and 78 percent got at two or more TT injection. A full package of ANC including minimum three ANC visits, at least one TT injection and 100 or more IFA tablets/Syrup was received by 24 percent of women.

Minimum three ANC and timing of first check up is crucial for maternal and child care. In Sikkim nearly 51 percent of women got ANC in the first trimester and nearly 23 percent had minimum three antenatal check-ups. An extent of ANC in first trimester varies from minimum of 33 percent in North maximum of 62 percent in North. In North, only 43 percent of women had minimum three ANC whereas in East more than 80 percent women had got minimum three ANC.

Nearly 59 percent of the total deliveries in Sikkim were conducted in the health institutions; 5 percentages point up from RCH Round I. The majority of the institutional deliveries were conducted in government institutions (54 percent of total deliveries) as against in private institution 5 percent of total deliveries. Eight percent of the total deliveries, that took place at home, were assisted by midwifery trained persons i.e. doctor/ nurse and ANM. So in all, 62 percent of the deliveries, slightly up from RCH Round I (37 percent), in the state were assisted by skilled personnel. The extent of institutional deliveries varies from the highest of 72 percent in South Sikkim to the lowest of 36 percent in North Sikkim. In all the districts, comparatively higher proportion of the deliveries took place in government health institutions. Safe deliveries were on the similar pattern in all the districts. The percent of the institutional deliveries increases substantially with women's education and economic status, though the

variation in the institutional deliveries by women's education is much conspicuous than that by women's economic status.

In Sikkim, 46, 49 and 40 percent of the women experienced pregnancy, delivery and post delivery complications respectively. About 29 percent of the women sought treatment for the pregnancy and 20 percent for the post-delivery complications. The pregnancy complication varies from the lowest of 21 percent in West Sikkim to the highest of 61 percent in East Sikkim. The incidence of all the three types of complications seems to be linked with each other. In the districts where the incidence of pregnancy complications is high, the incidence of delivery and post-delivery complications is also high.

In most of the districts and the state as a whole, the practice of breast-feeding is almost universal. The practice of initiation of breastfeeding within two hours of birth of the child is common. In Sikkim, 60 percent women started breastfeeding the child within two hours of birth and only 16 percent started after one day of birth. There is great deal of variation in the pattern of breastfeeding across the districts. In East Sikkim district 49 percent of the women breastfed the child within two hours of birth. In North and West Sikkim district, the percentage is highest (75 and 76 percent respectively).

In Sikkim 94, 78, 60 and 83 percent of the children received the BCG vaccine, three doses of DPT, Polio and measles vaccine respectively. There is 11 percentage points drop from BCG to measles. It means that large number of children that have contact with services providers are missed out of subsequent services. The complete schedule of immunization including BCG, three doses of DPT and Polio each and measles was received by 53 percent of the children, whereas 0.8 percent of the children did not receive a single vaccination under routine programme. About 50 percent of the children received supplementation of at least one dose of vitamin A and only 9 percent children received IFA tablets/liquid for iron supplementation.

The extent of complete immunization consisting of BCG, three injections of DPT, three doses of Polio and measles is the lowest in South Sikkim (22 percent) and highest in East Sikkim (69 percent).

In Sikkim, 85 percent of the women were aware of diarrhoea management and 46 percent were aware of Oral Rehydration Salt (ORS). During the two-week period prior to survey, children of 10 percent of the women suffered from diarrhoea. And 48 percent women treated diarrhoea among children by giving ORS. In comparison to awareness about diarrhoea management, the awareness about danger signs of pneumonia is quite low. Only 39 percent of the women reported awareness about danger signs of pneumonia. Eleven percent of the women reported that their children suffered from cough, cold and difficulty in breathing in two-week period prior to survey and 78 percent sought treatment.

The knowledge of family planning methods is universal in all districts of Sikkim, with over 99 percent women reporting knowledge of one method or the other. However, the knowledge of any spacing method is marginally low, but the proportion *per se* is quite high (96 percent). The knowledge of any modern methods is also universal in all the districts, though the knowledge of all modern methods is only 50 percent. The proportion knowing all modern

methods (males and females' sterilization, IUD, oral pills and condom) varies from about 20 percent in South Sikkim to 75 percent in West Sikkim.

In DLHS, knowledge about No-scalpel vasectomy has been asked to husbands of eligible women. About half of the husbands were aware of no-scalpel vasectomy in the state. The proportion of husbands knowing No-scalpel vasectomy varies from about 17 percent in South Sikkim to 70 percent in East.

The contraceptive prevalence rate (any methods) in the state is 65 percent, 25 percentage point up from RCH Round I, comprising of prevalence of about 55 percent of modern methods and 10 percent of traditional methods. Twenty six percent of the couples adopted sterilization. The percent user of the two male methods sterilization and condom is only 8 percent. There has been positive association between contraceptive use and female education, economic development and availability of health facility. The highest contraceptive prevalence is in East Sikkim (69 percent) followed by West Sikkim (67 percent) and lowest is in North Sikkim (60 percent).

In Sikkim, a total of 18 percent of women are found to have unmet need for family planning, with 13 percent for limiting and 5 percent for spacing. There are no inter-district differences in the pattern of unmet need. The total unmet need varies from 17 percent in South District to 18 percent each in East and West Sikkim and the highest is in North Sikkim (34 percent).

Only 0.7 percent of the women in the state reported that either ANM/LHV or health worker visited them at their residence at least once in the past three months. Less than one third of women who were visited by ANM felt that ANM had given them sufficient time to discuss health-related matters.

In 3 of the districts, East, West and South Sikkim less than one percent of the women reported the visit of ANM/LHV to their residence. In North Sikkim districts 3 percent of the women reported visits of ANM/LHV.

It has been observed that in three months period prior to survey, 19 percent of the eligible women who were required to consult health facility visited any of the government health facilities. Very small proportion of the women who visited the health facility rated facility as excellent. On the other hand, nearly 51 percent of the women who did not visit the government health facility reported government health facility "non-conveniently located" or "time is not suited" as reason.

The district level variation in the utilization of the government health facilities ranges from 64 percent in East Sikkim to 96 percent in South Sikkim. A small percentage of women visited to private health facilities (27 percent), ranges from 5-6 percent in South and West Sikkim, to 21 percent in North Sikkim and highest (36 percent) in East Sikkim.

In Sikkim 35 and 72 percent of women are aware of RTI/STI and HIV/AIDS respectively. The corresponding level of awareness among husbands of eligible women is 26 and

82 percent. The percent of women who are aware of RTI/STI and HIV/AIDS is lowest in South Sikkim 8 and 54 percent respectively to highest in East Sikkim 56 and 85 percent. Similarly awareness level of husbands of eligible women of RTI/STI is lowest in West Sikkim (25 percent) and for HIV/AIDS awareness is lowest in North Sikkim (65 percent) to highest in North Sikkim (29 percent) and in East Sikkim (94 percent) respectively. Out of 4, in 3 districts the awareness of HIV/AIDS is below state figure for women and it is the same for husbands of eligible women.

About 40 percent of women and 9 percent of husbands of eligible women in the state reported having at least one symptoms of RTI/STI. In most of the districts the reported prevalence of RTI/STI among husbands was low. The prevalence of RTI/STI is lowest in West Sikkim (9 percent) for women and in North Sikkim (1 percent) for husbands to highest in East Sikkim (49 percent) for women and in East Sikkim (15 percent) for husbands. About 5 percent of women reported vaginal discharge with low in South Sikkim (1 percent) to highest in East Sikkim (8 Percent). Forty percent of women sought treatment for vaginal discharge problem and 33 percent of husbands sought treatment with at least one symptoms of RTI/STI. It may be noted that in all the districts higher proportion of women compared to husbands sought treatment for their reproductive health problems.

CHAPTER I

INTRODUCTION

1.1 Background and Objectives of the Survey

The Reproductive and Child Health (RCH) programme that has been launched by Government of India (GoI) in 1996-97 is expected to provide quality services and achieve multiple objectives. It ushered a positive paradigm shift from method-oriented, target-based activity to providing client-centred, demand-driven quality services. Also, efforts are being made to reorient provider's attitude at grassroots level and to strengthen the services at outreach levels.

The new approach requires decentralization of planning, monitoring and evaluation of the services. The district being the basic nucleus of planning and implementation of the RCH programme, Government of India has been interested in generating district level data on utilization of the services provided by government health facilities, other than that based on service statistics. It is also of interest to assess people's perceptions on quality of services. Therefore, it was decided to undertake District Level Household Survey (DLHS) under the RCH programme in the country.

The Round I of RCH survey was conducted during the year 1998-99 in two phases (each phase covered half of the districts from all states/union territories) in 504 districts for which International Institute for Population Sciences (IIPS), Mumbai was designated as the nodal agency.

In Round II, survey was completed during 2002-04 in 593 districts as per the 2001 Census. In DLHS-RCH, information about RCH has been collected using a slightly modified questionnaire. In Round II, some new dimensions, such as test of cooking salt to assess the consumption of salt fortified with iodine, collection of blood of children, adolescents and pregnant women to assess the level of anaemia, and measurement of weight of children to assess the nutritional status, were incorporated.

The main focus of the DLHS-RCH has been on the following aspects:

- Coverage of ANC & immunization services
- Proportion of safe deliveries
- Contraceptive prevalence rates
- Unmet need for family planning
- Awareness about RTI/ STI and HIV/AIDS
- Utilization of government health services and users' satisfaction.

For the purpose of conducting DLHS-RCH, all the states and the union territories were grouped into 16 regions. A total of twelve research organizations including Population Research Centres (PRCs) were involved in conducting the survey in 16 regions with IIPS as the nodal agency.

1.2 Survey Design

In Round II, a systematic, multi-stage stratified sampling design was adopted. In each district, 40 Primary Sampling Units (PSUs – Villages/Urban Frame Size) were selected with probability proportional to size (PPS) using the 1991 Census data. All the villages were stratified according to population size, and female literacy was used for implicit arrangement within each strata. The number of PSUs in rural and urban areas was decided on the basis of percent of urban population in the district. However, a minimum of 12 urban PSUs were selected in each district in case the percent urban was low. The target sample size in each district was set at 1,000 complete residential households from 40 selected PSUs. In the second stage, within each PSU, 28 residential households were selected with Circular Systematic Random Sampling (CSRS) procedure after house listing. In order to take care of non-response due to various reasons, sample was inflated by 10 percent (i.e. 1,100 households).

For selecting the urban sample, the National Sample Survey Organization (NSSO) provided the list of selected urban frame size (UFS) blocks in the district. The UFS blocks were made available separately for each district for urban areas. The maps of selected blocks were obtained from the NSSO field office located in each state/union-territory.

But in each state, in two districts, the PSUs that were surveyed in Round I of DLHS-RCH (also known as RHS-RCH) were also selected for survey in Round II. This was done in order to measure the changes more accurately. Two districts, one with the highest proportion of safe delivery and another with the lowest proportion of safe delivery among those surveyed during Round I of the survey were selected for this purpose. In all other districts, fresh sample of PSUs were selected.

1.3 House Listing and Sample Selection

The household listing operation was carried out in each of the selected PSU segment prior to the data collection that provided the necessary frame for selecting the households. The household listing operation also involved preparation of location map and layout sketch map of the structures and recording the details of the households in these structures in each selected PSU. This exercise was carried out by independent teams each comprising one lister, one mapper and one supervisor under the overall guidance and monitoring of the survey coordinator of households of the selected regional agencies.

A complete listing of households was carried out in villages with households up to 300. In case of villages with more than 300 households but less than or equal to 600 households, two segments of more or less same size were formed and one segment was selected at random and household listing was carried out. In case of villages with more than 600 households, segments each of about 150 households were formed and two segments were selected for listing using the systematic random sampling method.

Small villages with less than 50 households were linked with a nearest village. After combining it with the nearest village, the same sampling procedure was adopted as mentioned above.

For the urban PSUs, the selected UFS blocks needed no segmentation as they were of almost equal size and contained less than 300 households.

No replacement was made if selected household was absent during data collection. However, if a PSU was inaccessible, a replacement PSU with similar characteristics was selected by the IIPS and provided to the regional agency for survey.

1.4 Questionnaire

DLHS-RCH collected information on a various indicators pertaining to RCH that would assist policymakers and programme managers to formulate and implement the goals set for RCH programmes. The International Institute for Population Sciences (IIPS), Mumbai, the Nodal Agency for DLHS–RCH project has made necessary modifications in the two Questionnaires: Households Questionnaire and Women’s Questionnaire and added three more Questionnaires i.e., Husband’s Questionnaire, Village Questionnaire and Health Questionnaire, in consultation with MoHFW and World Bank. These Questionnaires were discussed and finalized in training cum workshop organized at IIPS during the first week of November 2001.

These modified questionnaires had been canvassed of round II of the DLHS–RCH survey, taking into consideration the views of all the regional agencies involved. The house–listing teams and the interviewers and the supervisors for the main survey were given rigorous training based on the manuals developed for the purpose by the Nodal Agency.

All the questionnaires were bilingual, with questions in both regional and English language.

The Details of questionnaires are as follows:

Household Questionnaire: The household questionnaire lists all usual residents in each sample household including visitors who stayed in the household the night before the interview. For each listed household member, the survey collected basic information on age, sex, and marital status, relationship to the head of the household, education and the prevalence /incidence of tuberculosis, blindness and malaria. Information was also collected on the main source of drinking water, type of toilet facility, source of lighting, type of cooking fuel, religion and caste of household head and ownership of other durable goods in the household. In addition, a test was conducted to assess whether the household used cooking salt that has been fortified with iodine. Besides, details of marriages and deaths which happen to usual residents within reference period were collected. Efforts were also made to get information about maternal deaths.

Women Questionnaire: Women questionnaire is designed to collect information from currently married women age 15 – 44 years who are usual residents of the sample household or visitors who stayed in the sample household the night before the interview. The women questionnaire covered the following sections:

Section I: Background Characteristics: In this section the information collected on age, educational status and birth and death history of biological children including still birth, induced and spontaneous abortions.

Section II: Antenatal, Natal and Post natal Care: In this section the questionnaire collect information only from the women who had live birth, still birth, spontaneous or induced abortion during last three years preceding the survey date. The information on whether women received antenatal and postpartum care, who attended the delivery and the nature of complications during pregnancy for recent births were also collected.

Section III: Immunization and childcare: This section gives information about feeding practices, the length of breastfeeding, immunization coverage and recent occurrence of diarrhoea, and pneumonia for young children (below age 3 years).

Section IV: Contraception: This section provides information on knowledge and use of specific family planning methods. Questions were included about reasons for non use, intentions about future use, desire for additional child, sex preference for next child etc.

Section V: Assessment of quality of Government health services and client satisfaction. In this section the questions are targeted to assess the quality of family planning and health services provided by Government health facilities. The information were also collected about the rating of Government health facilities and staffs and reasons for not visiting to government health facilities by eligible woman.

Section VI: Awareness about RTI/STI and HIV/AIDS: In this section the information were collected about women's knowledge of RTI/STI about awareness, Source of knowledge, aware of mode of transmission, curability, symptoms and treatment seeking behaviour. About HIV/AIDS; Awareness, Source of knowledge, aware of mode of transmission and prevention etc were canvassed.

Husband Questionnaire: In DLHS-RCH, round II, husband questionnaire was used to collect information from eligible women's husbands about age, educational status, knowledge and source of knowledge of RTI/STI and HIV/AIDS reported symptoms of RTI/STI and male participation. Apart from these information desires for children, reasons for not using F.P. methods, future intention to use F.P. methods and knowledge about no scalpel vasectomy (NSV) has also been collected.

Health Questionnaire: In DLHS-RCH, round II, a health questionnaire is included. The information collected were on weight of children age 0–71 months old and the blood sample to assess the haemoglobin levels of children age 0–71 months old, adolescents 10–19 years old and pregnant eligible women. This information is useful for assessing the levels of nutrition prevailing in the population and prevalence of anaemia among women, adolescent girls and children.

Village Questionnaire: A village questionnaire is also added in this round of DLHS. The information collected on the availability and accessibility of various facilities in the village especially on accessibility of educational and health facilities.

1.5 Fieldwork and Sample Coverage

The fieldwork for RCH Round II was done in two phases. During Phase I, 2 districts were covered from June 2002 to August 2002 and remaining 2 districts were covered during Phase II from April 2004 to June 2004.

During Round II, a total of 4,214 households were covered. From these surveyed households, 4,039 currently married women (aged 15-44 years) and 3,060 husbands of eligible women were interviewed.

1.6 Data processing

All the five types of completed questionnaires were brought to the headquarters of regional agencies and data was processed using microcomputers. The process consisted of office editing of questionnaires, data entry, data cleaning and tabulation. Data cleaning included validation, range and consistency checks. For both data entry and tabulation of the data, IIPS developed the software package. The district and state level reports were prepared by regional agency whereas national report is prepared by the nodal agency.

1.7 Sample Weights

In generating district level demographic indicator sample weight for household, women and husband, weight have been used and these for a particular district are based on three selection probabilities f_1^i , f_2^i and f_3^i pertaining to i^{th} PSU of the district. These probabilities are defined as

$$f_1^i = \text{Probability of selection of } i^{\text{th}} \text{ PSU in a district}$$

$$= \frac{(n_r * H_i)}{H}$$

Where, n_r is the number of rural PSU to be selected in a district, H_i refers to the number of household in the i^{th} PSU and $H = \sum H_i$, total number of household in a district.

$$f_2^i = \text{Probability of selecting segment (s) from segmented PSU}$$

(in case the i^{th} selected PSU is segmented)

$$= (\text{Number of } i \text{ segments selected after segmentation of PSU}) / (\text{number of segment created a PSU})$$

The value of f_2 is to be equal to one for un-segmented PSU.

$$f_3^i = \text{Probability of selecting a household from the total listed households of a PSU or in segment(s) of a PSU}$$

$$= \frac{28 * HR_i}{HL_i}$$

Where HR_i is the household response rate of the i^{th} sampled PSU and HL_i is the number of households listed in i^{th} PSU in a district.

For urban PSU, f_1^i is computed either as the ratio of number of urban PSUs to be included from the district to the total number of UFS blocks of the district or as the ratio of urban population of the selected PSU to the total urban population of the district.

The probability of selecting a household from the district works out as;

$$f^i = (f_1^i * f_2^i * f_3^i)$$

The non-normalized household weight for the i^{th} PSU of the district is, $w^i = \frac{1}{f^i}$, while the normalized weight used in the generation of district indicators as

$$n_i^d = \frac{\sum_i n_i}{\sum_i n_i * w^i} * w^i, \quad i=1,2,3,\dots,40.$$

Where n_i is the number of households interviewed in the i^{th} PSU. The weight for women and husband are computed in the similar manner after multiplication of expression for f^i by the corresponding response rate. State weights for households, women and husbands are further derived from the district weights n_i^d for the i^{th} psu in d^{th} district using external control so that for sample results do not deviate from the corresponding information about the population.

Let, $n_s = \sum_i n_i^d$ and $N_I = \sum_i N_i^d$, denote the number of households in the sample and census of a particular state, then state level households weights are work out as;

$$n_i^s = n_i^d * \frac{\left(\frac{n_i^d}{n_s} \right)}{\left(\frac{N_i^d}{N_{sc}} \right)}, \quad \text{where } n_i^d \text{ household sample in } i^{\text{th}} \text{ district, } n_s \text{ is the total sample in the}$$

state, N_i^d is the census population in the i^{th} district and N_{sc} is the census population in the state.

These households' weights are controlled for rural-urban separately.

Considering sample and census currently married women in 15-44 years and married males above 15 years for specified state by districts and rural-urban residence, state level women and husbands' weights are obtained for estimation of state level indicators.

1.8 Sample Implementation

Table 1.1 shows the period of fieldwork, number of households interviewed and household's response rates. A total of 4,214 households are interviewed, about eighty-seven percent were rural. The overall household response rate – the number of households interviewed per 100 occupied households – was 99 percent. The household response rate was more than 97 percent in every district.

Table 1.1 NUMBER OF HOUSEHOLDS INTERVIEWED						
Month and year of fieldwork and number of households interviewed by district, Sikkim, 2002-04						
State/District	Month and year of field work		Number of households interviewed			Response rate
	From	To	Total	Rural	Urban	
State	-	-	4,214	3,692	522	98.9
State-phase I	06/2002	08/2002	-	-	-	-
State-phase II	04/2004	06/2004	-	-	-	-
North	06/2002	06/2002	1087	1033	54	100.0
South	07/2002	08/2002	1036	884	152	100.0
East	04/2004	06/2004	1059	743	316	99.2
West	04/2004	06/2004	1032	1032	0	96.5

Note: Table based on unweighted cases.

In the interviewed households, interviews were completed with 4,039 currently married women who are the usual member of the household or stayed night before the household interview and 3,060 husbands of eligible women were also interviewed (Table 1.2). The number of completed interviews per 100 identified eligible women and husbands in the households with completed interviews were 96 and 76 percent respectively. The variation in the women's response rate by district was highest in South district (99 percent) and lowest in East district (93 percent), similarly husband's response rate was found to be highest in North district (83 percent) and lowest in West district (71 percent).

Table 1.2 NUMBER OF WOMEN AND HUSBANDS INTERVIEWED								
Number of women and husbands interviewed by district, Sikkim, 2002-04								
State/District	Number of women interviewed			Response rate	Number of husbands interviewed			Response rate
	Total	Rural	Urban		Total	Rural	Urban	
State	4,039	3,534	505	95.7	3,060	2,678	382	75.9
North	1,010	959	51	97.1	796	758	38	83.0
South	1,026	874	152	99.0	731	619	112	72.5
East	1,001	699	302	92.9	787	555	232	78.4
West	1,002	1,002	0	94.0	746	746	0	70.5
Note: Table based on unweighted cases.								

1.9 Basic Demographic Profile of the State

Before presenting the survey result, the basic demographic features of Sikkim and its districts (as per census, 2001) are presented here.

The state of Sikkim located in the North Eastern part of the country with 0.54 million populations in 2001, Sikkim is a landlocked Indian state nestled in the Himalayas. It is the least populous state in India, and the second smallest in area after Goa. The geographical location of the state is quite unique. Sikkim, with a total area of 7,096 sq kms, situated in the inner Himalaya mountain range, is completely landlocked. It is surrounded in the north and northeast by Tibet, on the east by Bhutan, on the west by Nepal and on the south by the Darjeeling district of West Bengal. The state being a part of inner ranges of the mountains of Himalaya has no open valley and no plains. The state is consisted of 4 districts, Sub division 9 and 411 Revenue Blocks and 447 villages. The urban areas of the state comprise 9 towns during 2001. Gangtok is the capital of the state.

According to 2001 census the population of Sikkim is 0.54 million out of which 0.29 millions are males and 0.25 millions are females. The rural and urban breakup of the population shows that 88.9 percent of the population was enumerated in rural areas and 11.1 percent in urban areas. Keeping pace with the national average, Sikkim has recorded a sharp decline in the decadal growth rate from 28.47 per cent in 1981-91 to 32.98 percent during 1991-2001. Among the districts, East Sikkim with 37.17 percent has the highest decadal growth rate whereas West Sikkim with 25.48 percent has the lowest decadal growth rate of total population during 1991-2001.

Percentage of both Scheduled Caste and Schedule Tribe population have experienced a marginal decline during 1991-2001 and the proportion of schedule caste and scheduled tribe population in total population of 2001 are 5.0 percent and 20.6 percent respectively. Highest proportion of Schedule Caste population has been recorded in East District (5.8 per cent) and that of Schedule Tribe in North (53.1 percent) and North District has the lowest proportion of Schedule Caste (2.1 per cent) and that of North District Schedule Tribe in North (15.6 per cent). With a population density of 76 per sq. km. Sikkim ranks 22nd among the states and union territories in India and this figure is almost three times higher than the all India density of 325 persons per square km. Among the districts, East District has the highest density (257 person/sq. km.) and North District has the lowest (10person/sq. km).

The sex ratio of the total population in the state has improved since 1991 Census from 878 to 875 per 1000 males. West District has recorded the highest sex ratio (929) and surprisingly West District has the lowest (752) within the state.

The literacy rate in the state has improved from 56.94 percent in 1991 to 58.9 percent in 2001 .The literacy rate in urban (85 percent) is considerably higher in the state than that in rural areas (68 percent). Among the districts, East District has the highest literacy rate of 65.1 percent. West District has the lowest literacy rate of 49.2 percent. The male literacy for the state is 77 percent and the female literacy rate is 61 percent. Both the rates have increased from 1991 census to 2001 census.

Table 1.3 BASIC DEMOGRAPHIC INDICATOR							
Basic demographic indicator of India, state and districts, Census 2001							
India/state/district	Population (in thousand)	Percentage urban	Percentage decadal growth rate ¹	Sex ratio ²	Percentage literate 7+		
					Male	Female	Persons
India	1,028,737	28.0	21.5	933	75.8	54.2	65.4
State	540	11.1	32.98	875	76.0	60.4	68.8
North	41	3.0	31.32	752	75.7	55.4	67.2
South	131	3.0	33.37	927	74.3	59.7	67.3
East	245	21.6	37.17	844	81.2	66.8	74.7
West	123	1.5	25.48	929	66.8	50.1	58.8

Source: Primary Census Abstract, Series 20, Census of India, 2001. ¹ 1991-2001, ² Females per 1,000 males.

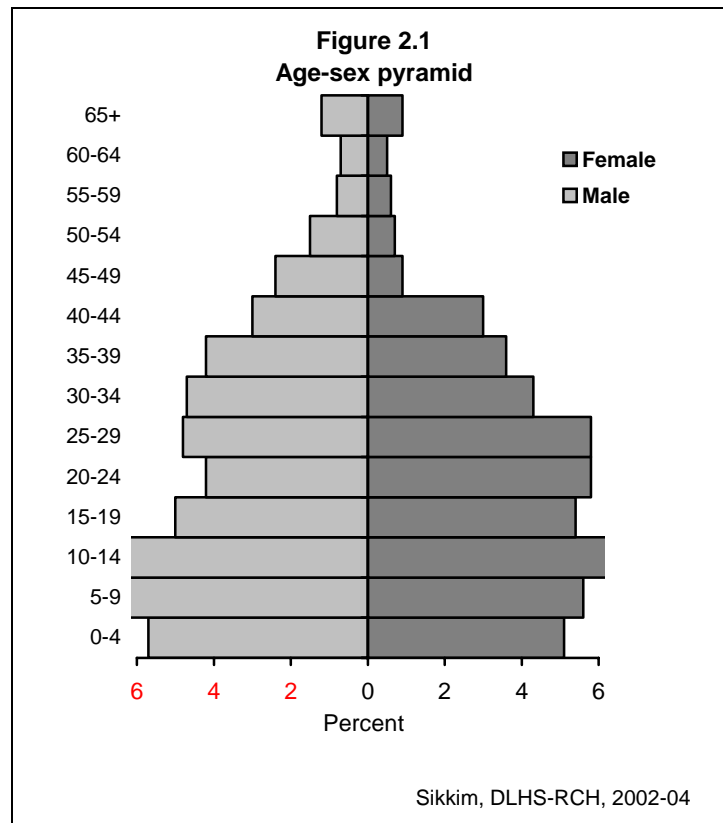
CHAPTER II

BACKGROUND CHARACTERISTICS OF HOUSEHOLD

This chapter provides a socio-economic and demographic profile of households interviewed in the District Level Household Survey-Reproductive and Child Health. Facilities and services such as Health, Education and Communication available in the representative sampled village are also presented here. The *de facto* producer of enumeration is adopted in order to include every individual staying in the sampled Primary Sampling Units (PSU), a village or an urban area, the night before the survey. The objective of adopting the *de facto* method is to avoid duplication of persons who are in transit.

2.1 Age –Sex Structure

The age-sex distribution of sampled household population classified by residence is presented in Table 2.1. The percent distribution is based on sampled *de facto* population of 20,853 persons of whom 87 percent lived in the rural areas of Sikkim. The state of Sikkim depicts a young and growing population with 36 percent below the age of 15 years (Figure 2.1). There is not much difference between number of children below 15 years recorded in rural areas (36 percent) compared to those in urban areas (33 percent).



The overall sex ratio of 106 males per 100 females is recorded for the de facto population. The sex ratio is skewed, 103 in favour of males in urban areas compared to 106 in rural areas)

Table 2.1 HOUSEHOLD POPULATION BY AGE AND SEX									
Percent distribution of the household population by age and by residence and sex, Sikkim, 2002-04									
Age	Total			Rural			Urban		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
< 1	1.9	1.8	1.9	1.8	1.7	1.9	2.4	2.5	2.3
1-4	8.8	9.2	8.5	8.8	9.2	8.3	9.2	9.0	9.4
5-9	12.2	12.9	11.5	12.7	13.4	11.9	9.0	9.4	8.5
10-14	12.8	12.5	13.2	12.9	12.5	13.4	12.3	12.4	12.3
15-19	10.4	9.8	11.1	10.4	9.8	10.9	10.7	9.4	12.1
20-24	10.1	8.3	12.0	10.0	8.0	12.0	10.8	9.7	11.8
25-29	10.6	9.3	12.0	10.7	9.3	12.1	10.1	9.3	11.0
30-34	9.0	9.2	8.9	8.9	9.1	8.7	9.9	9.6	10.2
35-39	7.8	8.1	7.5	7.8	8.1	7.5	8.1	8.5	7.7
40-44	6.1	5.9	6.2	6.1	5.9	6.3	5.7	5.9	5.4
45-49	3.3	4.7	1.8	3.2	4.6	1.7	4.0	5.5	2.5
50-54	2.2	3.0	1.4	2.2	2.9	1.4	2.5	3.2	1.7
55-59	1.4	1.6	1.2	1.4	1.7	1.1	1.5	1.5	1.6
60-64	1.2	1.4	1.1	1.3	1.3	1.2	1.2	1.6	0.7
65-69	0.9	1.0	0.8	0.8	0.9	0.8	1.5	1.8	1.1
70-74	0.7	0.8	0.5	0.7	0.8	0.5	0.5	0.4	0.6
75-79	0.3	0.2	0.3	0.2	0.3	0.2	0.4	0.1	0.6
80+	0.3	0.3	0.2	0.3	0.3	0.2	0.3	0.2	0.3
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of persons	20,853	10,709	10,144	18,118	9,322	8,796	2,735	1,387	1,348
Sex ratio ¹	106	NA	NA	106	NA	NA	103	NA	NA

Note: Table is based on the *de facto* population, i.e. persons who stayed in the household the night before the interview (including both usual resident and visitors) NA: Not applicable¹ Male per 100 females

2.2 Household Characteristics

The percent distribution of 4,214 households surveyed in the state of Sikkim by selected characteristics of the household head and the number of usual household members are shown in Table 2.2. This is based on *de jure*, the usual resident population. More than 95 percent of household heads are male invariant of place of resident while only 5 percent are female-headed households. Nearly 92 percent of household heads are in the 30-59 years age group. The median age of household heads is 38 years for the state as a whole, while it is 37 years in rural areas and 40 years in urban areas. About 18 percent of household heads are younger than 30 years and 8 percent are at least 60 years old. Majority of the household heads are Hindu (65 percent), less than one percent are Muslim, and 27 percent are Buddhist and 6 percent are Christians. Hindus constitute a higher proportion of population in rural areas (65 percent) than in urban areas (64 percent). Only less than one percent of the rural households are Muslim, and only 6 percent of urban households. Considerable numbers of people are Buddhist i.e 28 percent in total. About 28 percent in rural areas and 21 percent in urban areas are Buddhist.

Table 2.2 HOUSEHOLD CHARACTERISTICS			
Percent distribution of the household head by selected characteristics of the household head and household size, according to residence, Sikkim, 2002-04			
Characteristic	Total	Residence	
		Rural	Urban
Sex of the household head			
Male	95.2	95.2	95.2
Female	4.8	4.8	4.8
Age of the household head			
< 30	18.0	18.8	12.5
30-44	50.4	50.5	49.5
45-59	23.5	23.1	26.4
60+	8.1	7.6	11.6
Median age of the household head	37.8	37.4	40.2
Religion of the household head			
Hindu	64.8	65.0	63.5
Muslim	1.4	0.8	5.7
Christian	6.0	5.6	8.7
Sikh	0.2	0.2	0.0
Buddhist	27.1	28.0	20.8
Jain	0.1	0.1	0.2
Other	0.2	0.1	1.0
Missing	0.1	0.1	0.0
Caste/tribe of the household head			
Scheduled caste	6.3	5.8	10.4
Scheduled tribe	29.2	29.6	25.9
Other backward class	41.6	42.9	32.4
Other #	21.9	20.8	29.5
Don't know	1.0	0.9	1.8
Missing	0.1	0.1	0.0
Number of usual members			
1	0.1	0.1	0.0
2	5.5	5.7	4.0
3	15.1	15.0	15.5
4	26.3	26.9	21.8
5	21.0	21.1	20.3
6	14.9	14.2	19.9
7	9.0	9.3	6.8
8	4.0	3.9	4.6
9+	4.1	3.7	7.1
Mean household size	4.9	4.8	5.1
Total percent	100.0	100.0	100.0
Number of households	4214	3692	522

Note: Table is based on the *de jure* population # Higher caste (Not belonging to a scheduled caste, a scheduled tribe and an other backward class)

Six percent of the households in Sikkim belong to schedule caste, 29 percent to schedule tribes and as many as 42 percent belong to other backward classes while the remaining 22 percent of the households are headed by other castes not under schedule caste, schedule tribe and other backward classes. About 43 percent of the household head belong to other backward classes in rural areas and it is only 32 percent in urban areas. The overall state average household size is 4.9 persons. The rural-urban differential in average household size is 4.8 in rural areas and 5.1 in urban areas.)

2.3 Educational Level

The educational background of Sikkim presented in this section is based on *de facto* household population. Level of literacy and years of schooling, according to age, sex and residence are shown in Table 2.3.

Table 2.3 EDUCATIONAL LEVEL OF THE HOUSEHOLD POPULATION									
Percent distribution of household population age 7 and above by literacy level and years of schooling, according to age , residence and sex, Sikkim, 2002-04									
Age	Non-literate	Literate but no schooling	Years of schooling				Missing	Total Percent	Number of persons
			1-5	6-8	9-10	11 or more			
Total									
Male									
7-9	14.7	9.7	74.7	0.5	0.0	0.0	0.5	100.0	797
10-14	4.3	1.7	63.1	27.9	2.8	0.0	0.2	100.0	1,337
15-19	3.9	0.9	22.0	30.6	27.9	14.6	0.0	100.0	1,047
20-29	5.5	2.4	16.9	24.3	23.1	27.9	0.0	100.0	1,881
30-39	10.3	3.7	18.7	23.6	22.7	21.0	0.0	100.0	1,853
40-49	19.6	7.8	21.2	18.6	16.2	16.6	0.0	100.0	1,142
50+	38.2	16.2	22.7	8.8	7.8	6.2	0.0	100.0	885
Total	12.0	5.1	31.1	21.1	16.1	14.7	0.1	100.0	8,942
Female									
7-9	16.4	9.2	73.8	0.6	0.0	0.0	0.1	100.0	673
10-14	5.1	2.1	62.4	27.4	2.8	0.0	0.2	100.0	1,342
15-19	6.6	2.6	20.1	31.3	27.3	12.0	0.0	100.0	1,125
20-29	13.9	2.7	20.5	26.1	19.7	17.0	0.0	100.0	2,426
30-39	28.5	6.4	19.3	17.6	17.8	10.4	0.0	100.0	1,661
40-49	51.3	10.2	13.0	10.3	9.8	5.4	0.0	100.0	811
50+	73.6	9.9	7.1	4.6	1.8	2.8	0.1	100.0	561
Total	22.0	5.0	29.4	20.4	14.1	9.1	0.0	100.0	8,599
Total									
7-9	15.5	9.4	74.2	0.5	0.0	0.0	0.3	100.0	1,470
10-14	4.7	1.9	62.8	27.6	2.8	0.0	0.2	100.0	2,679
15-19	5.3	1.8	21.1	30.9	27.6	13.3	0.0	100.0	2,172
20-29	10.2	2.6	18.9	25.3	21.2	21.7	0.0	100.0	4,306
30-39	18.9	4.9	19.0	20.8	20.4	16.0	0.0	100.0	3,514
40-49	32.8	8.8	17.8	15.1	13.5	11.9	0.0	100.0	1,952
50+	52.0	13.8	16.7	7.2	5.5	4.9	0.1	100.0	1,447
Total	16.9	5.0	30.2	20.8	15.1	11.9	0.1	100.0	17,541
Note: Table is based on <i>de facto</i> population.									
									Contd.

Table 2.3 indicates that, 17 percent of the population aged seven and above are illiterate. The proportion of illiterates is 22 percent for females compared to 12 percent for males. The proportion of illiterates is much higher among the older cohorts compared to the younger ones. For both males and females, going by expected trend, the level of literacy is higher in the younger population than in the older age groups with the exception of the youngest age group of 7-9 years (Figure 2.2).

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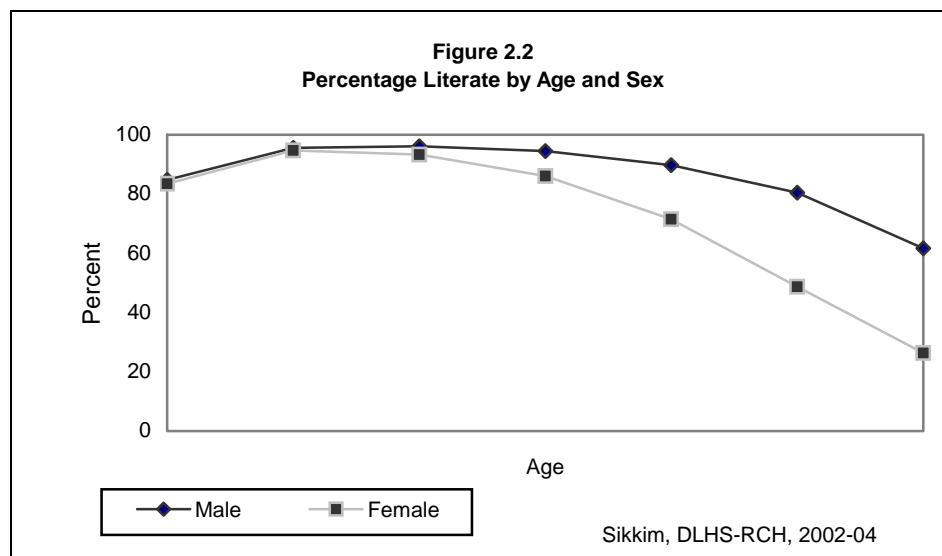


Table 2.3 EDUCATIONAL LEVEL OF THE HOUSEHOLD POPULATION

Percent distribution of household population age 7 and above by literacy level and years of schooling, according to age, residence and sex, Sikkim, 2002-04

Age	Non-literate	Literate but no schooling	Years of schooling				Missing	Total Percent	Number of persons
			1-5	6-8	9-10	11 or more			
RURAL									
Male									
7-9	15.7	8.2	75.0	0.6	0.0	0.0	0.5	100.0	720
10-14	4.2	1.2	63.6	28.0	2.8	0.0	0.2	100.0	1,166
15-19	3.9	0.8	22.4	30.9	28.0	14.1	0.0	100.0	917
20-29	6.0	2.0	17.4	25.0	23.4	26.2	0.0	100.0	1,617
30-39	11.5	3.7	19.1	24.7	22.1	18.9	0.0	100.0	1,603
40-49	21.4	7.7	22.5	18.8	15.2	14.5	0.0	100.0	983
50+	41.6	15.9	22.3	8.5	7.0	4.8	0.0	100.0	763
Total	13.0	4.7	31.7	21.4	15.8	13.3	0.1	100.0	7,768
Female									
7-9	16.2	8.5	74.6	0.6	0.0	0.0	0.1	100.0	612
10-14	4.6	1.7	63.9	27.1	2.6	0.0	0.2	100.0	1,175
15-19	6.7	2.0	19.9	31.1	28.0	12.2	0.1	100.0	961
20-29	14.7	2.6	21.7	27.0	19.2	14.9	0.0	100.0	2,119
30-39	30.8	6.4	19.8	17.8	16.9	8.3	0.0	100.0	1,420
40-49	54.9	9.9	13.4	8.9	9.1	3.8	0.0	100.0	703
50+	82.3	7.0	5.5	3.4	1.0	0.7	0.1	100.0	471
Total	23.3	4.5	30.3	20.4	13.6	7.8	0.0	100.0	7,462
Total									
7-9	15.9	8.3	74.8	0.6	0.0	0.0	0.3	100.0	1,332
10-14	4.4	1.4	63.8	27.6	2.7	0.0	0.2	100.0	2,341
15-19	5.3	1.4	21.2	31.0	28.0	13.1	0.0	100.0	1,879
20-29	11.0	2.3	19.8	26.1	21.0	19.8	0.0	100.0	3,735
30-39	20.6	5.0	19.5	21.5	19.6	13.9	0.0	100.0	3,023
40-49	35.4	8.6	18.7	14.7	12.7	10.0	0.0	100.0	1,686
50+	57.1	12.5	15.9	6.5	4.7	3.2	0.1	100.0	1,234
Total	18.0	4.6	31.0	20.9	14.7	10.6	0.1	100.0	15,230

Contd.

Around 75 percent of males and 74 percent females in this age group 7 - 9 had 1-5 years of schooling. Nearly 31 percent of males have had education for 1-5 years. Females are also not far behind compared to their female counterparts in this category with a corresponding share of 29 percent. Lesser proportion of females are found in higher education of 9-10 years (14 percent) and 11 or more years (9 percent) compared to the males having corresponding figures of 16 percent and 14 percent respectively. Just about five percent of the total population, five percent each of males and females are found to be literate without any formal schooling.

Table 2.3 EDUCATIONAL LEVEL OF THE HOUSEHOLD POPULATION									
Percent distribution of household population age 7 and above by literacy level and years of schooling, according to age, residence and sex, Sikkim, 2002-04.									
Age	Non-literate	Literate but no schooling	Years of schooling				Missing	Total Percent	Number of persons
			1-5	6-8	9-10	11 or more			
URBAN									
Male									
7-9	5.2	23.0	71.8	0.0	0.0	0.0	0.0	100.0	77
10-14	5.0	5.6	59.7	27.1	2.5	0.0	0.0	100.0	171
15-19	4.4	2.0	19.2	28.3	27.8	18.3	0.0	100.0	130
20-29	2.3	4.6	13.7	19.9	21.5	38.0	0.0	100.0	264
30-39	2.7	3.2	15.9	16.7	26.5	35.0	0.0	100.0	251
40-49	8.4	8.5	13.5	17.2	22.4	29.9	0.0	100.0	159
50+	17.2	18.5	25.5	11.2	12.7	14.8	0.0	100.0	123
Total	5.6	7.4	26.5	18.6	18.3	23.6	0.0	100.0	1,174
Female									
7-9	18.5	16.2	65.2	0.0	0.0	0.0	0.1	100.0	61
10-14	9.0	5.1	51.8	29.2	4.9	0.0	0.0	100.0	166
15-19	6.0	6.3	21.2	32.7	23.2	10.6	0.0	100.0	163
20-29	8.4	3.8	12.6	20.3	23.8	31.1	0.0	100.0	307
30-39	15.0	6.4	16.2	16.2	23.1	23.1	0.0	100.0	241
40-49	27.7	12.5	10.8	19.1	14.3	15.7	0.0	100.0	107
50+	28.5	24.9	15.5	11.1	6.2	13.7	0.0	100.0	90
Total	13.5	8.1	23.3	20.6	17.2	17.4	0.0	100.0	1,137
Total									
7-9	11.1	20.0	68.8	0.0	0.0	0.0	0.1	100.0	139
10-14	7.0	5.4	55.8	28.2	3.7	0.0	0.0	100.0	338
15-19	5.3	4.4	20.3	30.7	25.3	14.0	0.0	100.0	293
20-29	5.6	4.2	13.1	20.1	22.7	34.3	0.0	100.0	571
30-39	8.7	4.8	16.0	16.5	24.8	29.2	0.0	100.0	492
40-49	16.2	10.1	12.4	18.0	19.2	24.2	0.0	100.0	266
50+	22.0	21.2	21.3	11.2	10.0	14.4	0.0	100.0	213
Total	9.5	7.7	24.9	19.6	17.8	20.6	0.0	100.0	2,311

An examination of the educational attainment by place of residence revealed that the urban-rural differential was quite pronounced. In urban areas, only 10 percent of the total population is illiterate in comparison to 18 percent of the rural population. The numbers of illiterate females live in rural areas of Sikkim accruing a share as high as 23 percent, while illiterate rural males are 13 percent. Prevalence of illiterate is much less in urban areas with figures of 14 percent and 6 percent illiterate females and males respectively. A contrasting feature of rural-urban difference in educational level is that in rural areas most people had 1-5 years of schooling (31 percent), and those who had 11 or more years of schooling was just 11 percent, whereas in urban areas a significant proportion of people (21 percent) had this level of education.

2.4 Marital Status of the Household Population

The DLHS, collected information on the marital status of all household members aged 10 years and above. Table 2.4 shows the percent distribution of household population by marital status distribution of *de facto* household population by age and sex. Fifteen percent of females in the age group 15-19 years, followed by 90 percent in the age group 25-29 years, and 96 percent in the age group 30-44 years, are currently married. The proportion of never married for both males and female is 38 percent in the state, and it is higher for males (39 percent) than for females (36 percent). The proportion of never married among males declines with increasing age and reaches the lowest by the time they are in the age group 45-59 years. A similar pattern has been observed in the case of females, with the lowest never married proportion for the age group 45-59 years. The proportions of divorced, separated or widowed are negligible and limited to the older ages. Fifty five percent of women aged 60 years or above are widowed /divorced /separated. Among the *de facto* population aged 10 years and above, 58 percent of males and 60 percent of females are currently married.

Table 2.4 MARITAL STATUS OF THE HOUSEHOLD POPULATION						
Percent distribution of the household population aged 10 years and above by marital status, according to age and sex , Sikkim, 2002-04.						
Age	Marital status				Total Percent	Number of persons
	Never married	Currently married	Married, gaunna not performed	Widowed/ divorced/ Separated		
Male						
10-14	97.6	2.1	0.2	0.1	100.0	1,337
15-19	97.3	2.6	0.0	0.1	100.0	1,047
20-24	61.4	38.1	0.4	0.1	100.0	885
25-29	20.9	78.6	0.1	0.4	100.0	996
30-44	3.9	95.1	0.0	1.0	100.0	2,487
45-59	1.9	92.1	0.1	5.9	100.0	1,002
60+	1.8	66.8	0.1	31.3	100.0	391
Total	39.3	58.0	0.1	2.6	100.0	8,145
Female						
10-14	97.6	2.3	0.1	0.0	100.0	1,342
15-19	85.2	14.7	0.0	0.0	100.0	1,125
20-24	33.3	66.2	0.4	0.1	100.0	1,213
25-29	9.5	90.0	0.1	0.4	100.0	1,213
30-44	2.9	96.0	0.0	1.1	100.0	2,290
45-59	2.4	74.1	0.0	23.5	100.0	442
60+	3.4	41.8	0.2	54.6	100.0	301
Total	36.3	59.8	0.1	3.8	100.0	7,926
Total						
10-14	97.6	2.2	0.2	0.0	100.0	2,679
15-19	91.0	8.9	0.0	0.1	100.0	2,172
20-24	45.1	54.4	0.4	0.1	100.0	2,098
25-29	14.6	84.9	0.1	0.4	100.0	2,209
30-44	3.4	95.5	0.0	1.1	100.0	4,777
45-59	2.0	86.6	0.1	11.3	100.0	1,444
60+	2.5	55.9	0.2	41.4	100.0	692
Total	37.8	58.9	0.1	3.2	100.0	16,071
Note: Table is based on <i>de facto</i> population						

2.5 Marriage

Marriage in the household is an important event that reflects the socio-cultural practices of the communities surveyed in DLHS. This section outlines the marriages ceremonies during the three years period prior to the survey. Mean age at marriage by sex and percentage of total marriages which are below legal age at marriage, 21 years for boys and 18 years for girls by resident at the state and at district levels are shown in Table 2.5.

Table 2.5 MARRIAGE				
Mean age at marriage and percentage of marriages below legal at marriage by sex and by districts, Sikkim, 2002-04				
Place of residence/ District	Mean age at marriage		Percentage of marriage below legal age at marriage	
	Boy	Girl	Boy (<21)	Girl (<18)
State – Total	24.5	21.9	17.5	12.0
State – Rural	24.4	22.0	17.2	10.2
State – Urban	(25.4)	*	(15.2)	*
District				
East	25.4	22.5	16.5	8.5
North	24.5	21.0	20.2	18.1
South	23.1	20.0	5.3	32.0
West	23.7	20.2	28.6	22.4

Note: Table based on *de jure* population. Reference period: - January 1st, 1999 to survey date for phase-1, and January 1st, 2001 to survey date for phase-2. () Based on less than 50 unweighted cases. * Percentages not shown: based on few cases

Mean age at marriage for boys in urban areas of Sikkim are 25 years respectively. The corresponding figures in rural areas are 24 years and 22 years. On the whole, as far as Sikkim is concerned, both boys and girls seem to oblige the legal age marriage, the average age at marriage being 25 years for boys and 22 years for girls. However, 18 percent boys and nearly 12 percent girls got married below the corresponding specified legal age marriage. The proportion is much higher in the rural areas compared to the urban areas of the state.

When it comes to district level variation in mean age at marriage, it is highest in East and North districts, 25 years for boys and in East district, 23 years for girls. The lowest mean age at marriage for boys is 23 years in South district and for girls is 20 years, recorded for South and West districts.

It is also found that, the percentage of girls who were married below the legal age at marriage was the highest in South district (32 percent) and the lowest in East (9 percent). In the case of boys, marriages below the legal age at marriage are the highest in West district (29 percent) and lowest in South district (5 percent).

2.6 Morbidity Rates

The DLHS-RCH has collected information on the morbidity status relating to blindness, tuberculosis and malaria of the *de jure* members of the household. Table 2.6 provides prevalence rates.

Table 2.6 MORBIDITY RATES			
Prevalence of blindness, tuberculosis, and malaria, according to place of residence, Sikkim, 2002-04.			
Morbidity	Total	Residence	
		Rural	Urban
Prevalence rate of blindness			
Male			
Partial	3,732	3147	7,670
Complete	393	430	217
Night blindness	281	301	145
Female			
Partial	3,596	2,898	8,120
Complete	337	365	150
Night blindness	347	377	150
Persons			
Partial	3,666	3,027	7,894
Complete	366	398	184
Night blindness	313	338	111
Prevalence rate of tuberculosis			
Male	645	569	1,086
Female	654	525	1,504
Person	649	553	1,291
Prevalence rate of malaria ¹			
Male	265	304	74
Female	249	276	76
Person	262	290	37

Note: All the rates refer to *de jure* population. Prevalence rate per 100,000 population
Reference period: - January 1st, 1999 to survey date for phase-1, and January 1st, 2001 to survey date for phase-2. ¹ Last two weeks prior to the survey

Partial, Complete and Night Blindness

The overall prevalence of partial blindness is 3,666 per 100,000 population in the state and is higher in urban areas (7,894 per 100,000) than in rural areas (3,027 per 100,000). It is more among males. The prevalence of complete blindness is 366 per 100,000 populations with a rural-urban differential of 398 against 184 per 100,000. Complete blindness is reported more among males than females. The prevalence of night blindness due to vitamin A deficiency is 313 per 100,000 population, and in rural areas it is 338 while in urban areas it is 111.

Tuberculosis

The prevalence of tuberculosis is 649 per 100,000 population, with urban areas having a higher prevalence of 1,291 compared to 553 per 100,000 in rural areas. The prevalence of TB is a little higher among females (654 per 100,000) than among males (645 per 100,000).

Malaria

In the DLHS-RCH, household respondents were asked to state whether any member of their household suffered from malaria (characterized by recurrent fever with shivering) any time during the two weeks prior the survey. In the state of Sikkim, 262 persons per 100,000 population were reported to have suffered from malaria. Rural residents reported a much higher incidence of malaria than urban areas. The prevalence rate in rural areas is (290 per 100,000) than urban residents (37 per 100,000).

2.7 Morbidity Rates by Districts

Table 2.7 shows the prevalence of blindness, tuberculosis and malaria in the districts of Sikkim. The prevalence of partial blindness varies considerably among the districts the lowest being 258 per 100,000 in West district and the highest, 6,354 per 100,000 in East district.

Table 2.7 MORBIDITY RATES BY DISTRICTS				
Prevalence of blindness, tuberculosis, and malaria, by district, Sikkim, 2002-04.				
District	Prevalence ¹ of morbidity			
	Partial blindness	Complete blindness	Tuberculosis	Malaria ²
East	6,354	153	1,050	149
North	1,426	765	302	138
South	794	646	152	705
West	258	108	162	111
Sikkim	3,666	366	649	262

Note: All the rates refer to *de jure* population.¹ Prevalence rate per 100,000 population
Reference period: - January 1st, 1999 to survey date for phase-1, and January 1st, 2001 to survey date for phase-2. ² Last two weeks prior to the survey

The district with a prevalence rate below 1,000 per 100,000 is South and West districts. The prevalence rate of complete blindness ranges from 108 per 100,000 in West district to 765 per 100,000 in North district. Inter-district variations are substantial for tuberculosis and malaria.

The prevalence rate of tuberculosis is the highest in district Est district (1,050 per 100,000 population) and it is lowest in South district (152 per 100,000). In the case of malaria, the prevalence rate is highest in South district (705 per 100,000) and lowest in West district (111 per 100,000).

2.8 Housing Characteristics

This section describes the availability of basic amenities in the state. Table 2.8 presents the percent distribution of households by selected housing characteristics. Eighty eight percent of the households in Sikkim have electricity connection and it is much more in urban areas (94 percent) than in rural areas (87 percent).

As regards household source of drinking water about 80 percent of the households get drinking water through taps, while less than one percent drink water from hand pumps/ bore-wells, and less than one percent drink water from wells. About 96 percent of households in urban areas get piped water for drinking, whereas in rural areas only 78 percent of the households have such provision.

When it comes to sanitation facility, only 32 percent of the households have flush toilets, while 42 percent have pit based toilets or latrines, 10 percent depend on shared toilets and nearly 15 percent of the households have no toilet facility at all. There is a large rural-urban difference; 16 percent of rural households have no toilet facility, compared to just 6 percent of urban households.

DLHS-RCH has also collected data on type of fuel used in the households for cooking. Thirty three percent of the households used liquid petroleum/gas or electricity for cooking in Sikkim. About 55 percent of households rely on fire woods, 7 percent on kerosene, and almost a negligible proportion of households (0.1 percent) use other types of fuel for cooking. The use of liquid petroleum gas/electricity for cooking is reported more in urban areas (83 percent), and firewood as source for cooking are reported more in rural areas (62 percent).

There is considerable variation in the quality of housing. On the basis of building material, type of floor, walls and roof, households are categorised into *kachcha*, semi-*pucca* and *pucca*. Twenty-five percent of the households are living in *kachcha* houses, 46 percent in semi *pucca* houses and 29 percent in *pucca* houses. Sixty-nine percent of urban households live in *pucca* houses compared to 23 percent of rural households.

The possession of consumer durable goods is an indication of a household's socio-economic status. Table 2.8 shows that majority of the households in the state own radio/transistor (53 percent), telephone (26 percent), bicycles (2 percent), an electric fan (12 percent), and television (53 percent).

Table 2.8 HOUSING CHARACTERISTICS			
Percent distribution of the household by housing characteristics and percentage of households owing selected durable goods, according to residence, Sikkim, 2002-04			
Housing characteristic	Total	Residence	
		Rural	Urban
Electricity			
Yes	88.2	87.4	94.1
No	11.7	12.6	5.9
Source of drinking water			
Tap inside	50.9	49.8	58.8
Tap shared public	29.1	28.0	36.9
Hand pump/ bore well	0.3	0.2	0.9
Well covered	0.2	0.3	0.0
Well uncovered	0.5	0.5	0.0
River	0.5	0.5	0.6
Pond	1.4	1.5	0.3
Spring	16.1	18.2	1.2
Other	0.9	0.9	1.3
Sanitation facility			
Own flush toilet	32.3	29.8	49.8
Own pit toilet / latrine	42.0	45.5	16.5
Shared toilet of any type	10.4	8.4	24.6
Public / community toilet	0.6	0.3	3.2
No toilet facility	14.7	15.9	5.9
Main type of fuel used for cooking			
Liquid petroleum gas/ electricity	38.0	31.7	82.7
Kerosene	6.8	6.4	10.2
Wood	55.0	61.8	7.0
Other	0.1	0.2	0.0
Type of house			
Kachcha	25.0	26.6	13.3
Semi - pucca	45.9	49.9	17.8
Pucca	29.0	23.4	68.9
Household assets			
Fan	11.6	8.9	31.4
Radio/transistor	53.1	51.6	63.6
Sewing machine	4.7	3.9	11.1
Television	53.0	48.8	82.5
Telephone	25.9	21.8	54.6
Bicycle	1.9	1.6	4.1
Motor cycle/ scooter	3.3	2.8	6.6
Car / Jeep	5.8	4.3	16.2
Tractor	0.0	0.0	0.1
Standard of living index			
Low	34.2	37.7	9.2
Medium	44.2	45.3	36.8
High	21.6	17.0	54.1
Number of households	4,214	3,693	522

Other durable goods found in the surveyed households are sewing machine (5 percent), and motorcycle or scooter (3 percent). Car/jeep is owned by six percent of households in Sikkim. Ownership of most of the consumer durable items is more among the urban households than among the rural households.

Considering household amenities, such as, source of drinking water, type of house, source of lighting, fuel for cooking, toilet facility and ownership of durable goods a composite measure, standard of living index (SLI) is made for classification of households. The standard of living index is calculated as by adding the following scores;

Source of drinking water: 3 for Tap (own), 2 for Tap (shared), 1 for hand pump and well, and 0 for other;

Type of house: 4 for *pucca*, 2 for *semi-pucca*, and 0 for *kachcha*;

Source of lighting: 2 for electricity, 1 for kerosene, and 0 for other;

Fuel for cooking: 2 for LPG gas/electricity, 1 for kerosene and 0 for other;

Toilet facility: 4 for own flush toilet, 2 for own pit toilet, 2 for shared toilet and 0 for no toilet;

Ownership for items: 4 each for car and tractor, 3 each for television, telephone and motorcycle/scooter, and 2 each for fan, radio/transistor, sewing machine and bicycle.

The total of the scores may vary from the lowest of a 0 to maximum of 40. On the basis of total score, households are divided into three categories as;

- a) Low – if total score is less than or equal to 9,
- b) Medium – if total score is greater than 9 but less than or equal to 19 and
- c) High – if total score is greater than 19.

As per the standard of living index, thirty-four percent of the households come under the low standard of living category, 44 percent of households to medium standard of living, and 22 percent of the households to high standard of living.

The proportion of sample households with high standard of living is comparatively higher in urban areas than in rural areas, and the proportion of households with medium and low standard of living is much higher in rural households (45 and 38 percent) than in urban households (37 and 9 percent) respectively, in the state of Sikkim.

2.9 Housing Characteristics by Districts

The 4 districts in Sikkim are not uniform in terms of basic amenities and possession of consumer durables. Table 2.9 presents an inter-district comparison of housing characteristics. The percentage of households with electricity is 77 percent in the South district. The household with electricity is highest in East district (95 percent). Eighty-one percent or more of households used piped water or water from a hand pump for drinking in the state of Sikkim and the district wise percentage of the same is - East (92 percent), West (90 percent), South (64 percent) and North (50 percent).

Largely the districts in Sikkim have adequate toilet facility; in West district 75 percent households have toilet facilities, which is the lowest among all districts.

In North district the percentage of households using liquid petroleum gas/electricity for cooking is 13 percent which is the lowest, and the highest is 60 percent in East district. The

percentage of households living in *pucca* houses is quite low in all the districts of Sikkim. In East district 49 percent people live in *pucca* houses, which the highest in Sikkim. In West district (13 percent), North (14 percent) and South (19 percent) people live in *pucca* houses.

Table 2.9 HOUSING CHARACTERISTICS BY DISTRICT					
Selected housing characteristics by district, Sikkim, 2002-04					
Districts	Percentage of households:				
	With electricity	With drinking water ¹	With toilet facility	Using Liquid petroleum gas/ electricity	Living in <i>pucca</i> house
East	95.0	91.5	89.4	59.9	48.8
North	84.1	50.2	78.4	13.4	14.1
South	76.5	64.2	90.4	23.2	18.9
West	90.2	89.6	74.8	26.2	13.3
Sikkim	88.2	80.6	85.3	38.0	29.0

Note¹ That is piped or from a hand pump/bore well

2.10 Iodization of Salt

Consumption of salt fortified with iodine is recommended to avoid miscarriages, brain disorders, cretinism and retarded psychomotor development. As per the Prevention of Food Adulteration Act, 1988, the minimum iodine content of edible salt is 30 parts per million (PPM) at the manufacturing level.

In the DLHS-RCH survey, each interviewer was provided with a test kit to measure the level of iodine content of salt consumed by the surveyed households. The test results (Table 2.10) are classified by degree of ionization of salt and categorised by background characteristics. It is observed that nearly 61 percent of households used salt that contained a minimum recommended 15 ppm or higher level of iodine content whereas 11 percent of households used salt that is not iodized at all and another 25 percent used salt, which was inadequately iodized.

In rural areas, 11 percent of households against 2 percent in urban areas used non-iodized salts. Percentage of households using inadequately iodized salt in rural areas is higher compared to that in urban areas. Number of households using non-iodized or inadequately iodized salt is closely associated with the educational level of the household head. Nearly 81 percent of households headed by persons who had more than 10 years of schooling reported the use of adequately iodized salts. Consumption of adequately iodised salt among households of scheduled caste is 67 percent, followed by 64 percent in other backward class households and among other caste and scheduled tribe it is 62 percent and 55 percent of households.

Table 2.10 IODIZATION OF SALT

Percent distribution of household heads by degree of iodisation of salt, according to selected background characteristics, Sikkim, 2002-04

Background characteristic	Not iodised	7ppm	15+ppm	Other ¹	Total percent	Number of households
Place of Residence						
Rural	11.4	27.7	56.6	4.3	100.0	3,693
Urban	2.2	5.3	91.1	1.4	100.0	522
Education of the household heads						
Non-literate	22.0	37.1	36.7	4.2	100.0	758
0-9@ years	10.6	26.7	58.6	4.1	100.0	2,282
10 and above	2.1	13.6	80.8	3.5	100.0	1,174
Religion of household head						
Hindu	9.9	24.7	61.0	4.3	100.0	2,732
Muslim	1.0	13.5	83.2	2.3	100.0	60
Christian	9.1	18.7	70.9	1.4	100.0	252
Buddhist	11.6	27.6	57.1	3.7	100.0	1,144
Other	(23.1)	(19.2)	(46.2)	(11.5)	(100.0)	23
Caste/tribe of the household head#						
Scheduled caste	9.8	21.7	67.0	1.5	100.0	267
Scheduled tribe	15.5	27.4	54.5	2.6	100.0	1,229
Other backward class	6.9	24.4	63.9	4.8	100.0	1,755
Other	9.9	23.5	61.7	5.0	100.0	921
Standard of living index						
Low	21.3	40.5	31.7	6.4	100.0	1,440
Medium	6.1	21.0	69.8	3.1	100.0	1,863
High	1.2	8.3	88.6	1.9	100.0	912
High	10.3	24.9	60.9	4.0	100.0	4,214
Total						

Note:Ppm: Parts per million Note: Table includes 2 household heads with missing information on religion who are not shown separately. @ Literate persons with no years of schooling are also included. # Total number of cases may not add upto N due to do not know and missing cases. ¹ Includes salt not at home, salt not tested, refused and missing cases.
 () Based on less than 50 unweighted cases

Differential in the consumption of properly iodized salt is more pronounced when analysed by religion of the household head and standard of living index. Percentage of households using adequately iodized salt is only 57 percent among Buddhist households, whereas the corresponding figures for Hindu, Muslim and Christian households are 61 percent, 83 percent and 71 percent respectively. Again, households with low standard of living are more likely to use non-iodized or inadequately iodized salt compared to households with medium or high standard of living index. While 21 percent of households with low standard of living used non-iodized salt, 1 percent households with a high standard of living fall in this category. The number of households with a high standard of living using adequately iodized salt is higher than those with a low standard of living (89 percent and 32 percent).

2.11 Iodization of Salt by Districts

Table 2.11 shows district level variation in the percent distribution of households by level of iodization of salt used in the households. East district has the lowest proportion of households (3 percent) using non-iodized salt, whereas West district has the highest proportion of households (23 percent) using non-iodized salt. Percentage of households using inadequately iodized salt is the highest (43 percent) in West district and the lowest in East district (14 percent). Around 61 percent of the households in the state used adequately iodized salt, the highest being in the East district (83 percent). In South district 52 percent and in North district 42 percent of the households were using adequately iodized salt (see Map-2).

District	Not idoized	7ppm	15+ppm	Other ¹
East	3.1	13.9	82.6	0.4
North	19.4	27.5	41.6	11.5
South	8.7	27.1	52.3	12.0
West	22.5	42.5	34.9	0.0
Sikkim	10.3	24.9	60.9	4.0

Note:Ppm: Parts per million. ¹ Includes salt not at home, salt not tested, refused and missing cases

2.12 Availability of Facility and Services to the Rural Population

The DLHS-RCH collected information about surveyed village from knowledgeable persons such as, the 'Sarpanch' or 'Pradhan', (village head) or other village officials or other persons including 'teacher' in the villages on health and educational facilities and other services available in the village. One important aspect was on the distance of the village, if not available within the village, from various types of education facilities, including primary school, middle school, secondary school, higher secondary school, college, *Gurujee* scheme and 'Madarsa'. Further information on the distance of the village, if not available within the village, from various types of health facility, including sub-centres, primary health centres (PHCs), community health centres/ Rural Hospitals (CHCs/RHs), Government dispensary, hospital, private clinic or hospitals and health facilities of Indian system of Medicine (ISM).

Table 2.12 gives the distance of surveyed villages from an education facility. The unit of analysis is usual residents of rural population. Majority of the rural residents (90 percent) (the *de jure* rural population) in the state live in villages that have a primary school, 71 percent live in villages with middle school and 45 percent of the rural population live in villages with secondary schools. Higher secondary schools are available for 19 percent of the rural population. Less than one percent of the rural population live in villages, which have Madarassas. None of the surveyed villages have a college. As regards the distribution of educational institutions within 5 kilometres distance from of the village, it can be seen that, 15 percent of the villages have middle school, 21 percent have secondary school, and 17 percent have higher secondary school. For 88 percent of the villages, the college is more than 10 kilometres away.

Table 2.12 DISTANCE FROM THE NEAREST EDUCATION FACILITY						
Percent distribution of rural household population by distance from the nearest education facility, Sikkim, 2002-04						
Education facility	Within village	Distance from the village:			Don't know/missing	Total percent
		< 5 km	5-9 km	10+ km		
Primary School	90.3	8.9	0.0	0.8	0.0	100.0
Middle School	71.2	14.6	8.1	6.1	0.0	100.0
Secondary School	44.8	20.6	16.4	18.2	0.0	100.0
Higher Secondary School	18.9	16.7	19.4	44.8	0.1	100.0
College	0.0	3.0	4.5	87.6	4.9	100.0
Gurujee Scheme	0.0	0.0	0.0	0.0	100.0	100.0
Madarsa	0.6	0.0	0.0	0.0	99.4	100.0

Note: Table based on rural *de jure* population

Table 2.13 DISTANCE FROM THE NEAREST HEALTH FACILITY						
Percent distribution of rural household population by distance from the nearest health facility, Sikkim, 2002-04						
Health facility	Within village	Distance from the village:			Don't know/missing	Total percent
		< 5 km	5-9 km	10+ km		
Rural household population						
Sub-centre	52.7	24.9	11.5	10.8	0.0	100.0
Primary health centre	20.8	21.1	20.5	37.6	0.0	100.0
Either sub-centre or PHC	61.5	26.3	9.1	3.1	0.0	100.0
Community health centre/Referral hospital	0.0	8.4	10.1	80.5	1.0	100.0
Government dispensary	2.2	9.4	10.5	77.9	0.1	100.0
Government hospital	0.6	9.4	10.3	78.5	1.2	100.0
Private clinic	0.0	7.1	11.6	79.6	1.7	100.0
Private hospital	0.0	7.1	7.9	83.5	1.6	100.0
ISM health facility	0.8	10.0	4.7	53.2	31.3	100.0

Note: Table based on rural *de jure* population

Table 2.13 summarises the availability of health facilities within the surveyed villages and provides information on the distance between the villages and the nearest health facility. About 53 percent of the rural population live in villages with Sub-centres. Only 21 percent of the rural household population live in a village with a primary health centre, though the proportion of villages having facilities of either Sub-centre or primary health centre is 62 percent. The proportion of rural population with other health facilities is nil percent for CHCs/RHs, 0.6 percent for Government dispensary. Less than one percent villages have Government hospitals and facility for Indian System of Medicine. Whereas facility for private clinics and private hospitals has not been reported by any village.

Table 2.14 AVAILABILITY OF SERVICES	
Percentage of rural residents living in villages that have selected services, Sikkim, 2002-04	
Services	Percentage of rural residents
Anganwadi center	94.0
Anganwadi worker	87.6
Private doctor	7.1
Visiting doctor	34.1
Homeopathic doctor	2.4
Village health guide	23.6
Trained birth attendant	39.1
Traditional healer	45.0
Dai	40.3

Note: Table based on rural de jure population

The proportion of rural population located within a distance of 5 kilometres from health facilities are 25 percent for sub-centres, 21 percent for primary health centres, 26 percent for CHCs/RHs. 9 percent for a Government dispensary, 9 percent for Government hospitals, 7 percent for private clinic, 7 percent for private hospitals and 10 percent for ISM health facilities. Distance of particular health facilities is beyond 10 kilometres from surveyed villages in the case of Government hospitals (79 percent) and for private hospitals, (84 percent).

Table 2.14 shows the proportion of rural residents in the state that live in the villages with various health services. Almost 94 percent of rural residents live in villages that have an *anganwadi*, (a nursery school for children age 3-6 years) and at the same time 88 percent of rural households live in villages with *anganwadi* workers (*Anganwadi* workers provide integrated child development services) are available.

About seven percent of the rural residents live in villages that have a private doctor, 34 percent live in villages with a visiting doctor, 2 percent with a homeopathy doctor, 24 percent with a village health guide, 39 percent with a trained birth attendant and 45 percent with a traditional healer. About forty percent of the rural residents live in villages that have a Dai (Dai provides the services for the delivery).

2.13 Availability of Education Facility and Health Services by Districts

Table 2.15 shows the availability of education and health facilities for the rural population within the surveyed villages by districts in Sikkim. In all the districts, the rural population have access to primary schools. In the state of Sikkim, 93 percent of the rural population live in villages having primary schools. Around 53 percent of the rural population in the state have sub-centres within the village, with the highest coverage of 59 percent in South district and the lowest of 31 percent of the population in North district.

There is no PHCs within the villages in East district. Highest availability of PHCs within the village is found in West district (52 percent). In, West district 77 percent of the households in the rural area (highest in the area) have access to at least one government health facility including sub-centre, primary health centre, community health centre or referral hospital, government hospital and government dispensary within the village.

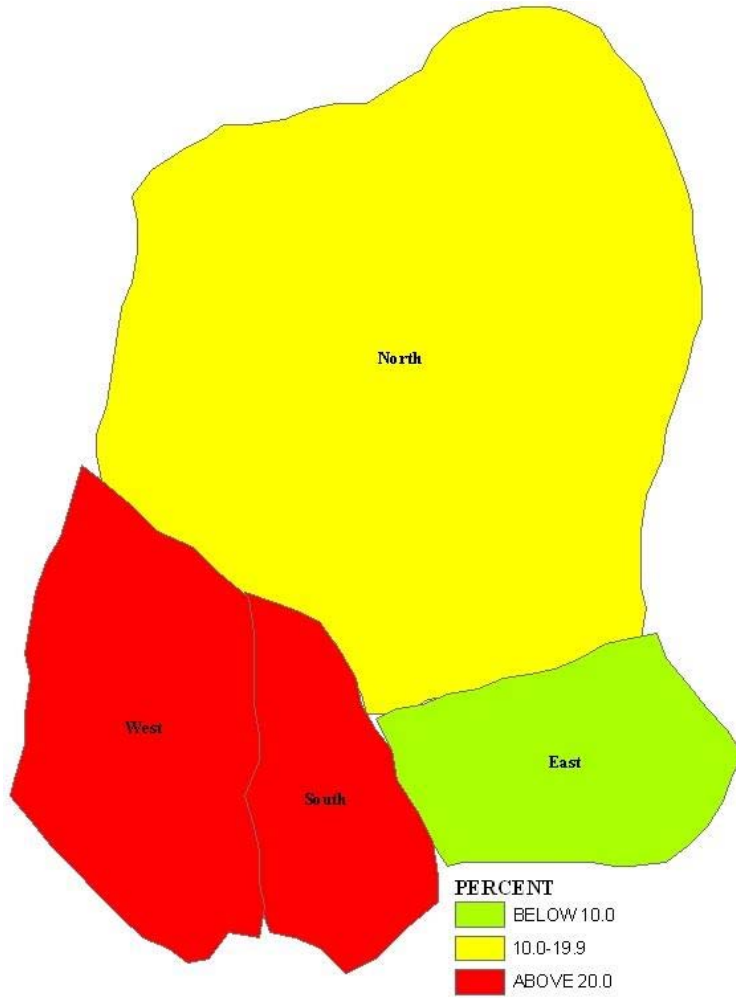
Table 2.15 AVAILABILITY OF FACILITY AND SERVICES BY DISTRICT							
Selected facility and services of rural household population within village by district, Sikkim, 2002-04							
Districts	Percentage of rural household population with:						
	Primary or middle school	Sub-centre	PHCs	Any government health facility ¹	Doctor ²	TBA ³	Anganwadi worker
East	85.8	55.1	0.0	55.1	7.2	22.3	93.0
North	93.7	31.3	13.9	44.5	0.0	34.8	60.3
South	100.0	58.8	21.3	61.9	37.8	38.2	73.5
West	97.0	51.6	54.0	76.6	97.7	66.6	100.0
Sikkim	92.7	52.7	20.8	61.5	38.1	39.1	87.6

Note:¹ Includes sub-center, primary health center, community health center or referral hospital, government hospital, and government dispensary within the village ² Either private or visiting doctor ³ Trained birth attendant

Around 98 percent of the rural population are visited either by private or by visiting doctors in the surveyed villages of West district, whereas no households can be classified in this category in North district. Highest numbers of rural population (67 percent) are attended by trained birth assistants in West district, while only 22 percent of rural population, availed themselves of such a provision in East district. A visit by anganwadi workers to rural households is highest (100 percent) in West district and the lowest in North district (60 percent).

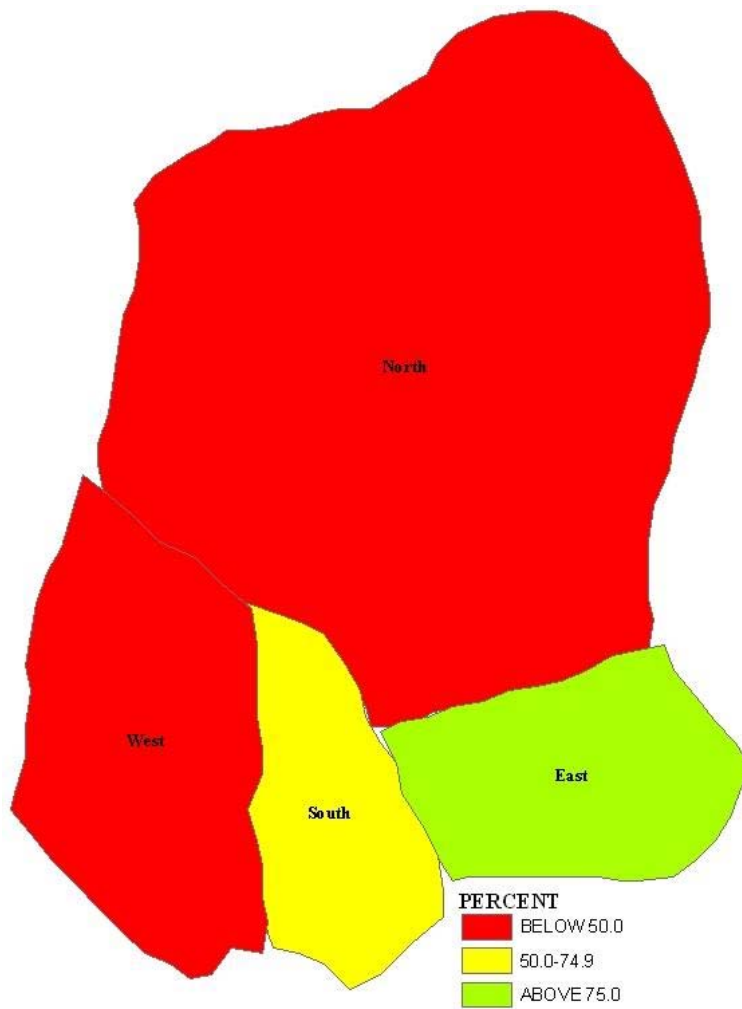
Map – 1

Percent Girl Marrying Below Legal Age at Marriage



MAP-2

Percentage of Households Using Salt that Contains 15 ppm Level of Iodine



CHAPTER III

CHARACTERISTICS OF WOMEN, HUSBANDS AND FERTILITY

The Reproductive and Child Health (RCH) programme is targeted towards the underprivileged section of the population, particularly, women and children. The utilization of RCH services provided across the country depends to a large extent on the characteristics of women, their husbands and episodes of pregnancies, miscarriages, abortions, number of children born to them and survival status of children. Age of women, marital duration, educational attainment, social background and living standard are important factors, which influence reproductive and child health. With this in view, the DLHS-RCH data were collected on demographic characteristics, such as current age, age at consummation of marriage and number of pregnancies, live births and surviving children from eligible women respondents of selected representative households. Information regarding household background characteristics was collected using a separate household questionnaire that covered religion and caste of head of household, type of house, source of drinking water and possession of consumer durables. Fertility preference of women in terms of timing and desire for additional children in comparison to the number of living children provides information on the need for reproductive and child health services.

This chapter provides a comprehensive outline of distribution of currently married women by present age, age at consummation of marriage, duration of marriage, complete years of schooling, pregnancy episodes, children ever born and children surviving, along with social and economic characteristics of households the women represent.

3.1 Background Characteristics of Women

The percent distribution of currently married women in the reproductive age group 15-44 years by residence, religion and caste of head of household, economic standard of household and other demographic characteristics are shown in Table 3.1. A sample of 4,039 eligible women represents the state of Sikkim in DLHS-RCH and 3,534 of these women are drawn from rural areas. About 46 percent of the currently married women are in the age range of 20-34 years and a similar age distribution is observed both for urban and rural areas. Age at consummation of marriage, particularly in rural areas is found to be 30 percent whereas in urban area it is 32 percent of the women having cohabited before 18 years of age, while it is 30 percent in the state. Looking at the distribution of marital duration it is noted that about 32 percent of the women across the state are married for more than 15 years.

Among the sample 4,039 representative women in Sikkim, Hindus, Christians and Muslims constitute 66 percent, 6 percent and 1 percent respectively. Whereas those belonging to Buddhist religion comprise of 27 percent people. Hindu women are found in urban areas and rural areas is the same (66 percent). Twenty-eight percent women in rural areas and 20 percent in urban areas are Buddhist. The presence of women belonging to other religious groups is insignificant in proportional and absolute terms. Seven percent of the women belong to scheduled castes, 29 percent to scheduled tribes and 42 percent to other backward classes. Majority of the sample women (22 percent) belong to a general caste other than scheduled caste/tribe and other backward class. In rural areas, there are more women belonging to

scheduled tribe and other backward classes than in urban areas, while more women from scheduled caste and other castes are found in urban areas. There is a clear rural-urban differential in the educational attainment of women. For the state of Sikkim, 26 percent of women are non-literate and women of this literacy category constitute 28 percent in rural areas, while it is just 13 percent in urban areas.

Table 3.1 BACKGROUND CHARACTERISTICS OF ELIGIBLE WOMEN			
Percent distribution of currently married women aged 15-44 by selected background characteristics, according to residence, Sikkim, 2002-04			
Background characteristic	Total	Residence	
		Rural	Urban
Age group			
15-19	3.6	3.6	3.6
20-24	18.4	18.7	16.1
25-29	25.6	26.1	22.2
30-34	20.6	20.0	24.8
35-39	17.7	17.3	19.9
40-44	14.3	14.4	13.5
Age at consummation of marriage			
Below 18 years	30.4	30.1	32.4
18 years & above	69.6	69.9	67.6
Marital duration			
0-4	21.2	21.5	18.9
5-9	25.1	24.9	26.6
10-14	21.4	21.6	19.9
15+	32.4	32.0	34.7
Religion			
Hindu	65.5	65.5	65.5
Muslim	1.4	0.8	5.7
Christian	5.8	5.5	7.7
Sikh	0.2	0.2	0.0
Buddhist	26.8	27.7	20.4
Jain	0.1	0.1	0.0
Other	0.2	0.1	0.7
Caste/tribe			
Scheduled caste	6.6	5.9	11.3
Scheduled tribe	28.6	29.1	24.7
Other backward class	41.6	43.0	32.2
Other #	22.2	21.1	30.1
Don't know	1.0	0.9	1.8
Education (Years of schooling)			
Non-literate	26.1	28.0	12.8
0-9@ years	54.3	54.7	51.1
10 years & above	19.6	17.2	36.0
Missing	0.0	0.0	0.0
Husband's education (Years of schooling)			
Non-literate	12.3	13.4	4.3
0-9@ years	55.0	56.2	47.0
10 years & above	32.4	30.2	48.3
Don't know	0.2	0.2	0.3
Missing	0.0	0.1	0.0
Standard of living index			
Low	34.0	37.6	9.2
Medium	44.4	45.5	37.0
High	21.6	17.0	53.7
Number of women	4,039	3,534	505

Note:# Not belonging to a scheduled caste, scheduled tribe and other backward classes. @ Literate persons with no year of schooling are included.

Fifty-four percent of women across the state have completed 0-9 years of schooling. Only 17 percent of rural women have completed 10 or more years of schooling compared to 36 percent for urban women. Men are more literate than their spouses. In Sikkim, 12 percent of the husbands of eligible women are non-literate and the corresponding figures are 13 percent in rural areas and 4 percent in urban areas. The DLHS-RCH, includes data on materials used for floor, walls and roofs of the housing structure along with status of possession of a list of durables and these are utilized to construct a composite index of household standard of living. Households are further classified as those with low, medium and high standard of living. Thirty-four percent of women in the state live in low standard of living households and this is 38 percent in rural areas and 9 percent in urban areas. Majority of women across the state live in households categorised as medium standard of living. In urban areas, 54 percent of women belong to high standard of living households and the corresponding figure is just 17 percent in rural areas.

3.2 Educational Level of Women

Table 3.2 provides details of educational level of eligible women in terms of classification by years of schooling, and selected background characteristics, such as, place of residence, religion, and caste and husbands' education. As regards distribution of non-literate women, it is observed that a lesser proportion of younger women below 30 years of age are non-literate compared to older women above 30 years. This age divide remains true even among literate women. A distinct pattern of educational attainment of women is that maximum of them attended schooling either for 1-5 years or 6-8 years and not many had 11 or more years of schooling. For the women in the age group 15-19 years, 22 percent and 35 percent of them had 1-5 years and 6-8 years of schooling, while only 3 percent had 11 or more years of schooling. Among the senior women in the age group 40-44 years, distribution by year of schooling is more or less uniform with 14 percent of them having attended school for 1-5 and 10 percent, 8 percent and 5 percent of them having attended school for 6-8, 9-10 and 11 or more years of schooling.

There is a significant rural-urban differential in the level of education of women in Sikkim. About 28 percent of rural eligible women are non-literate and 22 percent, 22 percent, 17 percent and 7 percent of the women have 1-5, 6-8, 9-10 and 11 or more years of schooling. The corresponding figures in urban areas are 13 percent non-literate and 15 percent, 22 percent each in the other categories. More Buddhist women (29 percent) are non-literate compared to Hindu women (26 percent), Christian women (18 percent) and women belonging to other religious communities (30 percent). For literate eligible women from all religious communities, maximum of them have either 1-5 or 6-8 years of schooling. The proportion of Hindu women with 1-5 years of schooling is 21 percent and it is the same is for Christian women, 20 percent for Buddhist women and 27 percent for women from other religions. Among the literate Hindu and Buddhist women 9 percent each, of them have 11 or more years of schooling, while 14 percent of literate Christian women have attained this level of education.

The uneven level of educational attainment by caste can be noted from the recorded proportion of non-literate women among scheduled caste (27 percent), scheduled tribe (30 percent), other backward class (23 percent) and other caste or tribe (28 percent). The literate women belonging to different castes or tribes are concentrated more in the range of 1-5 to 6-8 and 9-10 years of schooling. The husband's education is an important characteristic, which has

strong association with the education of eligible women. As many as 82 percent of women whose husbands are non-literate are also non-literate, while only 2 percent of women whose husbands have 11 or more or years of schooling are non-literate. Thirty eight percent of literate women educated for 11 or more years of schooling have husbands who have the same level of education.

Table 3.2 LEVEL OF EDUCATION OF ELIGIBLE WOMEN								
Percent distribution of currently married women aged 15-44 by years of schooling, according to selected background characteristics, Sikkim, 2002-04								
Background characteristic	Non-literate	Literate but no schooling	Years of schooling				Total percent	Number of women
			1-5 years	6-8 years	9-10 years	11 or more years		
Age group								
15-19	20.6	4.5	22.0	35.2	14.8	2.8	100.0	144
20-24	13.7	3.1	25.6	34.2	18.8	4.5	100.0	741
25-29	18.0	3.1	21.4	24.0	20.0	13.5	100.0	1,034
30-34	23.7	6.6	21.9	18.7	17.5	11.6	100.0	831
35-39	34.7	5.6	18.6	15.4	17.4	8.3	100.0	713
40-44	51.1	11.2	13.7	10.3	8.4	5.2	100.0	576
Place of residence								
Rural	28.0	5.4	21.5	21.7	16.2	7.2	100.0	3,534
Urban	12.8	6.3	15.2	21.7	22.2	21.7	100.0	505
Religion								
Hindu	25.6	6.3	20.7	22.3	16.6	8.5	100.0	2,646
Christian	17.9	3.9	21.4	24.9	17.8	14.3	100.0	232
Buddhist	29.1	4.3	20.0	19.9	17.6	9.2	100.0	1,081
Other	30.3	0.0	27.4	16.6	19.1	6.5	100.0	79
Caste/tribe #								
Scheduled caste	27.2	7.6	20.0	20.6	14.2	10.4	100.0	267
Scheduled tribe	29.8	4.0	16.8	21.4	17.6	10.4	100.0	1,154
Other backward class	22.7	8.1	22.3	22.1	16.4	8.4	100.0	1,681
Other	27.5	2.0	22.4	22.0	18.0	8.1	100.0	897
Husband's education								
Non-literate	82.0	2.8	10.3	3.6	0.9	0.4	100.0	496
Literate but no schooling	38.4	34.9	16.2	5.2	2.7	2.6	100.0	190
1-5 years	38.2	9.8	30.7	15.7	5.0	0.5	100.0	824
6-8 years	19.0	4.3	33.6	29.1	11.4	2.5	100.0	942
9-10 years	7.3	1.5	16.8	37.3	31.0	6.2	100.0	852
11 or more years	2.0	0.5	5.7	17.6	36.1	38.1	100.0	725
Total	26.1	5.5	20.7	21.7	17.0	9.0	100.0	4,039
Note:# Total number may not add upto N due to don't know and missing cases. Table includes 10 missing / do not know cases on husband's education were not shown separately.								

3.3 Background Characteristics of Husbands of Eligible Women

In DLHS-RCH husbands of eligible women were also interviewed. The response rate for husbands is relatively low compared to that of eligible women. Selected background characteristics of husbands are shown in Table 3.3. Across the state of Sikkim, husbands are mostly in the age group 25-34 years. Fewer husbands are less than 25 years old. In Sikkim, 64 percent of the husbands are Hindus, 6 percent are Christians and 28 percent are Buddhist, whereas the presence of other religious groups is insignificant. Thirty percent of husbands in the

state belong to the scheduled tribe and it is same in rural areas (30 percent) and in urban areas it is (26 percent). Nearly 41 percent of the husbands belong to other backward classes. In urban areas husbands from other castes constitute 27 percent, while it is 21 percent rural areas. As regards educational characteristics of the husbands of surveyed eligible women, 56 percent of them have completed 0-9 years of schooling and the proportion of non-literate husband ranges from 5 percent in urban areas to 13 percent in rural areas, while the overall state figure is 12 percent.

Table 3.3 BACKGROUND CHARACTERISTICS OF MEN			
Percent distribution of husband of eligible women by selected background characteristics, according to residence, Sikkim, 2002-04			
Background characteristic	Total	Residence	
		Rural	Urban
Age group			
< 25	7.5	7.4	8.1
25-34	38.5	38.9	35.5
35-44	35.5	35.4	36.1
45 +	18.5	18.2	20.3
Religion			
Hindu	64.4	64.4	64.3
Muslim	1.4	0.9	5.1
Christian	6.1	5.7	8.8
Sikh	0.1	0.2	0.1
Buddhist	27.7	28.6	21.3
Jain	0.1	0.1	0.0
Other	0.2	0.1	0.4
Caste/tribe			
Scheduled caste	7.4	6.5	14.2
Scheduled tribe	29.5	29.9	26.4
Other backward class	40.8	42.2	31.0
Other #	21.2	20.5	26.6
Don't know	1.0	0.9	1.8
Education (Years of schooling)			
Non-literate	12.3	13.4	4.8
0-9@ years	55.8	57.0	47.1
10 years & above	31.8	29.5	48.1
Missing	0.0	0.0	0.0
Standard of living index			
Low	33.0	36.3	10.1
Medium	44.6	46.1	34.4
High	22.4	17.7	55.6
Number of living children			
0	9.5	9.4	10.1
1	24.1	23.6	27.9
2	30.9	30.7	31.8
3	17.4	17.5	16.5
4+	18.2	18.8	13.7
Number of Men	3,060	2,678	382

Note:# Not belonging to a scheduled caste, scheduled tribe and other backward class.@ Literate persons with no year of schooling are included.

The proportion of husbands living in households classified as low, medium and high standard of living index are 33 percent, 45 percent and 22 percent respectively. In rural areas, 36 percent of the husbands live in low standard of living households compared to 10 percent in urban areas. This is complementary in the case of husbands living in high standard of living households, 56 percent in urban and 18 percent in rural. In terms of household standard of living composition, those living in medium standard of living dominate in rural areas (46 percent) while in urban Sikkim the corresponding figure is (34 percent). Around 18 percent of husbands across the state reported to have four or more living children. More husbands in urban areas (32 percent) reported to have two living children, while more husbands in rural areas (19 percent) have four or more living children. Above 17 percent of the husbands of urban eligible women have more than three living children and it is 18 percent for husbands of rural eligible women.

3.4 Educational Level of Husbands of Eligible Women

Educational levels in categories of years of schooling classified by age, place of residence, religion and caste/tribe of husbands of eligible women are shown in Table 3.4. The distribution of non-literate husbands across age is more or less uniform, though it is more for husbands above 45 years (23 percent) and other than 35-44 years (12 percent) compared to 7 percent and 13 percent for husbands in the age groups 25-34 years and less than 25 years respectively. Among the literate husbands, irrespective of their age at the time of survey most of them have up to 11 years or more of schooling, 8 percent of those below 25 years and 41 percent of those in the age group 25-44 years of age. As expected less number of husbands (8 percent) below 25 years have 11 or more years of schooling. As in the case of eligible women, 7 percent of Muslim, 12 percent of Hindu and 15 percent of Sikh husbands are non-literate while the corresponding non-literate husbands of other religions is 8 percent. The proportions of husbands of Hindu, Muslim and other religions who have 11 or more years of schooling constitute 18 percent, 24 percent and 18 percent respectively. Most of the literate Muslim husbands (28 percent) have completed 1-5 years of schooling and the corresponding numbers are 20 percent and 32 percent respectively for Hindu and other religions husbands. Educational attainment of husbands of eligible women varies according to the caste/tribe they belong. There are more non-literate husbands belonging to scheduled tribes (15 percent) followed by scheduled caste and other backward classes husbands (11 percent in each). Among the husbands belonging to scheduled castes, 20 percent and 16 percent of them have 11 years or more and 9-10 of schooling respectively. The literacy level of other backward classes is comparable with that of husbands from castes other than scheduled tribe, scheduled caste and other backward classes. Among the husbands belonging to scheduled tribes, 15 percent of them are non-literate and 18 percent of them have 11 or more years of schooling.

Table 3.4 LEVEL OF EDUCATION OF MEN								
Percent distribution of husbands of eligible women by years of schooling, according to selected background characteristics, Sikkim, 2002-04								
Background characteristic	Non-literate	Literate but no schooling	Years of schooling				Total percent	Number of men
			1-5 years	6-8 years	9-10 years	11 or more years		
Age group								
< 25	12.7	2.7	28.3	26.5	22.3	7.5	100.0	230
25-34	7.0	2.7	19.1	26.6	23.9	20.7	100.0	1,178
35-44	12.3	5.0	18.9	24.3	19.0	20.4	100.0	1,087
45 +	23.3	10.2	25.1	16.6	13.2	11.5	100.0	565
Place of residence								
Rural	13.4	4.7	21.6	24.3	19.9	16.1	100.0	2,678
Urban	4.8	6.6	15.3	21.3	21.4	30.6	100.0	382
Religion								
Hindu	11.7	5.3	19.9	24.3	20.7	18.1	100.0	1,970
Muslim	6.9	4.4	27.8	19.7	17.3	23.9	100.0	188
Sikh	15.4	4.1	20.7	24.3	19.5	16.0	100.0	846
Other	7.9	6.5	31.6	19.9	15.7	18.4	100.0	56
Caste/tribe #								
Scheduled caste	10.7	7.6	22.4	23.8	20.0	15.5	100.0	227
Scheduled tribe	14.7	3.6	19.7	25.4	19.0	17.7	100.0	902
Other backward class	11.2	6.2	22.6	24.3	19.5	16.2	100.0	1,249
Other	12.1	2.8	18.5	21.3	23.3	22.0	100.0	650
Total	12.3	4.9	20.8	23.9	20.1	17.9	100.0	3,060

Note: # Total number may not add upto N due to don't know and missing cases.

3.5 Children Ever Born and Surviving

In DLHS-RCH, currently married women in the age group of 15-44 years were asked about the children ever born alive and the number of children surviving. Table 3.5 shows mean children ever born and mean surviving children by selected background characteristics and sex of children. A look at the mean children ever born by age of the women reveals that older women had experience more average live births than younger women. On the average, women in the reproductive age group have given birth to more male children than female children and similar a sex differential is also noted when it comes to mean surviving children, but in both cases the difference is marginal. Completed fertility, that is, mean children ever born to women in the age group 40-44 years is 3.4 for the state of Sikkim and it comprises an average of 1.8 for male and 1.6 for female children. Out of the 3.4 mean children ever born to women in the 40-44 year age group an average of 3.3 children survived. By sex of children, out of 1.8 mean numbers of males, 1.7 survived on the average and the corresponding mean number of females surviving was 1.6 out of 1.6.

Women with longer marital duration have higher mean children ever born. On the average, women who are married for 15 or more years have 3.4 children ever born and on the average 3.3 of them are surviving. There is a clear rural-urban divide in terms of mean children ever born with 2.2 children in rural areas and 2.1 children in urban areas. The mean children ever born to women who are Hindu, Christian, Buddhist and other religions are 2.2, 2.0, 2.2 and 2.7

respectively. The corresponding mean surviving children are respectively 2.2, 1.9, 2.1 and 2.7 for these religious groups. The average children ever born also vary by caste/tribe of the eligible women. For women belonging to scheduled caste, the mean children ever born are 2.4, for the scheduled tribe are 2.3, other backward classes are 2.1 and other castes are 2.2. For all religious groups, the mean number of surviving children is slightly more than 2 shared almost by one surviving male and one surviving female children on the average.

Table 3.5 CHILDREN EVER BORN AND LIVING							
Mean children ever born (CEB) and children surviving (CS) by selected background characteristics of currently married women aged 15-44 years, Sikkim, 2002-04							
Background characteristic	Mean children ever born			Mean children surviving			Number of women
	Total	Male	Female	Total	Male	Female	
Age group (years)							
15-19	0.6	0.3	0.3	0.6	0.3	0.3	144
20-24	1.1	0.6	0.5	1.0	0.6	0.5	741
25-29	1.8	0.9	0.8	1.7	0.9	0.8	1,034
30-34	2.6	1.3	1.2	2.5	1.3	1.2	831
35-39	2.9	1.6	1.4	2.9	1.5	1.4	713
40-44	3.4	1.8	1.6	3.3	1.7	1.6	576
Marital duration							
0-4	0.7	0.4	0.3	0.7	0.4	0.3	855
5-9	1.8	0.9	0.8	1.7	0.9	0.8	1,013
10-14	2.5	1.3	1.2	2.4	1.3	1.1	863
15+	3.4	1.8	1.6	3.3	1.7	1.6	1,307
Residence							
Rural	2.2	1.2	1.1	2.2	1.1	1.0	3,534
Urban	2.1	1.1	1.0	2.0	1.0	0.9	505
Religion							
Hindu	2.2	1.2	1.1	2.2	1.1	1.0	2,646
Christian	2.0	1.1	0.9	1.9	1.1	0.8	232
Buddhist	2.2	1.1	1.0	2.1	1.1	1.0	1,081
Other	2.7	1.6	1.1	2.7	1.6	1.1	79
Caste/tribe #							
Scheduled caste	2.4	1.3	1.1	2.2	1.2	1.0	267
Scheduled tribe	2.3	1.1	1.1	2.2	1.1	1.1	1,154
Other backward class	2.1	1.1	1.0	2.1	1.1	1.0	1,681
Other	2.2	1.2	1.0	2.2	1.2	1.0	897
Education							
Non-literate	3.0	1.6	1.5	3.0	1.5	1.4	1,056
0-9@ years	2.1	1.1	1.0	2.0	1.0	0.9	2,191
10 years & above	1.5	0.8	0.7	1.5	0.8	0.7	791
Standard of living index							
Low	2.5	1.3	1.2	2.4	1.2	1.2	1,374
Medium	2.2	1.2	1.0	2.1	1.1	1.0	1,794
High	1.9	1.0	0.9	1.9	1.0	0.9	870
All women	2.2	1.2	1.0	2.1	1.1	1.0	4,039
Note:# Total number may not add upto N due to don't know and missing cases. @ Literate women with no year of schooling are included.							

The mean children ever born is higher for non-literate women (3.0) than women who have completed 0-9 years of schooling (2.1) and 10 or more years of schooling (1.5). The mean number of surviving children for women corresponding to these educational levels is 3.0, 2.0 and

1.5 respectively. Further the mean children ever born for women classified into low, medium and high standard of living by SLI are 2.5, 2.2 and 1.9 respectively. For the state of Sikkim, the DLHS-RCH shows inverse association between mean children ever born and educational attainment of women and also the level of household economic comfort.

3.6 Completed Fertility by District

The level of completed fertility as measured by mean children, ever born to women of 15-44 years by districts in Sikkim together with mean number of surviving children are shown in Table 3.6. On the average, women on the verge of completing reproductive period have given birth to 3.5 children in their reproductive life of which 3.3 children are surviving on the average. Completed fertility in Sikkim varies from the low of 2.9 mean children ever born for South Sikkim to the highest of 4.3 children in North district. Completed fertility in terms of mean children ever born in the districts of East Sikkim is (3.3) and in West Sikkim is (3.7). Mean children ever born in all other districts of Sikkim is more than 3 children. It is also true that in all the districts mean number of male children is more than the mean of female children born to women in the 15-44 year age group. North Sikkim recorded highest mean number of surviving children at 4.1. Looking at the absolute difference between mean children ever born and mean number of surviving children, it seems that infant and child mortality is not high and there are minor variation in the districts of Sikkim.

District	Mean children ever born			Mean children surviving		
	Total	Male	Female	Total	Male	Female
East	3.3	1.8	1.5	3.1	1.6	1.5
North	4.3	2.2	2.0	4.1	2.1	2.0
South	2.9	1.6	1.4	2.9	1.6	1.4
West	3.7	1.8	1.8	3.6	1.8	1.8
Sikkim	3.5	1.8	1.7	3.3	1.7	1.6

3.7 Birth Order

Birth order distribution by selected background characteristics of women are provided in Table 3.7 and Figure 3.1. This distribution can be use as a measure of fertility in the absence of formal measures of fertility, such as, crude birth rate and total fertility rate.

Table 3.7 BIRTH ORDER

Percent distribution of births during three years preceding the survey by birth order by selected background characteristics, Sikkim, 2002-04

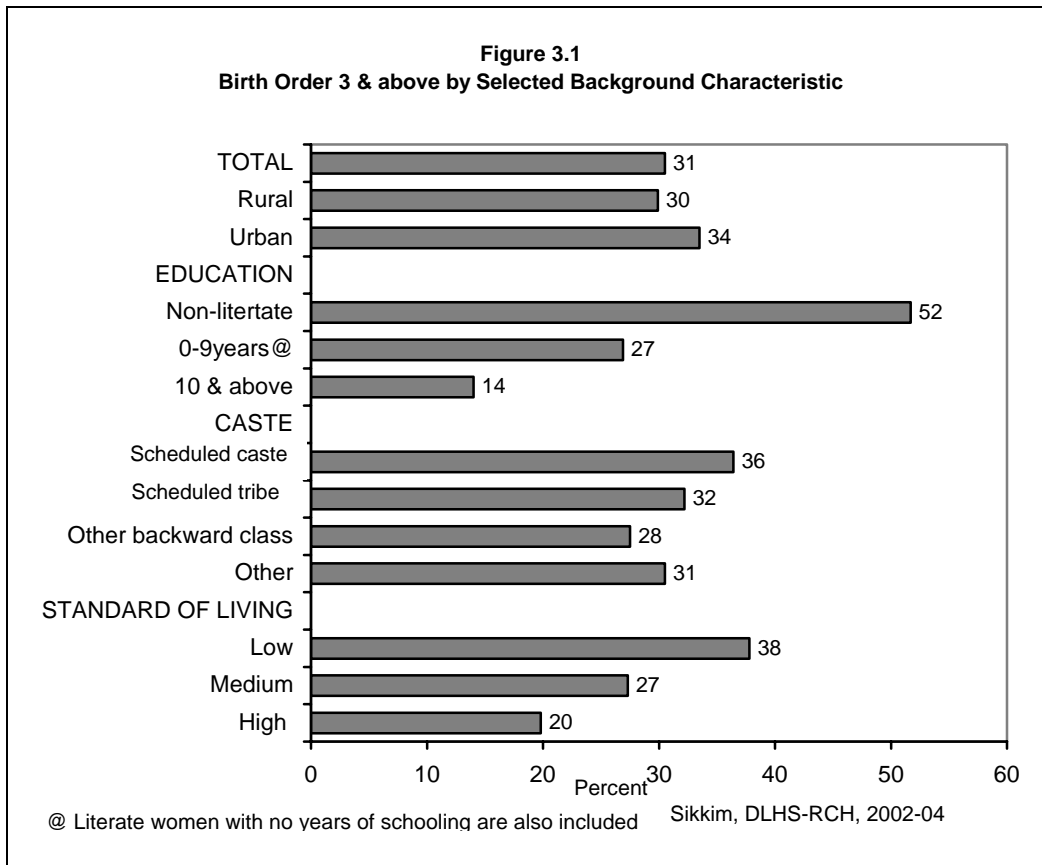
Background characteristic	Birth order				Total percent	Number of births
	1	2	3	4+		
Age of women						
15-19	89.9	10.1	0.0	0.0	100.0	70
20-24	61.2	27.7	10.4	0.6	100.0	393
25-29	34.4	32.7	19.0	13.9	100.0	351
30-34	16.4	26.2	16.9	40.6	100.0	176
35-39	13.6	16.3	20.8	49.3	100.0	78
Place of residence						
Rural	43.7	26.4	13.1	16.8	100.0	917
Urban	37.2	29.3	20.8	12.7	100.0	169
Education (Years of schooling)						
Non-literate	25.8	22.5	16.6	35.1	100.0	269
0-9@ years	43.9	29.2	14.7	12.2	100.0	601
10 years & above	60.3	25.7	10.3	3.7	100.0	217
Religion						
Hindu	43.0	28.7	13.0	15.3	100.0	682
Christian	35.5	25.0	20.8	18.6	100.0	78
Buddhist	43.2	23.7	16.0	17.1	100.0	305
Caste/tribe #						
Scheduled caste	36.3	27.3	14.3	22.1	100.0	100
Scheduled tribe	42.6	25.3	14.1	18.1	100.0	365
Other backward class	44.8	27.7	14.9	12.6	100.0	413
Other	42.5	27.0	13.3	17.2	100.0	196
Standard of living index						
Low	37.0	25.2	15.1	22.7	100.0	454
Medium	44.8	27.9	13.6	13.7	100.0	455
High	51.8	28.3	13.9	5.9	100.0	177
Total	42.7	26.8	14.3	16.2	100.0	1,087

Note:# Total number of births may not add upto N due to don't know and missing cases.

Total includes 19 births to women in 40-44 age group and 22 births to women in other religion.

For the state of Sikkim, 43 percent of the births born in the three years period preceding the survey were of first order, 27 percent of second order and the remaining 31 percent were of order 3 and higher order births. By current age of eligible women, more than 41 percent and 49 percent of births to women in the age group 35-39 years and 40-44 years are 4 and higher order births. For women of 15-19 years, 90 percent births are of first order and 10 percent births are of second order. In the case of eligible women in urban areas 37 percent of the births are of first order whereas this order births constitute 44 percent for rural women indicating that first order births are more concentrated in rural areas. Of the total births born to non-literate women, 35 percent are 4 and higher order births, followed by 12 percent for women with 0-9 years of schooling and 4 percent for women who had 10 or more years of schooling. In short, births born to non-literate women are of higher order whereas much lower order births occurred to women who completed 10 or more years of schooling. Looking at the religion differential in birth order distribution, it is observed that 39 percent of births born to Christian women are 3 and higher order births. For Hindu and Buddhist women, the 3 and higher order births constitute 28 percent

and 33 percent respectively. The occurrence of births of order 3 and above is more among scheduled tribe (32 percent) than among scheduled caste (36 percent), other backward classes (28 percent) and other castes (31 percent) women. Incidence of births of order 3 and above for women classified by household standard of living index are 20 percent for high, 27 percent for medium and 38 percent for low living standard households women.



3.8 Birth Order by District

Table 3.8 and Figure 3.2 shows the births order distribution by districts in Sikkim. The proportion of births of order 3 and above ranges from the lowest of 26 percent in South Sikkim to the highest of 47 percent in North Sikkim. The districts, of West and East Sikkim the proportion of births of order 3 and above is 30 percent and 29 percent respectively.

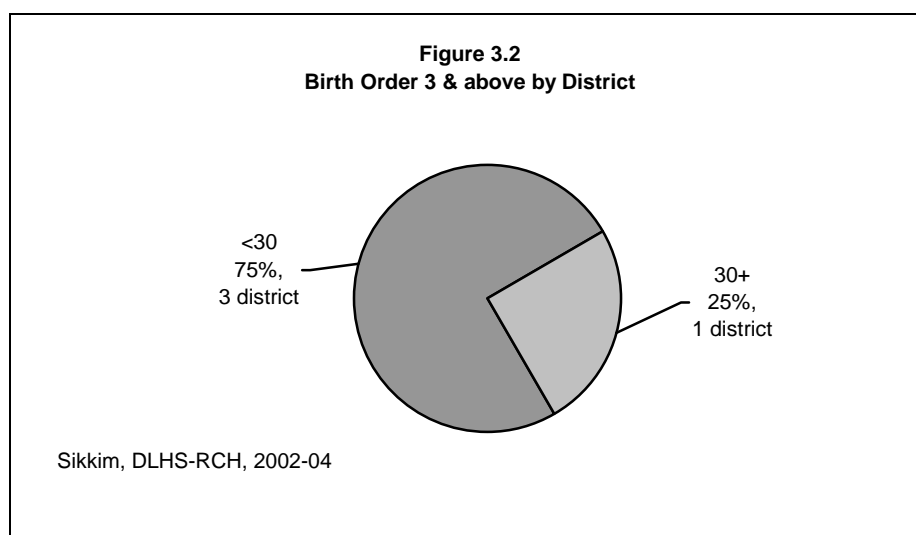


Table 3.8 BIRTH ORDER BY DISTRICT				
Percent distribution of births during three years preceding the survey by birth order, according to district, Sikkim, 2002-04				
District	Birth order			
	1	2	3	4+
East	43.7	27.0	14.6	14.7
North	29.9	23.0	18.8	28.2
South	47.3	26.4	14.4	11.8
West	41.7	28.5	14.4	15.4
Sikkim	42.7	26.8	14.3	16.2

3.9 Fertility Preference

The distribution of currently married women desiring additional children and preferred sex of additional children by number of living children of the women is shown vividly in Table 3.9 and Figure 3.3. Out of the 420 women with no living child, 29 percent are currently pregnant and 18 percent are using spacing methods, while 33 percent want to have children within two years, less than one percent want to have children after two years, 4 percent are undecided about the timing of birth and 2 percent desired not to have any children. Among the currently married women, the desire for additional children dwindles down with increasing number of living children. As many as 53 percent of the women having one living child are using spacing methods, 7 percent of them

want additional children within two years, 2 percent after two years, 5 percent are undecided about the timing of the next child, 9 percent of them want no more additional children and 6 percent are sterilized. Use of permanent as well as temporary means of contraception tends to be accelerated with number of living children. In the state of Sikkim, out of the 4,039 surveyed representative women, 6 percent desired to have additional children within two years, less than one percent after two years, 13 percent want no more children, 7 percent are currently pregnant and 40 percent are using either terminal or temporary contraceptive methods. A total of 429 women want additional children irrespective of the number of living children. Out of 184 women who have no living children and desire for additional children, 13 percent want a boy as the first child, 5 percent desired for girl, for 67 percent, the sex of the child is immaterial and 15 percent leave it to God. With increasing number of living children, is male the dominating preferred sex of the next child though a sizeable proportion of women desiring additional children expressed that the sex of the child was immaterial.

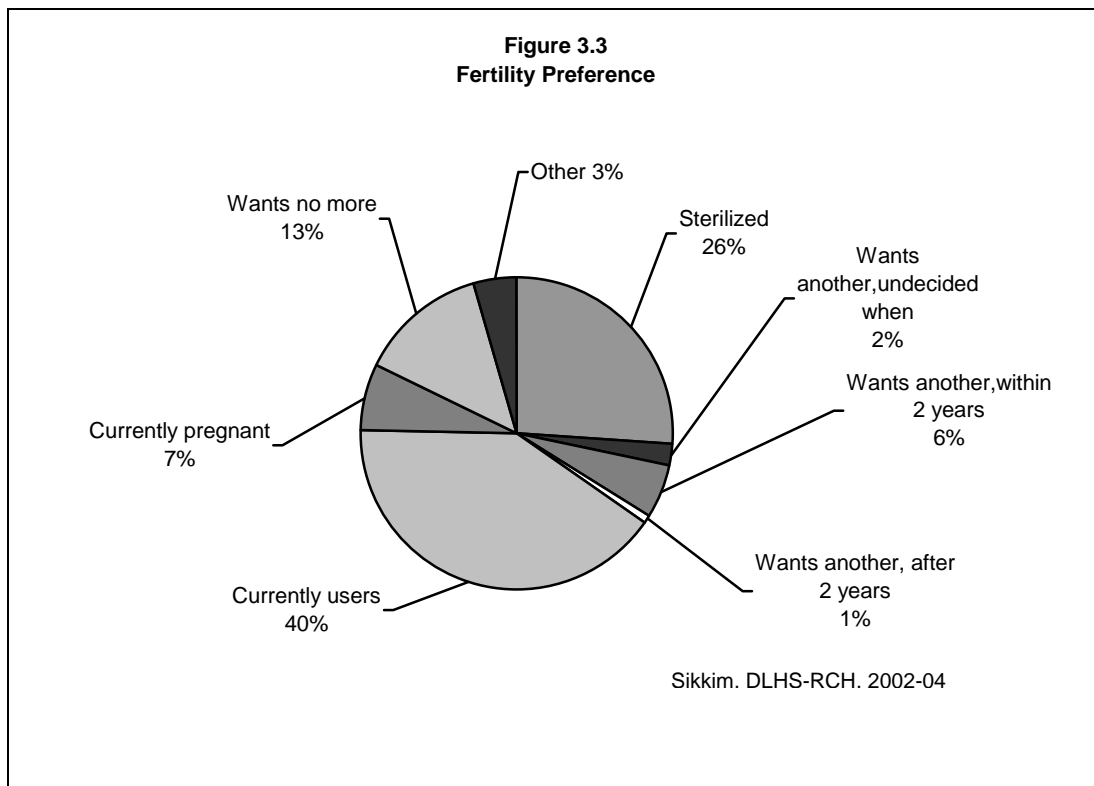


Table 3.9 FERTILITY PREFERENCE						
Percent distribution of currently married women by desire for children, according to number of living children, Sikkim, 2002-04						
Desire for children	Number of living children					Total
	0	1	2	3	4+	
Desire for additional child						
Wants another soon ¹	32.6	6.6	1.0	0.7	1.2	5.6
Wants another later ²	0.7	1.8	0.3	0.0	0.0	0.6
Want another, undecided when	4.0	5.4	1.0	0.7	0.1	2.1
Undecided	2.6	3.9	0.4	0.7	0.2	1.5
Up to God	3.9	1.0	0.3	0.1	0.3	0.8
Want no more	2.4	8.8	14.1	13.6	22.5	13.0
Sterilized	1.7	5.8	32.5	44.7	34.8	25.5
Currently users ³	18.2	52.7	44.6	33.6	33.4	39.8
Currently pregnant	29.3	8.2	3.5	1.7	1.6	6.6
Declared infecund	4.4	5.7	2.2	4.1	6.0	4.3
Missing	0.3	0.1	0.1	0.1	0.0	0.1
Total percent	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	420	959	1,236	707	717	4,039
Preferred sex of additional children						
Boy	12.9	30.6	(33.3)	*	*	24.2
Girl	5.1	21.2	(8.8)	*	*	11.4
Doesn't matter	66.8	37.6	(35.1)	*	*	49.7
Upto God	15.2	10.7	(22.8)	*	*	14.7
Missing						
Total percent	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	184	179	38	16	13	429
Note: ¹ Wants next births within 2 years. ² Wants to delay next birth for 2 or more years. ³ Other than sterilization. * Percentages not shown: based on few cases. () Based on less than 50 unweighted cases Note:						

3.10 Pregnancy Outcomes

Table 3.10 shows distribution of pregnancy outcomes including live birth, stillbirth, induced abortion and spontaneous abortion by districts in Sikkim. For the state as a whole, 95 percent of pregnancy ends in live births, 2 percent in induced abortions, 2 percent in spontaneous abortion and less than one percent in stillbirth. Same number of pregnancies in rural and urban areas end in live births (95 percent), while the incidence of induced abortion is more in urban areas (3 percent) than in rural areas (2 percent). The proportion of pregnancies ending in live births ranges from 93 percent in East Sikkim to 99 percent in North Sikkim. In the districts of South and West Sikkim the percentage of pregnancies ending in live birth is 97 percent and 98 percent respectively. The incidence of stillbirth is highest in West Sikkim (0.9 percent) followed by East Sikkim (0.8 percent) and almost nil in West Sikkim. Induced abortion is higher in the districts of East Sikkim (4 percent) and in West Sikkim it is less than 1 percent. In the other two districts it is reported nil. Spontaneous abortion is nil in North Sikkim and highest in South Sikkim (3 percent).

Table 3.10 OUTCOMES OF PREGNANCY

Percent distribution of all pregnancies of currently married women aged 15-44 years by their outcomes three year preceding the survey currently married women, according to districts, Sikkim, 2002-04

Districts	Live birth	Stillbirth	Induced abortion	Spontaneous abortion	Missing	Total percent
State-Rural	95.4	0.7	2.1	1.8	0.0	100.0
State-Urban	94.7	0.5	2.8	1.8	0.2	100.0
State-Total	95.3	0.7	2.2	1.8	0.1	100.0
East	93.2	0.8	4.0	2.0	0.0	100.0
North	98.7	0.5	0.0	0.0	0.8	100.0
South	97.1	0.0	0.0	2.9	0.0	100.0
West	97.6	0.9	0.6	0.9	0.0	100.0

CHAPTER IV

MATERNAL HEALTH CARE

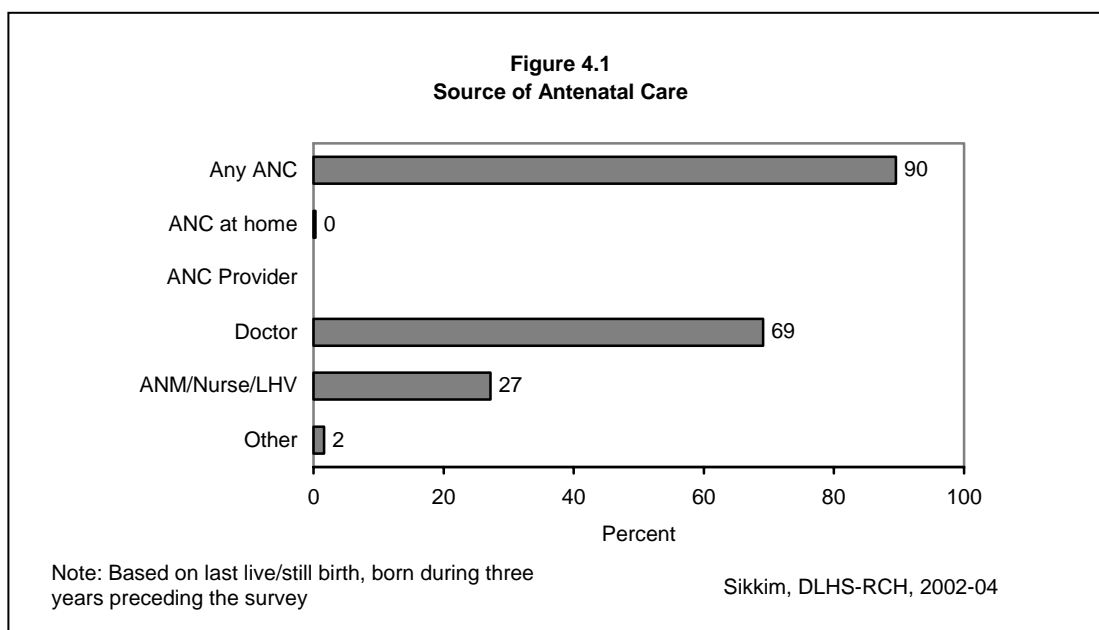
Provisions of maternal health care services to ensure safe motherhood is one of the major components of the Reproductive and Child Health (RCH) programme. The RCH programme services for antenatal care, includes at least three antenatal care visits, iron prophylaxis for pregnant and lactating women, at least one dose of tetanus toxoid vaccine, detection and treatment of anaemia in mothers, and management and referral of high-risk pregnancies, natal care, that is encouragement of safe delivery, post-natal care, and management of unwanted pregnancies. In rural areas, the government delivers reproductive health and other health services through its network of Sub-Centres (SCs), Primary Health Centres (PHCs) and other health facilities. In addition, pregnant women and children can get services from private maternity homes, hospitals, private practitioners, and in some case non-governmental organisations (NGOs) and trust hospitals. In urban areas, reproductive health services are available mainly through government or municipal hospitals, Urban Health Posts (UHPs), Urban Family Welfare Centres (UFWCs), hospitals and nursing homes operated by NGOs, and private nursing and maternity homes.

The National Population Policy (NPP), 2000 adopted by the Government of India (Ministry of Health and Family Welfare, 2000) reiterates the Government's commitments to the safe motherhood programme within the wider context of reproductive health. Among the national socio-demographic goals for 2010 specified by the policy, several goals pertain to safe motherhood, that 80 percent of all deliveries should take place in institutions by 2010, hundred percent deliveries should be attended by trained personnel, and the maternal mortality ratio should be reduced to a level below 100 per 100,000 live births. Empowering women for improved health and nutrition is one of the 12 strategic themes identified in the policy to be pursued either as stand-alone programmes or as intersectoral programmes.

In DLHS-RCH Phase-I, to all the eligible women who had their last pregnancy after January 1, 1999 a separate section on the status of maternal health and utilisation of maternal health care services was canvassed. In Phase-II, the same section was canvassed to all the eligible women who had their last pregnancy after January 1, 2001. The women whose last pregnancy terminated into live/still birth were asked about the details of antenatal, natal and post-natal care they received; pregnancy, delivery and post-delivery complications they suffered from and the treatment seeking behaviour in case of complications. Women whose last pregnancy terminated into abortion, either spontaneous or induced, were asked about the utilisation of safe abortion services and the post-abortion complications they experienced. This chapter presents information on antenatal, natal and postnatal care received by women whose last pregnancy had terminated during the three years preceding the survey as live birth or as stillbirth.

4.1 Antenatal Check-Ups

Women who had given a birth during the three years preceding the survey were asked whether they had gone for antenatal check-ups outside the home, and if they had, what type of service provider had given them the check-ups. They were also asked whether any health worker had visited them at home to provide antenatal check-ups. Table 4.1 and Figure 4.1 present the percentage of women who had given birth during the three years preceding the survey and information regarding the antenatal check-ups they had by source of antenatal check-ups according to some selected background characteristics. Results show that nine out of every ten women received antenatal check-ups during the three years preceding the survey, slightly more than RCH Round I (63 percent) Sixty-nine percent of women received antenatal check-ups from doctors, and 27 percent from ANM/Nurse/LHV. Less than one percent women received antenatal check-ups at the doorstep from the ANMs or health worker.



Antenatal check-ups are more common among younger women age below 35 years than among older women, and it is more common among those women who had given their first birth. The percentage of women who received antenatal check-up was comparatively higher in urban areas (93 percent) than in rural areas (89 percent), and the percentage of women who received antenatal check-ups from doctors is much higher in urban areas (89 percent) than in rural areas (66 percent), and on the other hand an 29 percent of rural women and 15 percent women from urban areas received antenatal check-ups from auxiliary nurse midwife, nurse or LHVs. Seventy-eight percent of non-literate women received antenatal check-ups, nearly all women (98 percent) who had completed high school received antenatal check-ups for their last pregnancy that terminated into births (either live or still birth) during the three years preceding the survey.

Table 4.1 ANTENATAL CHECK-UP

Percentage of women* who received any antenatal check-up (ANC) during pregnancy by source of antenatal provider, according to selected background characteristics, Sikkim, 2002-04

Background characteristic	Any ¹ antenatal check-up	Antenatal check-up only at home by ANM	Health personnel providing ANC ²				Number of women
			Doctor	ANM/ Nurse/ LHV	Other health professional	Other ³	
Age group							
Less than 20 years	88.4	0.0	53.0	42.9	0.4	0.0	70
20-34 years	90.5	0.4	71.1	25.9	1.0	1.6	970
35 years & above	81.4	0.0	61.7	28.6	3.1	2.9	106
Children ever born							
1	93.9	0.2	74.4	25.0	0.2	0.5	489
2	89.9	0.0	72.7	27.4	1.2	1.5	309
3	85.1	1.6	62.9	28.3	1.6	2.6	172
4+	80.8	0.2	54.0	31.9	3.4	4.0	171
Residence							
Rural	88.8	0.4	65.8	29.2	0.7	0.9	984
Urban	93.4	0.0	89.2	14.6	3.9	6.1	162
Education							
Non-literate	77.7	0.1	51.5	30.5	1.6	2.1	266
0-9 @ years	91.1	0.1	69.1	29.3	1.4	1.7	646
10 years & above	98.3	1.2	89.2	17.6	0.0	0.8	234
Religion							
Hindu	89.9	0.5	70.8	26.3	0.9	1.6	727
Christian	95.8	0.0	77.2	25.3	3.3	3.5	82
Buddhist	86.4	0.0	63.9	28.0	0.6	0.4	313
Caste/tribe#							
Scheduled caste	93.5	0.8	73.8	30.9	2.9	5.4	105
Scheduled tribe	87.6	0.0	63.1	31.9	0.5	0.4	370
Other backward class	89.3	0.1	71.2	23.3	1.0	0.8	447
Other	91.5	1.3	74.0	24.0	2.0	3.6	215
Standard of living index							
Low	80.9	0.2	54.7	32.8	1.2	1.3	475
Medium	94.7	0.6	74.1	27.0	1.3	1.8	473
High	97.8	0.0	91.9	13.9	0.8	1.8	198
Availability of health facility⁴ in the village							
No	88.8	0.0	67.1	28.0	1.1	1.5	374
Yes	88.9	0.6	65.1	30.0	0.5	0.5	610
Total	89.5	0.3	69.1	27.2	1.2	1.6	1,146

Note:* Women who had their last live/still birth since 1-1-1999/1-1-2001. Note: Total includes 5 women with zero parity and 24 women in other religion who were not shown separately.¹ Antenatal check-ups either at home or outside from home at health facility.² Antenatal check-ups outside home and percentage add more than 100.0 due to multiple responses³ Other also includes trained and untrained *dai*. #Total figure may not add to N due to do not know and missing cases @ Literate women with no years of schooling are also included.⁴ Includes sub-entre, primary health centre, community health centre or referral hospital, government hospital, and government dispensary within the village.

The proportion of women who received antenatal check-ups from a doctor, increased steadily with the level of education and the standard of living index. Seventy-eight percent non-literate women as compared to 98 percent having education of more than 10 years received ANC from doctors. Similarly, 81 percent women belonging to households with a low standard of living against 98 percent of that from a high standard of living fall in this category. The proportion of Christian women who received antenatal check-ups from doctors (96 percent) was much higher than that of Hindu women (90 percent), and Buddhist women (86 percent). Ninety-four percent of women from the scheduled caste category received antenatal check-ups from doctors, while it was 89 percent for other backward classes women, and 88 percent for scheduled tribe women, and for women from other castes, it was 92 percent. Women from scheduled castes and tribes were more likely to receive antenatal check-ups from auxiliary nurse midwives, or LHV's. Thirty-one percent of scheduled caste

women received antenatal check-ups from ANMs, while it was 32 percent each among scheduled tribes, 23 percent for other backward classes and women from the 'other' castes category the percentage was 24 percent.

4.2 Antenatal Check-Ups at Health Facility

DLHS-RCH asked women who had a birth during the three years preceding the survey whether women had received antenatal check-ups, and if they had, from where they had availed such services.

Table 4.2 PLACE OF ANTENATAL CHECK-UP									
Percentage of women* who received any antenatal check-ups (ANC) during pregnancy by source and place of antenatal check-ups, according to selected background characteristics, Sikkim, 2002-04									
Background characteristic	Antenatal check-up only at home	Place of antenatal check-ups ¹							Number of women
		Government ² health facility	Private ³ health facility	PHC	SC	ISM ⁴ facility			
						Govt.	Private	Other	
Age group									
Less than 20 years	0.0	88.0	3.1	44.1	17.1	0.0	0.0	0.0	70
20-34 years	0.4	80.8	9.6	32.0	10.7	0.1	0.6	0.7	970
35 years & above	0.0	77.5	2.2	38.7	6.5	0.0	1.8	2.3	106
Children ever born									
1	0.2	85.5	8.3	29.3	11.2	0.2	0.3	0.6	489
2	0.0	78.7	12.1	37.8	7.9	0.0	1.3	0.4	309
3	1.6	75.3	8.7	35.3	9.6	0.0	0.9	1.9	172
4+	0.2	77.1	2.6	35.8	15.3	0.0	0.3	0.8	171
Residence									
Rural	0.4	81.8	5.8	35.3	12.6	0.1	0.4	0.9	984
Urban	0.0	75.5	25.4	21.7	0.0	0.0	1.9	0.0	162
Education									
Non-literate	0.1	73.1	2.3	36.8	11.3	0.0	0.7	1.9	266
0-9 @ years	0.1	84.9	6.3	37.2	13.2	0.1	0.3	0.6	646
10 years & above	1.2	78.6	21.7	20.1	3.7	0.3	1.4	0.0	234
Religion									
Hindu	0.5	80.8	9.8	34.3	8.8	0.0	0.3	0.3	727
Christian	0.0	81.2	13.7	24.6	9.4	0.0	1.9	2.4	82
Buddhist	0.0	79.9	4.9	33.6	15.0	0.4	0.9	1.5	313
Caste/tribe#									
Scheduled caste	0.8	81.4	8.2	34.5	17.7	0.0	1.6	1.9	105
Scheduled tribe	0.0	80.9	7.0	33.8	11.9	0.2	0.6	0.9	370
Other backward class	0.1	80.8	8.4	34.8	8.7	0.1	0.4	0.7	447
Other	1.3	80.8	11.2	28.6	9.3	0.0	0.6	0.0	215
Standard of living index									
Low	0.2	77.3	1.4	40.0	15.0	0.0	0.4	1.7	475
Medium	0.6	86.4	7.2	34.1	9.9	0.2	0.7	0.2	473
High	0.0	76.2	28.7	18.2	4.1	0.0	1.0	0.0	198
Availability of health facility⁵ in the village									
No	0.0	79.7	8.1	34.9	.7	0.3	0.6	0.8	374
Yes	0.6	83.0	4.3	35.6	14.3	0.0	0.3	0.9	610
Total	0.3	80.9	8.5	33.3	10.7	0.1	0.6	0.7	1,146

Note:* Women who had their last live/still birth since 1-1-1999/1-1-2001. Note: Total includes 5 women with zero parity and 24 women in other religion who were not shown separately. # Total figure may not add to N due to do not know and missing cases. @ Literate women with no years of schooling are also included. ¹ Antenatal check-ups outside home and percentage add more than 100.0 due to multiple responses. ² Includes sub-centre, primary health centre, community health centre or rural hospital, urban health centre/ urban health post/ urban family welfare centre, government hospital or dispensary. ³ Includes Private hospital/clinic or non-governmental hospital/ trust hospital or clinic. ⁴ Indian system of medicine. ⁵ Includes sub-centre, primary health centre, community health centre or referral hospital, government hospital, and government dispensary within the village.

Table 4.2 shows the percentage of women who had received antenatal check-ups during pregnancy by place. During pregnancy, women received antenatal check-ups from multiple sources such as, health workers providing ANC at home, Government health facility, private health facility, and at Indian System of medicine etc. Women who received antenatal check-ups both at home and outside the home are categorised as having received care outside the home. Around 81 percent of women received antenatal check-ups at Government health facility, including 33 percent through primary health centre and 11 percent through sub-centre, and 9 percent at a private health facility. Other than this, less than one percent each of women reported that they had received antenatal check-ups at the Government Indian system of medicine, and private Indian system of medicine. As mentioned above women availed antenatal check-ups from multiple sources. Women who were visited by an ANM might have also visited government and/ or private health facilities including Indian system of medicine.

Younger women were more likely to receive antenatal-check-ups at government health facilities (88 percent) than older women 81 percent for age 20-34 and 78 percent for age 35 and above. Eighty-two percent women from rural areas availed government health facilities for antenatal check-ups that were much lower than women in urban areas (76 percent), and a high proportion of women (25 percent) from urban areas availed private health facilities for antenatal check-ups than women from rural areas (6 percent). It may be mentioned that about 13 percent of the women from rural areas and women aged above 20 years (17 percent) received antenatal check-ups at sub-centre. This indicates that the services are reaching the target population, particularly through the public sector. A comparatively high proportion of women who received antenatal check-ups at Government health facilities are literate, Hindu, Christian, scheduled caste or tribe, living in households with a medium or high standard of living and women from those villages where health facilities are not available.

4.3 Antenatal Check-Ups by District

Table 4.3 indicates the antenatal coverage in Sikkim that ranges from the highest of 94 percent in East Sikkim to the lowest of 72 percent in North Sikkim. Almost all districts, except North Sikkim more than 85 percent of women got some kind of antenatal check-ups for their last births during the three years preceding the survey. Antenatal check-ups received from doctor was low in West Sikkim (43 percent), and North Sikkim (59 percent), and in all the remaining districts more than 80 percent of the women received antenatal check-ups from doctor and it is highest in East Sikkim (82 percent). In South Sikkim, 8 percent of the women received antenatal check-ups by ANM/Nurse/LHV. In the rest of the districts the percentage of women who received antenatal check-ups by ANM/Nurse/LHV ranged between 20 to 54 percent.

The extent of utilisation of government health facilities for antenatal check-ups was higher than that of private health facilities. The range of antenatal check-ups coverage through government facilities was highest in South Sikkim (89 percent) to the lowest of 65 percent in North Sikkim. In Sikkim, one percent pregnant women in East and North district availed the Indian system of medicine (either government or private) for an antenatal check-up.

Table 4.3 ANTENATAL CHECK-UPS BY DISTRICT

Percentage of women* who received any antenatal care (ANC), by source and place of antenatal check-ups by district, Sikkim, 2002-04

District	Any ¹ antenatal check-up	Antenatal check-up only at home by ANM	Health personnel providing ANC		Place of antenatal check-ups		
			Doctor	ANM/ Nurse	Govern- ment ² health facility	Private ³ health facility	ISM ⁴ facility
East	94.4	0.5	81.9	20.6	82.2	14.6	1.0
North	72.3	0.3	58.7	19.6	65.1	5.5	1.4
South	90.8	0.0	79.5	7.8	89.0	2.1	0.2
West	85.4	0.3	43.3	54.4	77.2	4.5	0.3
Sikkim	89.5	0.3	69.1	27.2	80.9	8.5	0.7

Note:* Women who had last live/still birth during three years preceding the survey. ¹ Antenatal check-ups either at home or health facility. ² Includes sub-centre, primary health centre, community health centre or rural hospital, urban health centre/ urban health post/ urban family welfare centre, government hospital or dispensary. ³ Includes Private hospital/clinic or non-governmental hospital/ trust hospital or clinic. ⁴ Either government or private Indian system of medicine.

4.4 Components of Antenatal Check-ups

Women who received any kind of antenatal check-ups were asked whether they received each of the several components of antenatal check-ups at least once during their pregnancy. Table 4.4 presents the percentage of women who received specific components of check-ups by residence. Except for X-rays (which are not recommended as a standard component of antenatal care), all of the measurements and tests are part of essential obstetric care or are required for monitoring high-risk pregnancies.

Seventy-three percent of women were weighed, 82 percent had their blood pressure checked, and 73 percent had an abdominal examination as the part of the antenatal check-ups. Other common components of antenatal check-ups were blood test (69 percent), urine test (71 percent), and the measurement of height (17 percent), internal examination (26 percent), and breast examination (20 percent). About 24 percent of women had a sonogram or ultrasound, 4 percent had an X-ray and only one percent of women reported that they had amniocentesis test. All of these measurements or producers were performed more often during antenatal check-ups in urban areas than in rural areas.

The type of advice received by women who had antenatal check-ups for last live/still births during three years preceding the survey is also presented in Table 4.4. Advice on diet was given to 84 percent of urban women as compared to 75 percent of rural women and 77 percent in general. Forty seven percent of the women received advice on danger signs of pregnancy. Women were less likely to receive advice on delivery care (56 percent), on breastfeeding (45 percent), and on newborn care (40 percent). Advice on family planning was given to 32 percent of rural women and 27 percent of urban women.

Table 4.4 COMPONENTS OF ANTENATAL CHECK-UPS			
Percentage of women* who received an antenatal check-up by specific components of antenatal check-up, according to residence, Sikkim, 2002-04			
Components of antenatal check-ups	Total	Rural	Urban
Antenatal measurements/tests			
Weight measured	73.3	72.5	77.6
Height measured	17.3	17.8	14.6
Blood pressure checked	82.4	80.5	93.2
Blood tested	69.2	66.4	85.5
Urine tested	71.1	68.2	88.3
Abdomen examined	72.5	69.1	91.9
Internal examined	24.5	18.7	58.3
Breast examined	19.5	16.1	39.2
X-ray	4.1	4.1	3.9
Sonography /ultrasound	23.7	19.0	50.8
Amniocentesis	1.4	1.2	2.7
Antenatal advice			
Diet	76.6	75.4	83.9
Danger signs of pregnancy	47.1	45.6	55.7
Delivery care	55.6	52.7	72.6
Breast feeding	44.9	40.5	70.5
New born care	39.5	35.1	64.8
Family planning	31.4	32.3	26.5
Number of women who received any antenatal check-up	1,026	875	151
Note:* Women who had their last live/still birth since 1-1-1999/1-1-2001			

4.5 Antenatal Care Services

In India, the Reproductive and Child Health Programme includes all pregnant women should be registered in the first 12-16 weeks (Ministry of Health and Family Welfare, 1997). Accordingly the first antenatal check-ups should take place at latest during the first trimester of the pregnancy. It also includes the provision of at least three antenatal care visits, of at least one tetanus toxoid injection, and supplementary iron in the form of IFA tablets daily for 100 days. To assess whether the women had received all the care during pregnancy, information was collected regarding number of antenatal visits, timing of the first visit, received tetanus toxoid injection and supplement iron folic acid tablets. The results are presented in Table 4.5. In Sikkim, 22 percent of the women received at least four antenatal check-ups and 46 percent had four or more check-ups. At least four antenatal check-ups were received by 74 percent of women in urban areas compared with 41 percent of women in rural areas. Number of visits for antenatal care varies by education, children ever born, religion, caste and standard of living index. 24 percent of non-literate, 40 percent literate women (educated below high school) and 81 percent of women who had 10 or more years of schooling visited for minimum three antenatal care. Parity of women is negatively associated with antenatal check-ups. About 26 percent of women with parity one received three antenatal check-ups compared to only 20 percent of the women with parity 4 and above.

Table 4.5 ANTENATAL CARE

Percent distribution of women who had live/still births during three years preceding the survey by number of antenatal check-ups, the stage of pregnancy at the time of first check-up, the number of tetanus toxoid injections received and were given iron folic acid (IFA) tablets/syrup during pregnancy, and percentage who received full antenatal check-ups by some selected background characteristics, Sikkim, 2002-04

Antenatal care indicators	Total	Residence		Education			Children ever born			
		Rural	Urban	Non-literate	0-9@ years	10 years & above	1	2	3	4+
Number of ANC visits										
No visit	10.5	11.1	6.6	22.1	8.9	1.7	6.1	10.0	14.9	19.3
1	4.1	4.5	1.5	7.2	3.6	1.9	3.3	3.7	2.9	8.4
2	17.5	18.7	10.7	20.9	21.3	3.5	13.1	20.7	21.6	21.0
3	22.4	24.9	7.2	23.5	25.9	11.5	25.6	17.2	25.0	19.9
4+	45.5	40.8	74.0	26.1	40.4	81.4	51.9	48.4	35.7	31.5
Missing	0.1	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Stage of pregnancy at the time of the first antenatal check-up										
No antenatal check-up	10.5	11.1	6.6	22.1	8.9	1.7	6.1	10.0	14.9	19.3
First trimester	50.7	46.7	75.0	34.3	49.6	72.4	56.7	52.9	43.4	36.8
Second trimester	34.4	37.1	18.2	38.6	36.6	23.8	33.1	34.3	35.8	37.4
Third trimester	4.3	5.0	0.2	4.7	5.0	2.1	4.1	2.7	5.9	6.5
Missing	0.1	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Women who received TT										
No TT	12.7	13.9	5.1	25.1	10.7	4.1	7.5	11.4	19.0	23.6
1	8.4	7.9	11.1	10.6	8.2	6.3	4.6	11.2	10.3	12.3
2+	77.5	76.4	83.8	62.5	79.5	88.9	86.0	76.5	68.4	64.1
Do not remember/missing	1.5	1.7	0.0	1.8	1.6	0.7	1.9	0.9	2.3	0.0
Women who received IFA tablets/syrup										
No IFA/syrup	19.3	20.3	12.9	34.9	18.1	4.9	14.4	15.4	29.3	30.5
Received but not consumed	3.1	3.3	1.9	3.9	3.1	2.1	2.6	3.2	2.6	4.7
Consumed one IFA per day	42.5	41.2	50.3	32.3	43.1	52.6	46.7	39.0	39.6	39.4
Received 100+ IFA tablets/syrup	30.3	29.3	36.5	19.5	30.5	42.0	33.3	36.3	23.9	17.9
Percentage of women who received full ¹ antenatal check-ups	23.5	21.6	34.6	13.6	22.4	37.6	26.7	25.7	20.7	13.3
Number of women	1,146	984	162	266	646	234	489	309	172	171

Note: Total includes 5 women with zero parity who were not shown separately. @ Literate women with no years of schooling are also included.

¹ At least three visits for antenatal check-ups, at least one TT injection received and were given adequate amount of IFA tablets/syrup.

Table 4.5 ANTENATAL CARE (contd)

Percent distribution of women who had live/still births during three years preceding the survey by number of antenatal check-ups, the stage of pregnancy at the time of first check-up, the number of tetanus toxoid injections received and were given iron folic acid (IFA) tablets/syrup during pregnancy, and percentage who received full antenatal check-ups by some selected background characteristics, Sikkim, 2002-04

Antenatal care indicators	Religion			Caste#				Standard of living index			Availability of health facility ² in the village	
	Hindu	Christian	Buddhist	Schedul ed caste	Schedule d tribe	Other backward class	Other	Low	Medium	High	No	Yes
Number of ANC visits												
No visit	10.0	3.8	13.6	6.5	12.3	10.7	8.5	19.0	5.3	2.2	11.1	11.1
1	4.5	2.2	3.5	4.0	4.1	3.2	5.2	7.6	1.9	0.8	3.2	5.3
2	19.3	8.7	17.0	16.3	17.1	19.6	14.9	22.2	18.3	4.7	20.4	17.6
3	22.7	15.7	22.7	26.0	20.2	22.1	24.9	26.4	22.8	11.5	25.4	24.5
4+	43.5	69.2	43.1	47.3	46.1	44.4	46.6	24.6	51.7	80.8	39.7	41.5
Missing	0.0	0.4	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.0
Stage of pregnancy at the time of the first antenatal check-up												
No antenatal check-up	10.0	3.8	13.6	6.5	12.3	10.7	8.5	19.0	5.3	2.2	11.1	11.1
First trimester	51.5	62.6	47.0	49.4	49.1	54.0	47.1	39.2	52.5	74.1	43.7	48.6
Second trimester	34.6	28.9	34.2	41.0	32.2	32.4	40.1	35.1	38.7	22.7	41.1	34.6
Third trimester	3.9	4.3	5.2	3.1	6.4	2.9	4.3	6.6	3.5	1.0	4.0	5.7
Missing	0.0	0.4	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.0
Women who received TT												
No TT	12.5	1.5	16.8	8.8	12.5	13.1	14.2	21.9	7.9	2.2	14.6	13.5
1	7.9	4.6	9.9	16.1	7.7	8.1	5.7	7.2	9.6	8.2	8.6	7.5
2+	78.1	93.4	71.5	75.1	78.6	76.4	79.6	69.3	81.1	88.5	73.9	78.0
Do not remember/missing	1.5	0.4	1.8	0.0	1.2	2.5	0.5	1.5	1.5	1.2	2.9	1.0
Women who received IFA tablets/syrup												
No IFA/syrup	19.6	7.0	21.8	12.2	17.7	20.7	22.5	29.5	14.2	6.9	19.6	20.8
Received but not consumed	3.0	2.9	2.7	4.0	3.5	2.2	3.6	2.9	4.3	0.5	5.0	2.2
Consumed one IFA per day	42.1	47.5	42.1	47.3	41.3	43.6	39.3	33.6	45.2	57.5	38.0	43.2
Received 100+ IFA tablets/syrup	31.1	31.2	28.6	30.7	27.9	30.2	35.2	25.3	31.5	39.3	30.6	28.4
Percentage of women who received full ¹ antenatal check-ups	22.6	27.5	24.4	20.9	23.9	22.3	26.9	16.8	24.2	37.8	21.6	21.6
Number of women	727	82	313	105	370	447	215	475	473	198	374	610

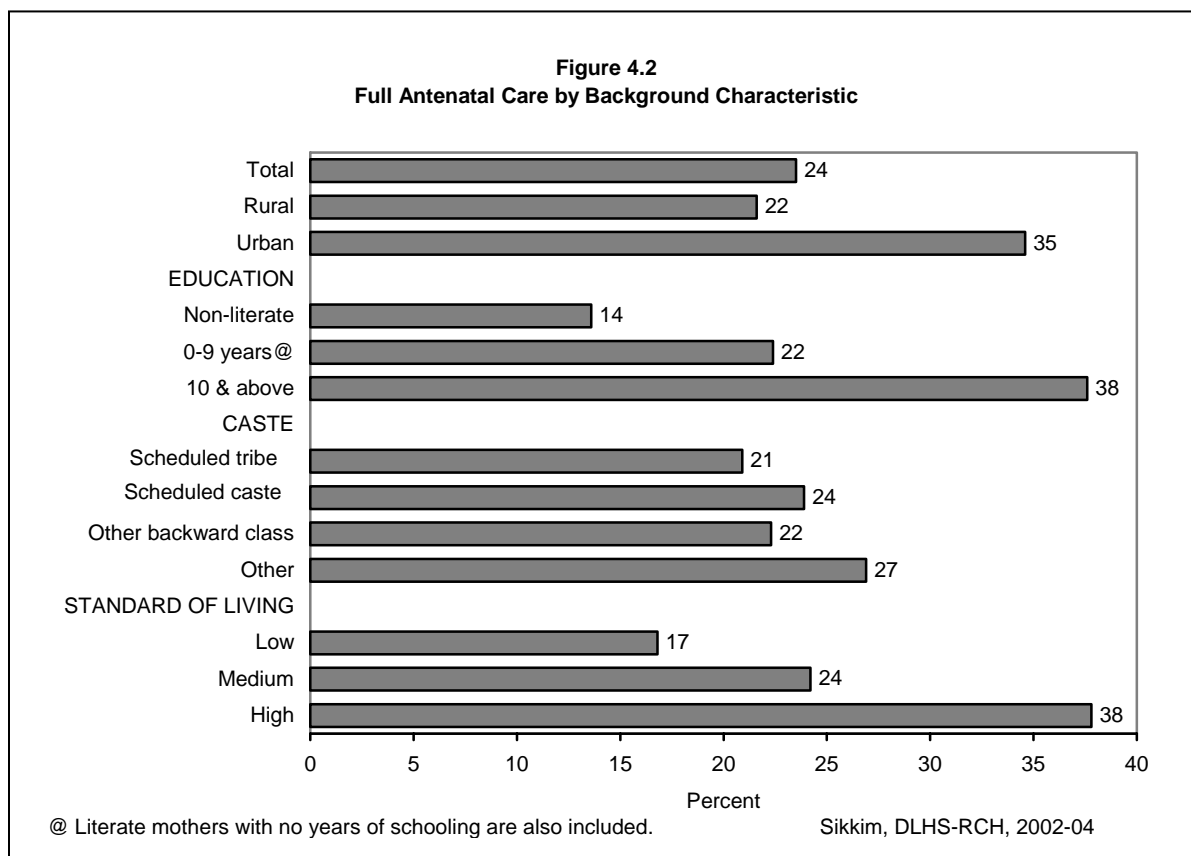
Note: Total includes 24 women in other religion who were not shown separately. # Total figure may not add to N due to don't know and missing cases. ¹ At least three visits for antenatal check-ups, at least one TT injection received and was given adequate amount of IFA tablets/syrup. ² Includes sub-center, primary health center, community health center or referral hospital, government hospital, and government dispensary within the village.

Hindu women and Buddhist women (23 percent each) were more likely to have at least three visits for antenatal check-ups than Christian women (16 percent). Coverage is substantially lower for women from scheduled tribe (20 percent) than women of other backward classes (22 percent), scheduled caste (26 percent) and those belonging to other caste category (25 percent). Having four or more antenatal visits also increased with the standard of living-25 percent for women with a low standard of living, 52 percent for women with a medium standard of living and 81 percent for women with a high standard of living. Availability of health facility in the village does not make much difference to the minimum three visits for antenatal check-ups.

Data on timing of first antenatal check-ups shows that about 51 percent of the women received their first antenatal check-up in the first trimester of pregnancy, and another 34 percent received their first check-up in the second trimester, and 4 percent of women received their first check-up in the third trimester. A relatively higher proportion of women in the urban areas (75 percent) as compared to those in rural areas (47 percent) had a check-up in the first trimester of pregnancy. The first antenatal check-up in the first trimester has steadily increased with education. Thirty-four percent of non-literate women had undergone their first antenatal check-up in the first trimester, and 72 percent of women who had completed at least 10 years of schooling received their first antenatal check-up in the first trimester. More women (57 percent) with parity-1 were visited in first trimester and only 37 percent women with parity-four and above had undergone antenatal check-up in first trimester. Buddhist women were less likely to go for first antenatal check-up in first trimester of their pregnancy as compared to Hindu and women of other religion, and 49 percent each of scheduled tribe and scheduled caste women were visited in first trimester for first antenatal check-ups compared with 54 percent of other backward class of women and 47 percent women from 'other' caste category. Thirty-nine percent women with low standard of living, 53 percent with medium standard of living, and 74 percent of women with high standard of living respectively had undergone their first antenatal check-up in the first trimester of their pregnancy period

Nutritional deficiencies in women are often exacerbated during pregnancy because of the additional nutrient requirements of foetal growth; therefore a pregnant woman needs six times more iron than a non-pregnant woman. The information on receiving iron folic acid tablets/syrup during pregnancy is also collected. Table 4.5 shows that women in Sikkim received IFA supplements for 43 percent of the last birth during three years preceding the survey. The coverage of IFA tablets is relatively lower in rural areas (41 percent) than in urban areas (50 percent). IFA coverage is much below for non-literate women, women with medium standard of living, other caste women, and women of higher parity. IFA coverage is higher among Christian women(48 percent) and scheduled caste women (47 percent) than Hindu (42 percent), and Buddhist women (42 percent). Again, during pregnancy in the last three years preceding the survey, only 30 percent of women received 100 or more IFA, 29 percent in rural areas and 37 percent in urban areas. Intake of 100 or more IFA is positively associated with education and standard of living index and negatively associated with parity. Women from other caste received an intake of 35 percent of 100 or more IFA than their counterparts. Such a large difference in receiving IFA or intake of 100 or more IFA tablets/syrup is not found while analysing the situation by availability of health facility in the village.

For the last live birth or stillbirth during the three years preceding the survey, women were asked whether they were given tetanus toxoid injection to prevent them and their baby from getting tetanus. Table 4.5 shows that seventy-eight percent of the women received two or more tetanus toxoid injections. Coverage of two or more TT injection is slightly higher in urban areas (84 percent) than that in rural areas (76 percent). The coverage of two or more tetanus toxoid injection for Christian women (93 percent) is more than that for Hindu women (78 percent) and Buddhist women (72 percent). Coverage of at least one tetanus toxoid injection is more for schedule caste (16 percent) than that for schedule tribe (8 percent), other backward classes (8 percent), and for 'other' caste category women (6 percent). Non-literate women received more than two tetanus toxoid injection for 63 percent of their last birth, whereas literate women with 9 years of schooling received more than two tetanus toxoid injection for 80 percent, and women who had completed 10 years or more of schooling received more than two tetanus toxoid injection for 89 percent of their last birth. Eighty-nine percent of women with a high standard of living received more than two tetanus toxoid injection, and 69-81 percent women with low or medium standard of living received more than two tetanus toxoid injection for their last live/still birth. The coverage varies inversely by parity. More than two tetanus toxoid injection was received by 86 percent women of Parity-1 compared with 64 percent of Parity 4 and above.



The percentage of women who received full antenatal care, (that is, at least three antenatal check-ups, and at least one tetanus toxoid injection and supplementary iron in the form of IFA tablets daily for 100 days as recommended by the RCH programme,) has been presented in Figure 4.2. Only 24 percent of women in Sikkim received full antenatal care. Coverage of full antenatal care is low for non-literate women, women with higher parity, women from scheduled caste, women with a low standard of living, and women from those villages where health facilities are available. Full antenatal coverage was also lower in rural areas (22 percent) than in urban areas (35 percent).

4.6 Antenatal Care Indicator by District

Table 4.6 shows the percentage of women who had given live/still birth during the three years preceding the survey who received different types of antenatal care; (the percentage who received antenatal check-up in the first trimester of pregnancy, the percentage who received at least three antenatal check-ups, the percentage who received at least one tetanus toxoid injection, the percentage given 100 or more iron folic acid tablets/syrup, and the percentage who received full antenatal care services) by district.

Table 4.6 ANTENATAL CARE INDICATORS BY DISTRICT					
Percentage of women* who received different type of antenatal care by district, Sikkim, 2002-04					
District	Percentage that received an antenatal check-up in the first trimester of pregnancy	Percentage that received three or more antenatal check-ups	Percentage that received at least one tetanus toxoid injection	Percentage that received adequate amount of IFA ¹	Percentage that received full ² antenatal check-ups
East	62.2	79.5	91.6	35.6	30.4
North	33.4	43.4	69.8	22.6	15.0
South	41.8	70.7	78.7	34.0	24.1
West	45.0	53.4	87.3	20.7	13.9
Sikkim	50.7	67.9	85.8	30.3	23.5

Note:* Women who had their last live/still birth since 1-1-1999/1-1-2001¹ 100 or more iron folic acid tablets including syrup ² At least three visits for antenatal check-ups, at least one TT injection received and adequate amount of IFA

The utilisation of antenatal care services differs from district to district. In East, North, South and West Sikkim about 62 percent, 33 percent, 42 percent and 45 percent women received their first antenatal check-up in the first trimester of pregnancy. The percentage of women who received at least three visits for antenatal check-ups ranges from 43 percent in North Sikkim to 80 percent in East Sikkim.. In all the districts the coverage of at least three visits of ANC were more than 40 percent (see Map-3). There has been fairly good coverage of tetanus toxoid injection in the all districts, ranging from 70 to 92 percent, but on the other hand, performance regarding receipt of 100 or more IFA is poor. In all the districts, the value ranges from 21 to 36 percent, and it is lowest in West Sikkim. The percentage of women who received full antenatal care ranges from 14 percent in West Sikkim to 30 percent in East Sikkim. In 2 of 4 districts, West Sikkim and North Sikkim coverage rate of full antenatal care is below than that of the state average.

4.7 Pregnancy Complications and Treatment

Complications during pregnancy may affect both women's health and the outcome of the pregnancy adversely. Early detection of complications during pregnancy and their management are important components of the safe motherhood programme. In the survey, all the eligible women who had given last live or still birth during the three years preceding the survey were asked if at any time during the pregnancy, they had experienced any of the following pregnancy-related problems such as swelling of hands and feet, paleness, visual disturbance, vaginal bleeding, convulsions, weak or no movement of foetus, abnormal position of foetus, and other problems. All the information is based on women's self-reporting which is presented in Table 4.7 and Figure 4.3.

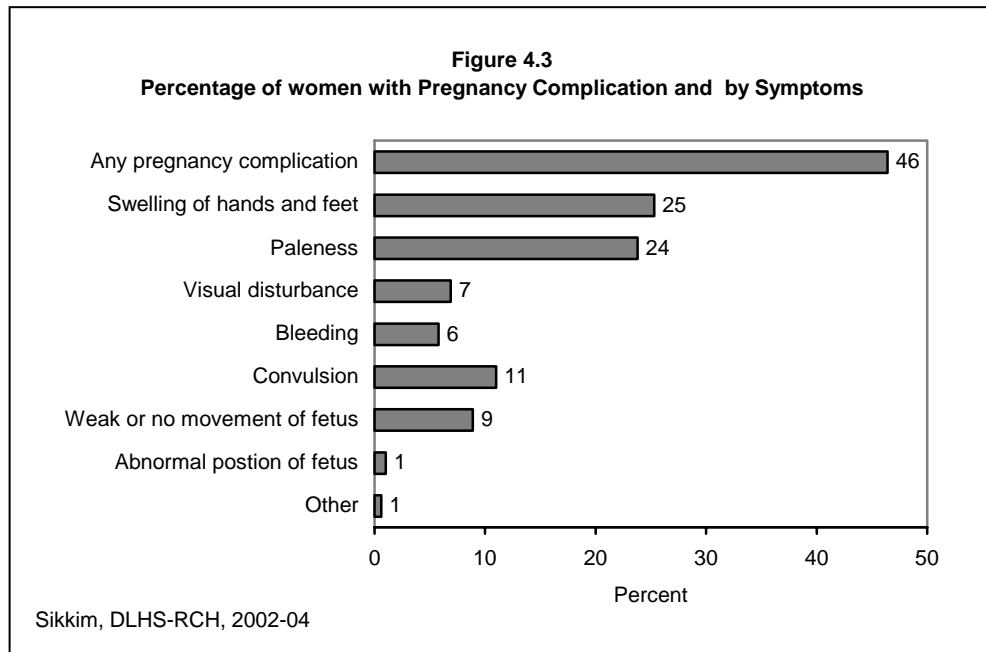


Table 4.7 PREGNANCY COMPLICATIONS

Percentage of women who had live/still births during three years preceding the survey by pregnancy complication and type of complication during pregnancy by some selected background characteristics, Sikkim, 2002-04

Background characteristic	Percentage of women with any pregnancy complication	Type of pregnancy complication;								Number of women
		Swelling of hands and feet	Paleness	Visual disturbances	Bleeding	Convulsion	Weak or no movement of foetus	Abnormal position of foetus	Other	
Age group (years)										
15-19	39.7	17.3	16.0	7.9	7.9	17.8	7.0	0.0	0.0	70
20-24	44.3	24.2	25.2	9.1	4.4	9.4	9.1	0.9	0.4	403
25-29	49.8	28.2	24.8	4.1	7.6	13.0	7.5	1.4	1.2	382
30-34	47.7	27.5	20.3	6.0	5.4	10.9	8.3	1.5	0.1	185
35-39	42.0	21.0	24.6	10.2	3.3	5.4	15.1	0.0	0.1	88
Children ever born										
1	44.2	24.5	22.4	7.2	5.9	10.0	8.2	1.3	0.7	489
2	51.1	27.9	25.8	6.9	6.6	11.1	9.9	0.7	0.0	309
3	41.7	21.9	23.5	5.6	5.1	11.7	3.1	1.4	1.4	172
4+	48.8	25.1	25.0	7.1	4.9	13.3	14.1	0.6	0.3	171
Residence										
Rural	45.1	24.5	23.2	6.6	5.6	10.3	10.0	1.1	0.7	984
Urban	54.2	29.8	27.3	8.2	6.6	15.2	2.2	0.9	0.0	162
Standard of living index										
Low	43.5	23.1	25.7	6.8	4.9	10.2	9.7	0.8	0.3	475
Medium	48.9	25.5	22.0	7.3	7.1	12.7	9.6	0.8	0.3	473
High	47.5	30.0	23.4	6.0	4.7	8.9	5.3	2.4	1.7	198
Received any ANC										
Yes	48.2	26.1	24.7	7.2	5.8	10.7	9.7	1.2	0.6	1026
No	31.4	18.4	15.8	4.2	5.4	13.9	1.8	0.0	0.1	120
Total	46.4	25.3	23.8	6.9	5.8	11.0	8.9	1.0	0.6	1,146

Note: Total includes 5 women with zero parity, 1 with missing information on whether received any ANC and 1 on type of pregnancy complication who were not shown separately. Total includes 18 women in the age-group 40-44 who were not shown separately. @ Literate women with no years of schooling are also included.

About 46 percent of the women experienced at least one pregnancy related problem. The proportion was higher among urban women (54 percent) than among rural women (45 percent). Women aged 30 years and above, and women with higher parity face at least one pregnancy related problem more than younger women and women with low parity do. This proportion is relatively high among women who had received some kind of antenatal care during the pregnancy. Forty eight percent of women who had an antenatal check-up reported that they had experienced at least one problem during their pregnancy while 31 percent of women did not receive any antenatal check-up during their pregnancy fall in this category. The major problems reported were 'swelling of hand and feet' (25 percent), 'paleness' (24 percent), and 'visual disturbance' (7 percent). Only 1 percent reported 'abnormal position of foetus', and 'vaginal bleeding' (6 percent), 'convulsions' (11 percent), and 'weak or no movement of foetus' (9 percent). Other problems related to pregnancy were reported by less than one percent of women. Swelling of hands and feet is more common among women in the age group 25-29 years, women with parity-1 and parity-2, and women with high a standard of living. The percentage of women who were more anaemic belonging to the age group 20-24 years, 25-29 years and 35-39 years, women from urban areas, women with a low standard of living and women who received some kind of antenatal care during the pregnancy. Anaemia, visual disturbance, and convulsion increased steadily with increase of parity, whereas women with parity-2 and 3 reported vaginal bleeding, weak or no movement of foetus and abnormal position of foetus more. The women in the age group 35-39 years were more likely to report vaginal bleeding and weak or no movement of foetus as pregnancy complications.

Women who reported at least one pregnancy related complication were asked whether they had consulted someone or had sought treatment for their problem and also the source of treatment. Table 4.8 shows the percentage of women who had pregnancy complications who obtained advice or had sought treatment by source of treatment according to residence and availability of health facility in the village. Twenty-nine percent of women reported that they had obtained advice or consulted someone for their problem. The proportion was slightly higher among urban women (30 percent) than among rural women (29 percent), and 23 percent of women sought treatment from those villages where health facility was available as compared to 35 percent of women with non-availability of health facility within the village.

Among women who sought treatment for pregnancy complications, 77 percent visited a government health facility including a primary health centre (32 percent) and sub-centre (9 percent). 21 percent of them visited a private health facility, and 4 percent had gone to a facility with the Indian system of medicine, while another 3 percent obtained advice from another health facility. The proportion of women who visited a private health facility is higher in urban area is 18 percent. Among women who sought treatment, 83 percent went to a doctor and 16 percent to an auxiliary nurse midwife or nurse or LHV, and another one percent to someone else. 81 percent in rural areas were examined by a doctor, whereas ANM/Nurse/LHV examined 18 percent women in rural areas.

Table 4.8 TREATMENT FOR PREGNANCY COMPLICATIONS					
Percentage of women* who had any pregnancy complication, sought treatment and source of treatment according to residence and availability of health facility in the village, Sikkim, 2002-04					
Treatment and source	Total	Residence		Availability of health facility ⁵ in the village	
		Rural	Urban	No	Yes
Percentage of women sought treatment who had any pregnancy complication	28.7	28.5	29.9	35.1	23.1
Number of women	532	444	88	199	246
Percentage sought treatment at health facility					
Government health facility ¹	77.3	79.8	*	80.6	78.9
Primary health centre	31.5	31.3	*	32.3	30.1
Sub centre	9.1	11.0	*	8.9	13.7
Private health facility ²	21.0	18.2	*	16.3	20.5
ISM ³ facility	0.4	0.5	*	0.8	0.0
Other	0.3	0.4	*	0.3	0.4
Percent distribution of women who obtained treatment from					
Doctor	82.9	80.8	*	82.4	78.9
ANM/nurse/midwife/LHV	15.9	17.8	*	16.3	19.6
Other ⁴	1.1	1.3	*	1.2	1.5
Missing	0.1	0.1	*	0.1	0.0
Total percent	100.0	100.0	100.0	100.0	100.0
Number of women	153	126	26	70	57
Note: ¹ Include municipal hospital, dispensary, urban health centre/urban health post/urban family welfare centre, community health centre/rural hospital, primary health centre and sub centre ² Include private hospital/clinic and non-governmental organization/ trust hospital ³ Either government or private Indian system of medicine. ⁴ Other include Dai trained or untrained, other health professional and ISM practitioner ⁵ Includes sub-centre, primary health centre, community health centre or referral hospital, government hospital, and government dispensary within the village* Percentages not shown: Based on few cases					

4.8 Delivery Care

4.8.1 Place of Delivery

One of the important thrusts of the Reproductive and Child Health Programme is to encourage deliveries under proper hygienic conditions under the supervision of trained health professionals. The provision of delivery services in the government health institutions is one of the components of the RCH programme. For each live/still birth during three years preceding the survey, DLHS-RCH asked the women where (place) their children were born, who assisted during the deliveries in case of home deliveries, characteristics of delivery, and any problems that occurred during the delivery. Table 4.9 and Figure 4.4 present the place of delivery. About 53 percent of the birth took place in government health institutions, 5 percent in private health institutions, and a large proportion of births (41percent) took place at home. About fifty one percent of the deliveries in rural areas and 64 percent of the deliveries in rural areas took place in public health institutions. Deliveries in health facilities in Sikkim rose from 32 percent in Round-I to 37 percent in Round-II

Table 4.9 PLACE OF DELIVERY							
Percent distribution of women who had given live/still births during three years preceding the survey, by place of delivery, according to selected background characteristics, Sikkim, 2002-04							
Background characteristics	Health institutions		Home	Other	Missing	Total percent	Number of women
	Public	Private					
Age group (in years)							
Below 20	38.5	1.1	60.3	0.1	0.0	100.0	70
25-34	54.6	5.5	39.4	0.3	0.3	100.0	970
35 and above	52.5	5.8	41.6	0.1	0.0	100.0	106
Children ever born							
1	64.4	4.7	30.5	0.4	0.0	100.0	489
2	54.1	8.0	37.2	0.1	0.5	100.0	309
3	47.8	5.8	45.6	0.0	0.8	100.0	172
4+	25.5	1.6	72.8	0.2	0.0	100.0	171
Residence							
Rural	51.6	3.4	44.6	0.1	0.2	100.0	984
Urban	64.1	16.3	17.8	0.9	0.8	100.0	162
Education							
Non-literate	34.7	2.8	62.0	0.0	0.5	100.0	266
0-9@ years	55.6	2.6	41.4	0.1	0.3	100.0	646
10 years & above	68.5	15.3	15.4	0.8	0.0	100.0	234
Religion							
Hindu	53.1	5.9	40.6	0.3	0.2	100.0	727
Christian	59.4	12.0	26.5	0.1	2.0	100.0	82
Buddhist	52.8	2.3	44.7	0.2	0.0	100.0	313
Caste#							
Scheduled caste	47.4	7.4	44.8	0.4	0.0	100.0	105
Scheduled tribe	51.3	3.5	45.1	0.2	0.0	100.0	370
Other backward class	57.9	3.8	37.3	0.3	0.7	100.0	447
Other	51.4	10.2	38.4	0.1	0.0	100.0	215
Standard of living index							
Low	39.2	1.3	58.8	0.1	0.6	100.0	475
Medium	62.1	3.9	33.8	0.2	0.0	100.0	473
High	66.6	18.0	14.7	0.8	0.0	100.0	198
Number of antenatal check-ups							
No check-up	19.8	0.8	79.4	0.1	0.0	100.0	120
1	(27.3)	(3.0)	(69.7)	(0.0)	(0.0)	100.0	47
2	46.2	1.1	52.0	0.0	0.7	100.0	201
3	52.3	4.5	43.1	0.1	0.0	100.0	256
4+	67.8	8.5	23.0	0.5	0.3	100.0	522
Delivery characteristics							
Normal	50.1	3.7	45.9	0.3	0.0	100.0	1007
Caesarean	78.4	18.1	3.6	0.0	0.0	100.0	128
Availability of health facility¹ in the village							
No	53.9	3.8	41.8	0.1	0.4	100.0	374
Yes	50.3	3.2	46.4	0.2	0.0	100.0	610
Total	53.4	5.2	40.9	0.2	0.3	100.0	1,146

Note: Total includes 5 women with zero parity, 1 with missing information on number of ANC visits, 4 on delivery characteristics who were not shown separately. Total includes 24 women in other religion and 8 in assisted delivery who were not shown separately# Total figure may not add to N due to do not know and missing cases. @ Literate women with no years of schooling are also included.¹ Includes sub-centre, primary health centre, community health centre or referral hospital, government hospital, and government dispensary within the village

The proportion of births occurring in health institutions is higher for women who are 25 and above (60-58 percent) than for women below 20 years (40 percent). Institutional deliveries, particularly in private health facilities, increase sharply with education and the standard of living. Around 38 percent of the births to non-literate women and 84 percent births to literate women who had completed at least 10 or more years of schooling took place at health institutions.

Women with a high standard of living were more likely to give birth in health institutions than women with a low standard of living (Figure 4.4). The proportion of institutional deliveries decreases as parity increases from parity one (69 percent) to parity four and above (27 percent). Institutional delivery is much higher for Christian women (71 percent) than for Hindus (59 percent) and Buddhist women (55 percent). About 55 percent each, births of women from scheduled-tribes and scheduled castes are institutional deliveries as compared to 62 percent each, of births to women from other backward classes and women from the 'other' caste category. Institutional deliveries are more common among women who had four or more antenatal check-ups (76 percent) than among who had fewer antenatal check-ups (47-57 percent). Institutional deliveries are least prevalent among births to women who did not receive any antenatal check-ups (21 percent). As expected, a large proportion of births occurred through caesarean section (96 percent), and 54 percent of normal deliveries took place at health institutions. At the same time, 4 percent of caesarean deliveries and 46 percent of normal deliveries took place at home. Fifty-four percent of births took place at health institutions in the village with availability of health facility compared to 58 percent of births from villages without any health facility.

4.8.2 Assistance During Home Delivery

Table 4.10 shows distribution of assistance during home delivery by selected background characteristics. Generally, assistance during delivery can be provided by medical staff (doctors, ANM/nurse/LHV, TBA, un-trained *dai*), and relatives/friends. If more than one type of attendant assisted during the delivery, then only the most qualified person is considered. In the last three years only 2 percent of home deliveries were attended by doctors, 6 percent by ANM or nurse or LHV, 1 percent by trained birth attendants, 2 percent by untrained *dais*, 88 percent were attended by relatives and friends and less than one percent of home deliveries were not attended by anyone (Figure 4.4). Overall, health professionals attended 8 percent of deliveries that took place at home. The percentage of births (home delivery) attended by health professionals do not differ much between women age. About 9 percent of births attended by health professional for women age 25-34 years and only 6 percent of births for women age 35 and above were attended by health professionals. In rural areas, 8 percent of births were attended by health professionals as compared to 11 percent of that in urban areas. The percentage of births attended by health professionals were decreased steadily with increasing with parity of women.

Births to literate women who had completed 10 or more years of schooling which were attended by health professionals is higher than those of non-literate women. About 11 percent of home deliveries to women with a medium standard of living and 4 percent of deliveries to women with a low standard of living were attended by health professionals. Home deliveries which were attended by health professionals is same for Hindu women as well as Buddhist women (8 percent each). Only 7 percent each of births to women from scheduled castes and scheduled tribes, eight

Table 4.10 ASSISTANCE DURING HOME DELIVERY AND SAFE DELIVERY

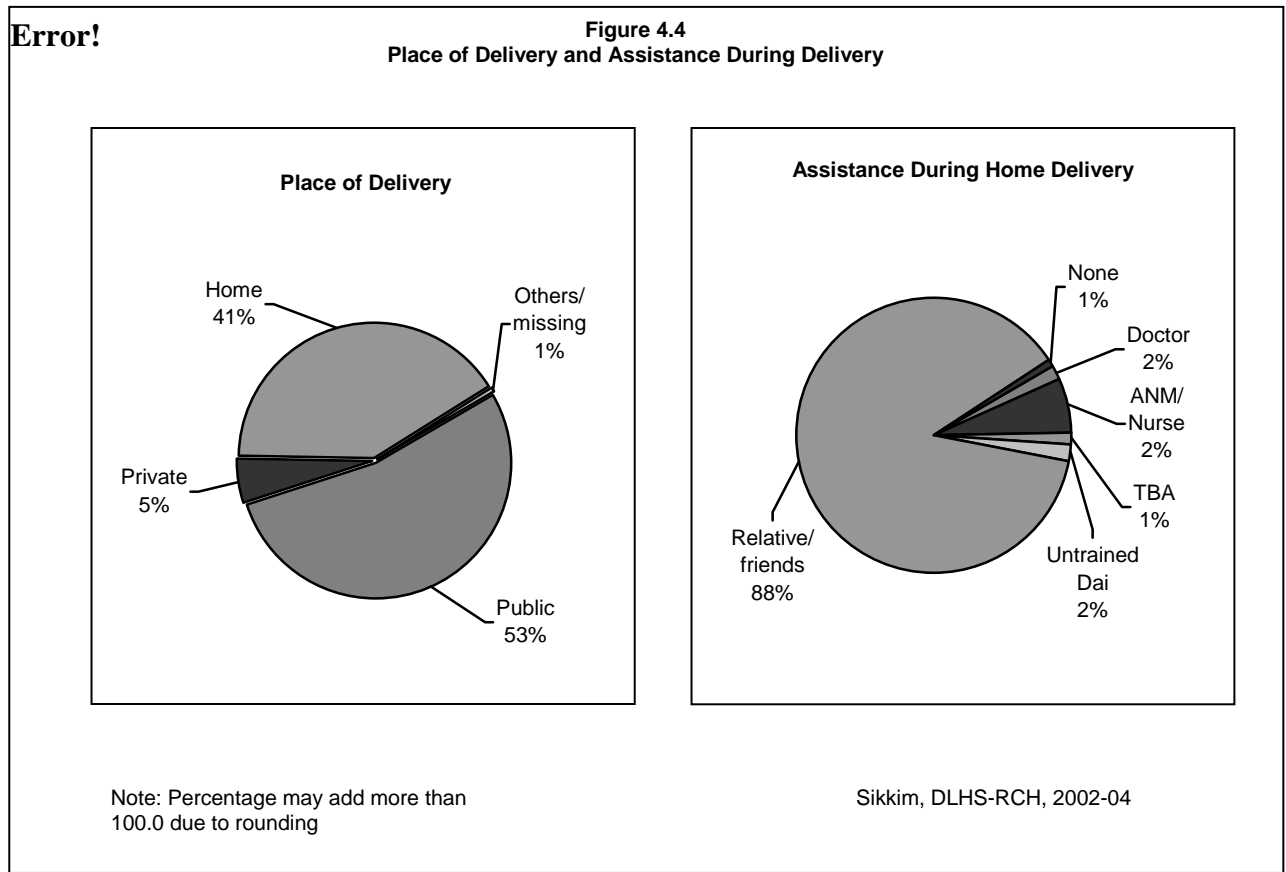
Percent distribution of women who had given live/still births during three years preceding the survey, by assistance during home delivery, and percentage of safe delivery, according to selected background characteristics, Sikkim, 2002-04

Background characteristics	Attendant assisting during home delivery ¹						Number of women	Percentage of safe ² delivery
	Doctor	ANM/ Nurse/ LHV	TBA	Un- trained <i>dai</i>	Relative/ friends	None		
Age group (in years)								
Below 20	(0.0)	(2.6)	(0.0)	(2.6)	(94.7)	(0.0)	42	40.9
25-34	2.2	6.9	1.8	1.9	86.6	0.6	382	63.6
35 and above	(0.0)	(5.8)	(0.0)	(0.0)	(88.4)	(5.8)	44	60.1
Children ever born								
1	4.1	10.9	0.6	2.9	81.6	0.0	149	73.7
2	1.9	2.2	3.4	1.5	90.8	0.2	115	63.6
3	0.0	6.3	0.0	1.2	91.2	1.3	78	56.5
4+	0.0	4.3	1.5	1.7	90.6	1.8	125	30.2
Residence								
Rural	1.9	5.6	1.1	2.0	88.6	0.8	439	58.4
Urban	(0.0)	(11.4)	(2.9)	(2.9)	(82.9)	(0.0)	29	83.3
Education								
Non-literate	1.7	3.0	0.0	3.2	90.9	1.3	165	40.4
0-9@ years	2.1	6.8	1.7	1.4	87.5	0.5	267	61.9
10 years & above	(0.0)	(15.0)	(2.5)	(0.0)	(82.5)	(0.0)	36	86.4
Religion								
Hindu	1.8	6.6	1.3	2.4	87.6	0.2	295	62.3
Christian	*	*	*	*	*	*	22	72.4
Buddhist	2.0	6.4	1.2	0.1	88.3	2.0	140	58.9
Other	*	*	*	*	*	*	11	52.5
Caste#								
Scheduled caste	(4.9)	(2.4)	(0.0)	(2.4)	(90.2)	(0.0)	47	59.2
Scheduled tribe	0.9	5.7	2.3	0.0	89.7	1.5	167	57.7
Other backward class	1.3	6.8	1.7	2.8	87.1	0.2	166	64.7
Other	1.3	8.0	0.0	2.8	87.1	0.8	82	65.1
Standard of living index								
Low	1.6	2.8	1.1	0.4	93.2	1.0	279	43.1
Medium	2.3	9.1	0.5	5.0	82.6	0.4	160	69.9
High	(0.0)	(20.0)	(5.7)	(0.0)	(74.3)	(0.0)	29	88.0
Number of antenatal check-ups								
No check-up	0.4	1.9	0.9	2.1	92.5	2.2	95	22.4
1	(0.0)	(4.3)	(0.0)	(0.0)	(95.7)	(0.0)	38	22.1
2	1.7	6.3	1.0	2.0	88.1	0.8	105	51.5
3	1.2	5.3	0.0	2.9	90.3	0.3	110	59.6
4+	4.0	11.0	4.0	1.4	79.4	0.2	120	79.7
Delivery characteristics								
Normal	1.2	6.2	1.0	1.9	89.0	0.7	462	57.2
Caesarean	*	*	*	*	*	*	5	98.3
Availability of health facility³ in the village								
No	2.3	4.2	0.7	1.7	90.6	0.6	156	60.4
Yes	1.6	6.4	1.3	2.2	87.6	0.9	283	57.2
Total	1.8	6.2	1.4	1.9	87.9	0.7	468	61.9

Note: Total includes one woman with zero parity and one in assisted delivery who were not shown separately. @ Literate women with no years of schooling are also included. # Total figure may not add to N due to do not know and missing cases

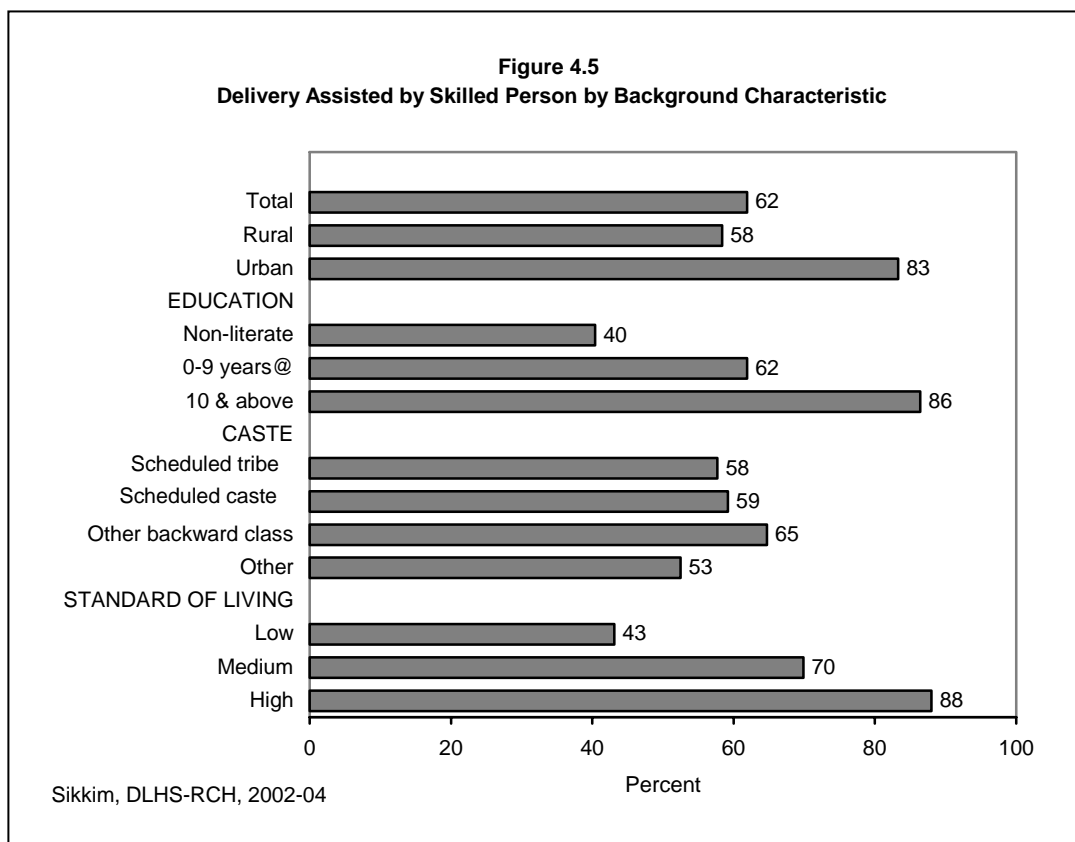
¹ If the respondent mentioned more than one attendant, only the most qualified attendant is shown ² Either institutional delivery or home delivery assisted by doctor/ANM/Nurse/LHV ³ Includes sub-centre, primary health centre, community health centre or referral hospital, government hospital, and government dispensary within the village() Based on less than 50 unweighted cases* Percentages not shown: Based on few cases

percent to other backward classes and 9 percent to women belonging to 'other castes' category were attended by health professionals. Two percent of home deliveries to women who did not have any antenatal check-ups were attended by health professionals compared to 15 percent of home deliveries to women who had four or more antenatal check-ups. About 7 percent of home deliveries that were normal were attended by health professionals, but the result should be interpreted with caution due to the small number of cases. Seven percent home deliveries were attended by health professionals in villages with non-availability of a health facility and the corresponding figure for villages with availability of a health facility is 8 percent.



4.8.3 Delivery Assisted by Skilled Persons

The extent of safe deliveries varied substantially by background characteristics of women (Table 4.10 and Figure 4.5). More than half of the births (62 percent) were safe in Sikkim. In urban areas (83 percent) of the deliveries were safe as against little more than half (58 percent) in rural areas. About 41-64 percent of the deliveries were safe for younger women aged below 35 than to elderly women (60 percent). The proportion of safe deliveries was much lower among women from other religion (53 percent) than among Christian and Hindu women (72-62 percent). Only 58 percent of births to women from scheduled-tribe were safe deliveries, compared to 59 percent to women from scheduled-castes, 65 percent each to women from other backward classes and women from 'other castes' category. Proportion of safe deliveries decreases as parity rises from 1 (74 percent) to 4 and above (30 percent). Safe deliveries were least prevalent among women who did not receive any antenatal check-ups (22 percent), and it is most prevalent among women who had four or more antenatal check-ups (80 percent). The proportion of safe deliveries increased sizeably with women's education and standard of living. Only forty percent of non-literate women had safe deliveries whereas its prevalence is 86 percent among women who had completed at least high school. Women with a high standard of living had 88 percent safe deliveries compared to 70 percent of women with a medium standard of living and 43 percent with a low standard of living. As compared to women who had caesarean deliveries (98 percent) only 57 percent of women with normal deliveries are safe deliveries. The proportion of safe deliveries was slightly higher in villages with a health facility than to women from those villages where health facilities are not available.



4.9 Reasons for Not Going to Health Institutions for Delivery

Table 4.11 shows the percentage distribution of women who did not deliver in health institutions in the three years preceding the survey. The main reason for not going to health institutions has been presented according to residence and availability of health facility in the village. A little less than half (45 percent) of the women stated that it was not necessary to deliver in health institutions. The number of urban women (29 percent) who felt that it was not necessary to deliver at an health institution is much lower than that of rural women (46 percent). Also, 48 percent of women stated that it was not necessary to deliver in health institutions when their villages were equipped with health facilities, when compared to 43 percent of women from villages where a health facility is not available. About 3 percent of the women felt that it was not customary to deliver in health institutions. Other factors contributing for not going to health institutions for delivery were, 'it cost too much' (3 percent), 'no transportation' or 'health facility is too far' (7 percent), 'no time to go' (15 percent), 'family did not allow' (less than one percent), 'better care at home' (18 percent), and 'other' (2 percent). About 3 percent reported lack of knowledge regarding the delivery facilities. Two percent women did not opt for institutional delivery due to poor quality of services. The corresponding figures were 3 percent in both urban and rural areas. It is also needs mention that 2 percent of women from villages with a health facility reported lack of knowledge as a reason for not having delivery at home.

Table 4.11 REASONS FOR NOT GOING TO HEALTH INSTITUTIONS FOR DELIVERY					
Percent distribution of women who had given last live/still birth at home during three years preceding the survey by the main reason for not going to health institution for delivery, according to residence and availability of health facility in the village, Sikkim, 2002-04					
Reason	Total	Residence		Availability of health facility ¹ in the village	
		Rural	Urban	No	Yes
Not Necessary	45.0	46.2	(28.6)	43.1	47.9
Not customary	2.8	2.2	(5.7)	0.6	3.1
Cost too much	3.2	2.5	(8.6)	3.4	1.9
Health facility too far/ No transport	7.0	7.4	(5.7)	8.4	6.9
Poor quality service	2.4	2.5	(2.9)	3.7	1.9
No time to go	15.4	15.9	(25.7)	22.3	12.3
Family did not allow	0.7	0.7	(0.0)	0.1	1.1
Better care at home	18.1	17.3	(20.0)	13.2	19.5
Lack of knowledge	2.9	3.1	(0.0)	4.6	2.3
Other	1.9	1.7	(2.9)	0.7	2.2
Total percent	100.0	100.0	100.0	100.0	100.0
Number of women	468	439	29	156	283

Note:¹ Includes sub-centre, primary health centre, community health centre or referral hospital, government hospital, and government dispensary within the village.
 () Based on less than 50 unweighted cases

4.10 Delivery Characteristics by District

Table 4.12 shows the delivery characteristics by district; institutional delivery (delivery in government or private health institutions), home delivery and attendant assistance during home delivery for last live/still births to women during the three years preceding the survey. The proportion of institutional delivery is lowest in North Sikkim (36 percent) and followed by West Sikkim (39 percent) and it is highest in South Sikkim (72 percent).

Table 4.12 DELIVERY CHARACTERISTICS BY DISTRICT				
Place of delivery, assistance during home deliveries, and percentage of safe deliveries by district, Sikkim, 2002-04				
Districts	Percentage of women who had institutional delivery	Percentage of women who had delivery at home	Home delivery assisted by skilled ¹ persons	Percentage of safe ² delivery
East	69.6	29.5	9.7	72.4
North	36.0	62.8	7.2	40.5
South	71.5	28.5	3.9	72.6
West	38.8	61.2	8.2	43.8
Sikkim	58.6	40.9	8.0	61.9

Note:*Table includes last live/still birth since 1-1-1999/1-1-2001. ¹ Includes Doctor/ANM/Nurse. ² Either institutional delivery or home delivery assisted by skilled person.

Compared to delivery in a private health facility, deliveries at home are more common in all the districts of Sikkim. Almost 65 percent of births are by delivery at home in the state. In South Sikkim 29 percent and in East Sikkim 30 percent of the births took place at home and North and West Sikkim had about 63 and 61 percent, respectively, of home deliveries. Percentage of home deliveries which were attended by a health professionals in all the districts range from 4 percent to 10 percent. The extent of safe deliveries also varies by district, in 2 of 4 districts, the proportion of safe deliveries are below state average, it ranges from 41 percent in North to 73 percent in South. (See Map-4).

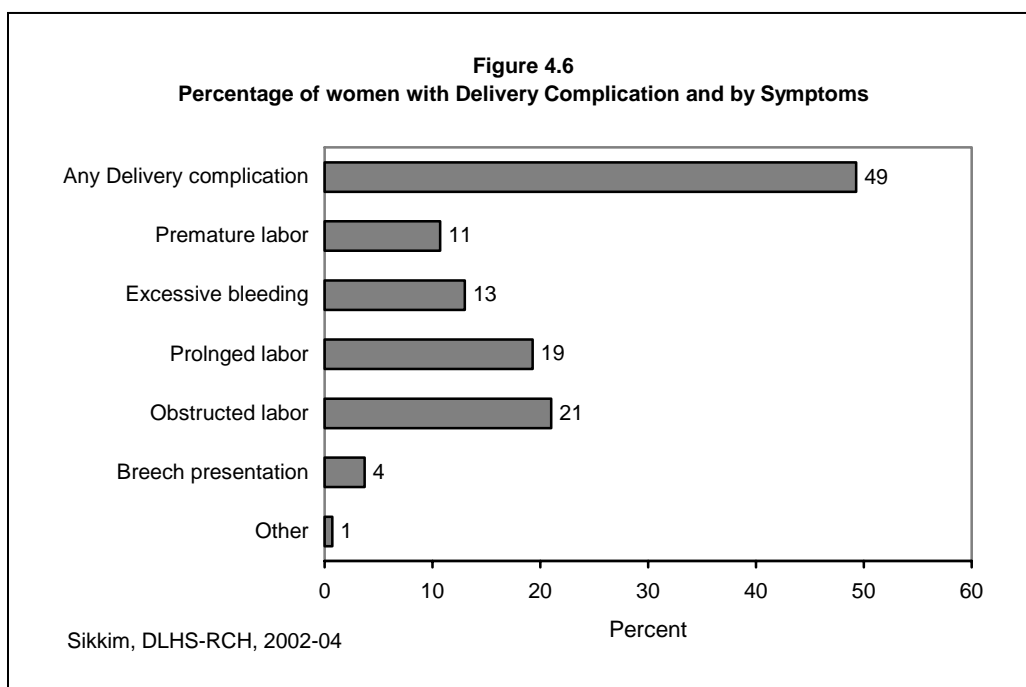
4.11 Complications During Delivery

Complications during delivery include ‘premature labour’, ‘obstructed labour’, ‘prolonged labour (more than 12 hours)’, ‘breech presentations’, ‘excessive bleeding during delivery’ and ‘other problems’ at the time of delivery reported by women during the three years preceding the survey. Forty-nine percent of the women experienced at least one problem during delivery (Table 4.13 and Figure 4.6). The proportion of delivery complications is higher among urban women (56 percent) than among rural women (48 percent). Younger women below the age of 20 years, and women with low parity 1-2 reported more at least one delivery related problem than older women

aged 35 years and above and women with higher parity. This proportion is relatively high among women who had received some kind of antenatal care during their pregnancy. Forty-one percent of women who had not had any antenatal check-up reported that they experienced at least one problem during their pregnancy when compared to 42-51 percent of women who had received some kind of antenatal check-up. Among women who had caesarean delivery, 74 percent reported experiencing such problems, and 46 percent women with normal deliveries also cited complications during delivery. A relatively higher proportion of women who delivered in health institutions (58-53 percent) faced at least one delivery complication compared to those who delivered at home or other places (38 percent).

Table 4.13 DELIVERY COMPLICATIONS								
Percentage of women who had given last live/still births during three years preceding the survey by delivery complication, according to selected background characteristics, Sikkim, 2002-04								
Background characteristics	Any delivery complication	Type of delivery complication;						Number of women
		Premature labour	Excessive bleeding	Prolonged labour	Obstructed labour	Breech presentation	Other	
Age group (in years)								
Below 20	54.0	9.8	9.0	24.4	31.0	6.2	0.0	70
25-34	49.9	11.0	13.1	19.4	20.8	3.6	0.7	970
35 and above	41.2	8.2	14.9	14.9	16.5	2.9	0.8	106
Children ever born								
1	53.4	14.1	11.5	23.9	23.8	4.1	0.8	489
2	47.8	9.5	11.6	17.7	21.5	2.6	1.1	309
3	48.5	5.8	17.9	14.0	17.0	6.1	0.0	172
4+	40.2	7.1	14.7	15.0	16.2	1.6	0.2	171
Residence								
Rural	48.2	11.8	13.5	19.3	19.4	3.5	0.5	984
Urban	56.3	3.6	10.1	19.6	31.0	4.7	1.6	162
Number of antenatal check-ups								
No check-up	41.1	8.6	12.1	17.4	13.1	5.1	2.9	120
1	(42.4)	(15.2)	(18.2)	(18.2)	(10.6)	(3.0)	(0.0)	47
2	45.7	11.5	13.1	16.6	23.7	1.0	0.2	201
3	52.2	13.2	16.9	18.7	16.3	3.4	0.4	256
4+	51.1	9.2	10.6	21.2	25.0	4.4	0.5	522
Delivery characteristics								
Normal	46.1	9.2	13.3	17.6	20.7	1.8	0.6	1007
Caesarean	74.0	20.7	10.3	31.5	24.6	18.8	1.4	128
Place of delivery								
Government sector	57.5	11.9	13.3	23.5	23.5	5.3	1.0	612
Private sector	53.4	15.8	3.9	20.1	29.5	2.7	0.0	60
Home	38.3	8.4	14.0	13.9	16.6	1.7	0.3	468
Total	49.3	10.7	13.0	19.3	21.0	3.7	0.7	1,146
Note: Total includes 5 women with zero parity, one with missing information on number of ANC check-ups, 4 on delivery characteristics, 3 on place of delivery who were not shown separately. Total includes 8 women in assisted delivery and 3 in other place of delivery who were not shown separately.								

The major problems reported were ‘obstructed labour’ (21 percent), ‘prolonged labour’ (19 percent), ‘premature labour’ (11 percent), and ‘excessive bleeding (13 percent). Only 4 percent reported ‘breech presentation’, and less than one percent reported ‘other’ problems related to delivery. Premature labour, prolonged labour, obstructed labour and breech presentation are more common among younger women, and women with low parity. Rural women were more likely to report delivery complications such as excessive bleeding, whereas premature labour, prolonged labour, obstructed labour and breech presentations are more prevalent among urban women. Premature labour, prolonged labour, obstructed labour and other health problems related to delivery were more among women whose last delivery was assisted with instruments, and breech presentation was more likely among those who had a caesarean, and excessive bleeding during delivery than by women with normal delivery during the three years preceding the survey. Women whose recent delivery was performed in medical institutions were more likely to report premature labour, prolonged labour, breech presentation and obstructed labour compared with place of delivery other than medical institutions.



4.12 Post Delivery Complications and Treatment

Table 4.15 and Figure 4.7 present information about women who faced complications after delivery according to some selected background characteristics. The incidence of post delivery complications judged by any of the following during the first six-weeks of delivery- ‘high fever’, ‘lower abdominal pain’, ‘foul smelling vaginal discharge’, ‘excessive bleeding’, ‘convulsion’, ‘severe headache’, and ‘other’ problems. Forty percent of women reported that they faced any of the problems during the first six weeks after their delivery. The proportion of women who cited at least one post delivery complication is higher in urban areas (55 percent) than in rural areas (37

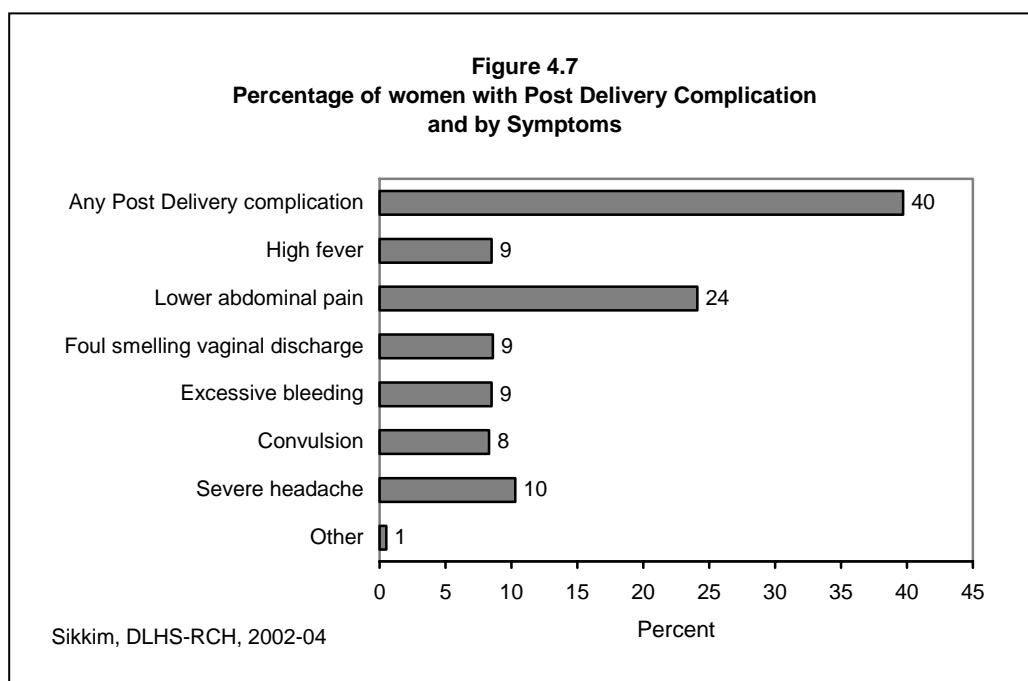
percent). Older women aged 35 years and above, and women with higher parity 4 and over, had their deliveries assisted with instruments, and those whose deliveries took place at home, and those whose deliveries at home were attended by none are more prone to report at least one post delivery related problem.

Background characteristics	Any post delivery complication	Type of post delivery complication;							Number of women
		High fever	Lower abdominal pain	Foul smelling vaginal discharge	Excessive bleeding	Convulsion	Severe headache	Other	
Age									
Below 20	41.5	7.7	20.3	3.3	12.0	8.1	12.8	0.0	70
25-34	39.9	8.9	24.2	9.1	8.2	8.6	10.5	0.6	970
35 and above	36.6	5.1	25.7	7.9	8.1	5.7	6.5	0.0	106
Children ever born									
1	39.5	7.1	21.2	8.4	6.3	7.9	9.2	0.4	489
2	42.0	8.1	27.5	7.0	9.6	8.0	11.6	0.3	309
3	36.9	6.9	24.6	6.5	12.8	8.6	7.0	1.5	172
4+	39.4	13.9	26.6	14.5	7.8	10.1	14.6	0.1	171
Residence									
Rural	37.1	7.8	22.0	7.2	8.4	7.7	11.0	0.4	984
Urban	55.3	12.5	37.0	17.6	8.8	12.4	6.2	1.2	162
Delivery characteristics									
Normal	38.8	8.9	23.0	8.9	8.5	8.1	10.1	0.6	1007
Caesarean	48.3	5.1	33.8	6.9	8.2	10.7	13.0	0.0	128
Place of delivery									
Government sector	38.7	6.9	21.9	8.2	7.8	8.1	8.0	0.3	612
Private sector	52.6	4.5	33.4	9.2	3.0	8.6	16.8	0.0	60
Home	39.7	11.1	26.1	9.2	10.1	8.7	12.5	0.8	468
Assistance during home delivery									
ANM/Nurse/LHV	(34.3)	(5.7)	(20.0)	(17.1)	(11.4)	(11.4)	(11.4)	(0.0)	29
Relative/friends	39.8	11.4	27.8	8.0	9.1	7.9	11.8	0.4	411
Total	39.7	8.5	24.1	8.6	8.5	8.3	10.3	0.5	1,146

Note: Total includes 5 women with zero parity, 4 with missing information on delivery characteristics and 3 on place of delivery who were not shown separately. Total includes 8 women in assisted delivery, 3 in other place of delivery, 8 assisted by doctor during home delivery, 7 by TBA, 9 by untrained Dai and 4 assisted by none who were not shown separately.

Women reported high fever (9 percent), severe headache (10 percent), lower abdominal pain (24 percent), foul smelling vaginal discharge (9 percent), excessive vaginal bleeding (9 percent), and convulsion (8 percent). Less than one percent of women reported other problems. Rural-urban differences in all symptoms of postpartum complication are large. All the postpartum complications, except excessive bleeding and severe headache, are more prevalent among women in the age group 25-34 years. The symptoms of postpartum complications were increasing steadily with increased parity. There are minimal differences in the likelihood of having different

symptoms in the postpartum period by place of delivery. Women who had the last delivery at home and were not assisted by anyone were more likely to have high fever, lower abdominal pain and other postpartum problems during the first six weeks of delivery. Symptoms like high fever, lower abdominal pain, foul smelling vaginal discharge and severe headache are more common for women who delivered at home assisted by an ANM/nurse/LHV, trained birth attendant, untrained *dai*, or relatives or friends.



Women who reported at least one complication during the postpartum period were asked, whether they had consulted or sought treatment for their problems and also the source of treatment. Table 4.16 shows the percentage of women who had post delivery complications and who sought treatment by source of treatment according to residence and availability of health facility in the village. Twenty percent of women reported that they had obtained advice or had consulted someone for their problems. The proportion was higher among rural women (20 percent) than among urban women (18 percent), and 22 percent of women sought treatment from those villages where health facility was available as compared to 17 percent of women who did not have a health facility within the village.

Table 4.15 TREATMENT FOR POST DELIVERY COMPLICATIONS

Percentage of women who had last live/still births during three years preceding the survey and who had any post delivery complication, sought treatment for the problems, and source of treatment according to residence and availability of health facility in the village, Sikkim, 2002-04

Treatment and source	Total	Residence		Availability of health facility ⁵ in the village	
		Rural	Urban	No	Yes
Percentage of women sought treatment who had any post delivery complication	19.7	20.0	18.3	16.6	22.2
Number of women	455	366	89	144	222
Percentage sought treatment at health facility					
Government health facility ¹	79.7	77.6	*	*	(78.0)
Primary health centre	24.1	25.2	*	*	(14.6)
Sub centre	7.8	9.6	*	*	(7.3)
Private health facility ²	16.2	17.3	*	*	(9.8)
ISM ³ facility	1.4	1.7	*	*	(4.9)
Other	2.9	3.6	*	*	(7.3)
Percent distribution of women who obtained treatment from					
Doctor	81.7	77.6	*	*	(80.5)
ANM/nurse/midwife/LHV	15.8	19.4	*	*	(14.6)
Other health professionals ⁴	2.5	3.0	*	*	(4.9)
Total percent	100.0	100.0	100.0	100.0	(100.0)
Number of women	90	73	16	24	49
Note: ¹ Include municipal hospital, dispensary, urban health centre/urban health post/urban family welfare centre, community health centre/rural hospital, primary health centre and sub centre ² Include private hospital/clinic and non-governmental organization/ trust hospital ³ Either government or private Indian system of medicine ⁴ Other health professionals include Dai (trained or untrained), relative/friends and ISM practitioners ⁵ Includes sub-centre, primary health centre, community health centre or referral hospital, government hospital, and government dispensary within the village () Based on less than 50 unweighted cases. * Percentages not shown: based on few cases.					

Among women who sought treatment for complications in the postpartum period, only 80 percent visited a government health facility including primary health centre and sub-centre (24 percent and 8 percent). About sixteen percent of women visited a private health facility, and 2 percent went to a facility with the Indian system of medicine (either government or private) and another 3 percent obtained advice from other health facilities. The proportion of women who visited a government health facility in rural areas is 78 percent. On the other hand, the proportion of women seeking treatment from a private health facility is 10 percent for women who belonged to villages with availability of health facility within the village. Among women who sought treatment, 82 percent preferred to go to a doctor and 16 percent visited an auxiliary nurse midwife or nurse or LHV, 3 percent went to other health professionals. Seventy-eight percent of these women in rural areas went to a doctor, whereas a visit to an ANM/nurse/LHV was 19 percent. Eighty-one percent of women who belonged to villages with availability of health facilities were seen by doctor.

4.13 Obstetric Morbidity by District

The extent of health problems/ complications women suffer during pregnancy, delivery and post delivery period indicates the state of obstetric morbidity. Table 4.17 presents the incidence of pregnancy, delivery and post-delivery complications and treatment seeking behaviour in case of pregnancy and post delivery complications by district. As mentioned earlier, in the state, 46 percent, 49 percent and 40 percent of the women experienced pregnancy, delivery and post delivery complications respectively. About 29 percent of the women sought treatment for pregnancy complications and 20 percent for post delivery complications. In every district, more than 20 percent of the women experienced at least one of the symptoms of pregnancy complications.

Table 4.16 PREGNANCY, DELIVERY AND POST DELIVERY COMPLICATIONS					
Extent of pregnancy, delivery and post delivery complications and treatment seeking behaviour by districts, Sikkim, 2002-04					
District	Percentage of women ¹				
	Who had complication during pregnancy	Sought ² treatment for pregnancy complication	Who had delivery complication	Who had post delivery complication	Sought ³ treatment for post delivery complication
East	61.3	30.1	64.0	55.7	22.8
North	53.5	34.5	42.3	45.7	19.3
South	35.8	24.1	40.4	24.3	5.6
West	21.3	21.7	26.5	17.8	12.0
Sikkim	46.4	28.7	49.3	39.7	19.7

Note:¹ Women who had last live/still birth during three years preceding the survey. ² Women who reported at least one complication of pregnancy. ³ Women who reported at least one post delivery complication.

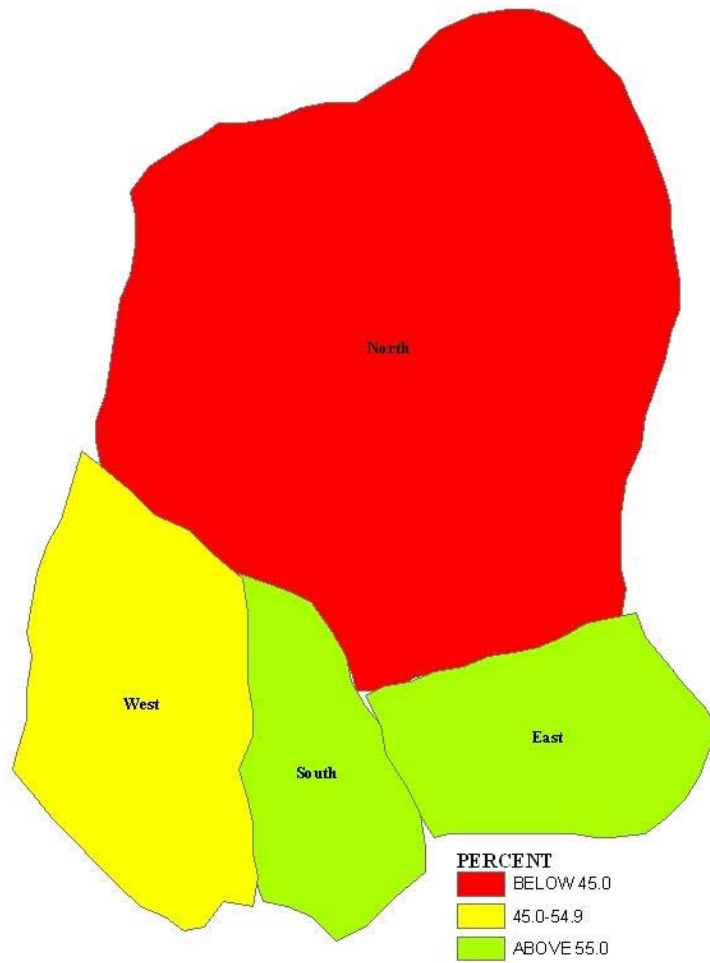
In the districts of East Sikkim (61 percent) and North Sikkim (54 percent), the incidence of pregnancy complications is comparatively higher than other two districts. The incidence of post delivery complication is higher than that of pregnancy and delivery complications. The percentage of women who experienced at least one type of delivery complication ranges from 27 percent in West Sikkim to 64 percent in East Sikkim, and incidence of post delivery complication varies from 18 percent in West Sikkim to 56 percent in East Sikkim. The incidence of all three types of complications seems to be linked with each other in varying proportions.

In most of the districts of Sikkim about three-quarters of the women received some kind of antenatal care. In spite of a large proportion of women having contact with a doctor or any other health workers during the antenatal period, in all districts less than 35 percent of the women sought treatment for pregnancy complication. Similarly, among women who experienced at least one symptoms of postpartum complication, the proportion seeking treatment also varies across the districts, ranging from 6 percent in South Sikkim to 23 percent in East Sikkim.

Map-3 : Three or more antenatal check-ups, Sikkim, 2002-04

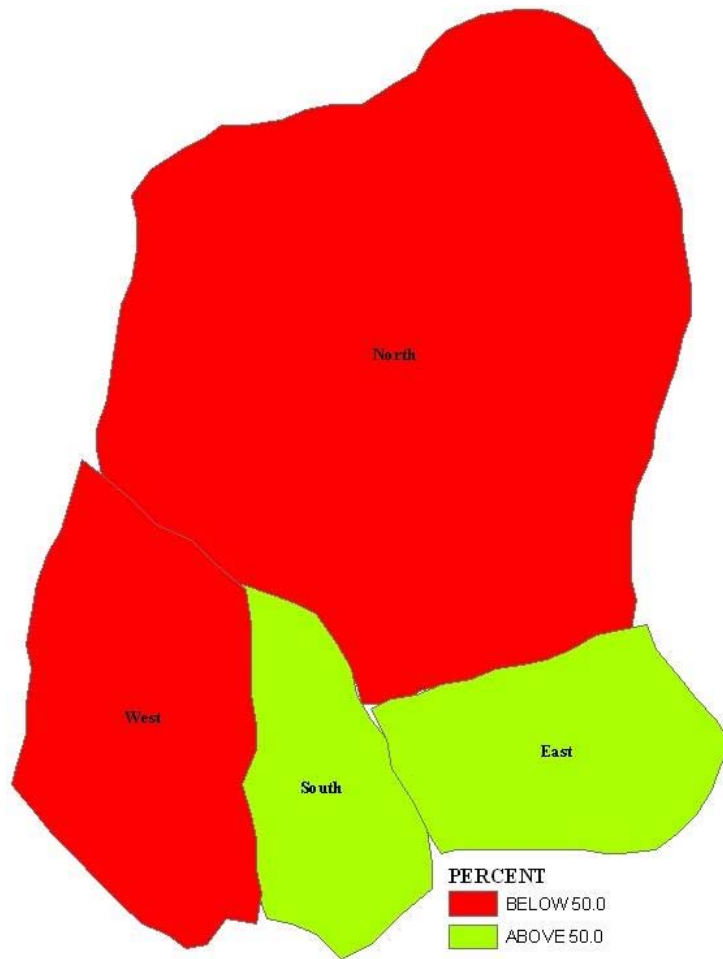
MAP-3

Percentage of Women Received Three or more Antenatal Check Ups



MAP-4

Percentage of Delivery Attended by Skilled Person



CHAPTER V

CHILD CARE AND IMMUNIZATION

Child health services under the Reproductive and Child Health (RCH) programme include health education to mothers on breast-feeding and services for immunization, Vitamin A supplements and Iron prophylaxis, treatment of diarrhoea and Acute Respiratory Infections (ARIs). The District Level Household Survey (DLHS) covered all the currently married women whose last surviving child was born during the three years preceding the survey, and information on those breastfeeding currently and duration of breastfeeding. They were also asked about their awareness of diarrhoea management and danger signs of pneumonia and practices followed in case of episodes of diarrhoea and ARI among the children. Data on immunization, administering Vitamin A supplements and Iron prophylaxis was collected for the last two living children born after January 1, 1999/2001. This chapter presents an analysis of the data collected on the above aspects.

5.1 Breastfeeding

Educating mothers on correct breastfeeding practices and child nutrition is one of the components of the RCH programme. Infant feeding practices have significant effects on the health of both mothers and children. Mothers are affected through the influences of breastfeeding on the period of postpartum infertility, and hence on fertility levels and the length of birth intervals. These effects vary according to the duration and intensity of breastfeeding. Proper infant feeding, starting from the time of birth, is important for the physical and mental development of the child. Breastfeeding improves the nutritional status of young children and reduces morbidity and mortality. Breast milk not only provides important nutrients, but also protects the child against infection. The timing and type of supplementary foods introduced in an infant's diet have significant effects on the child's nutritional status.

As recommended by the World Health Organization (WHO), breastfeeding should be initiated immediately after birth and should be continued upto a minimum of six months. The WHO also suggests that the yellowish milk, known as colostrums, should be given to the baby because it provides protection against certain infections. Afterwards, it has to be supplemented with other semi-solid and solid foods at the proper time intervals.

Table 5.1 shows the breastfeeding practices among children born during the three years preceding the survey in Sikkim. Although, the practice of breastfeeding is common in Sikkim, the initiation of breastfeeding within two hours of the birth of the child is not always followed. Sixty percent of the children were breastfed within two hours of birth, and 83 percent were breastfed within one day of birth (including those who were breastfed within two hours of birth), while 16 percent of children were breastfed after one day of birth. As shown in Figure 5.1, about 23 percent of the children were breastfed within one day of birth but after two hours of birth, 14 percent were breastfed after the first day of birth but before 3 days, and 2 percent children were put to the breast after three days. One percent of the children were never breastfed. About half of the women (58 percent) who gave birth to children during the three years preceding the survey squeezed the first milk from the breast before they began breastfeeding. Women belonging to

low standard (66 percent) of living were more likely to breastfeed within two hours of birth than those belonging to medium (61 percent) and high (48 percent) standard of living. Fifty-nine percent of children from scheduled tribe were breastfed within two hours of birth, and 80 percent of children from scheduled castes were breastfed within one day of birth. Women who reside in urban areas, women who have had high school education and above and women who live in households with a high standard of living are much less likely to start breastfeeding their children early. A large proportion of children from urban areas (22 percent), children from scheduled castes (21 percent), children of educated mothers (68 percent), and children from households with a high standard of living (73 percent) were put to the breast after one day of birth.

Table 5.1 INITIATION OF BREASTFEEDING					
Percentage of children under age 3 whose mother started breastfeeding within two hours of births, within one day of birth, and after one day of birth and percentage whose mother squeezed the first milk from her breast before breastfeeding by selected background characteristics, Sikkim, 2002-04					
Background characteristic	Percentage started breastfeeding			Percentage whose mother squeezed first milk from breast	Number of children
	Within two hours of birth	Within one day of birth ¹	After one day of birth		
Residence					
Rural	62.2	84.7	14.6	54.1	837
Urban	50.2	75.7	21.8	82.5	151
Mother's education					
Non-literate	67.3	84.1	15.9	51.6	234
0-9@ years	60.6	85.2	13.8	57.6	552
10 and above	51.5	77.3	20.7	68.4	201
Religion					
Hindu	61.0	83.4	15.5	58.6	613
Buddhist	60.7	83.8	15.9	57.0	279
Other	57.8	80.4	17.0	54.9	80
Caste/tribe#					
Scheduled caste	57.2	79.5	20.5	58.6	89
Scheduled tribe	59.3	80.6	19.1	56.3	334
Other backward class	58.1	85.0	13.5	58.2	378
Other	67.6	86.4	11.9	64.2	179
Standard of living index					
Low	65.5	85.0	14.6	47.3	400
Medium	60.5	83.2	15.4	62.7	418
High	47.7	79.7	19.0	73.9	170
Total	60.3	83.3	15.7	58.4	988
Note:- Table based on youngest living child born during the three years preceding the survey. ¹ Includes children who started breastfeeding within two hours of births. @ Literate mother with no years of schooling are included. #Total figure may not add to N due to do not know and missing cases. Total includes 15 Muslim children who were not shown separately.					

The custom of squeezing the first milk from the breast before breastfeeding is widely practised in every group, but it is slightly higher among the mothers of scheduled caste children, children belonging to other caste, Hindu and Buddhist religion and children whose mothers are literate. The women living in low standard were less likely to squeeze the first milk from the breast before breastfeeding than those living in high standard. In the urban areas the percentage of the custom of squeezing the first milk from the breast before breastfeeding is slightly higher (83 percent) than rural areas (54 percent). Mothers of children born in the three years preceding the survey were asked whether the child had been fed breast milk exclusively and if so, what the duration was. Here it needs to be mentioned that, exclusive breastfeeding includes breastfeeding the child without giving it anything including water. Results are shown in Table 5.2.

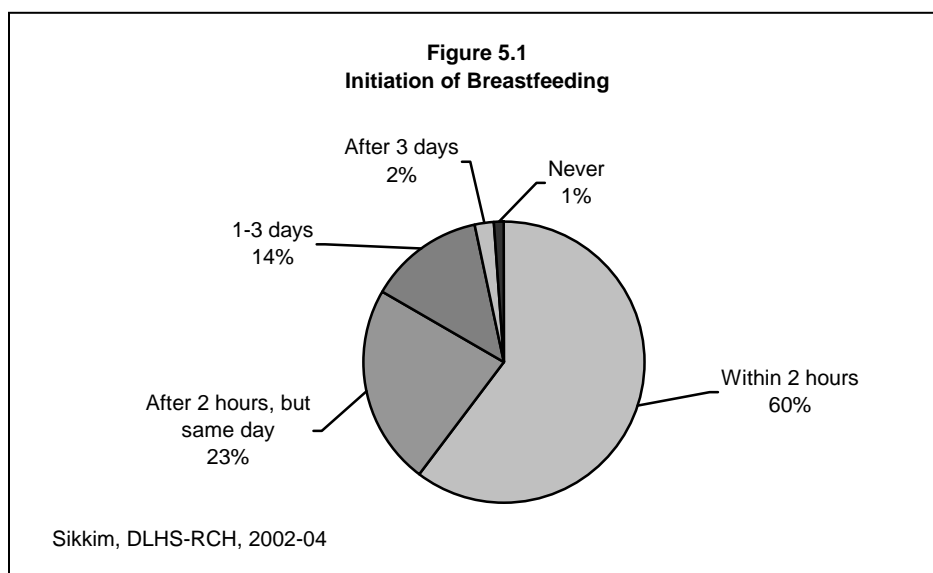


Table 5.2 EXCLUSIVE BREASTFEEDING BY CHILD'S AGE
Percentage of children under age 3 years by exclusive breastfeeding and child's age in month, Sikkim, 2002-04

Age in months	Status of exclusive breastfeeding			Number of children
	Exclusive breastfeeding	At least 4 months	At least 6 months	
<4	35.5	*	*	105
4-7	9.8	31.1	*	143
8-11	4.3	18.3	11.1	55
12-15	2.0	20.8	7.7	134
16-19	4.4	25.9	7.9	137
20-23	0.9	10.7	1.7	90
24-27	1.2	28.7	11.7	88
28-31	0.2	22.1	5.2	117
32-35	0.8	28.1	9.9	56
<4 months	35.5	*	*	105
4-6 months	9.0	31.7	*	118
7-9 months	6.5	28.0	14.3	97

Note: Table based on youngest living child born during the three years preceding the survey

In Sikkim, 36 percent of children under four months of age are exclusively breastfed. The percentage of infants exclusively breastfed drops steadily from 36 percent for children under 4 months of age to 10 percent for children who are 4-6 months old. About 32 percent of children in the age group 4-6 months were exclusively breastfed up to 4 months and 14 percent of children in the age group 7-9 months are exclusively breastfed upto 6 months.

5.1.1 Breastfeeding by Districts

Table 5.3 shows that in all the districts of Sikkim, except East Sikkim, more than 59 percent of the children were put to the breast within two hours of birth. About 49 percent of the children were breastfed within two hours of birth in East Sikkim district. More than three-fourth of the children were put to the breast after one day of birth in all the four districts. In West district only 14 percent mothers squeezed the first milk before breastfeeding. In the other three districts the percentage was much higher (East – 76 percent, North -69 percent and South – 82 percent).

Table 5.3 BREASTFEEDING BY DISTRICT					
Percentage of children under age 3 whose mother started breastfeeding within two hours of birth, within one day of birth and after one day of birth, percentage whose mother squeezed the first milk from her breast before breastfeeding and percentage of children who were exclusively breastfed by district, Sikkim, 2002-04					
District	Percentage started breastfeeding			Percentage whose mother squeezed first milk from breast	Exclusive breastfeeding ²
	Within two hours of birth	Within one day of birth ¹	After one day of birth		
East	48.9	76.1	22.2	75.6	3.6
North	75.2	85.2	14.7	68.5	21.5
South	59.3	97.0	3.0	81.7	8.8
West	75.8	89.3	10.1	13.5	10.2
Sikkim	60.3	83.3	15.7	58.4	8.0

Note: Table based on youngest living child born during the three years preceding the survey.¹ Includes children who started breastfeeding within two hours of births. ² Based on youngest children age 6 months and older at the time of survey and breastfed exclusively 6 months or more as mother reported.

There is a great deal of variation in the extent of exclusive breastfeeding for six months. It is highest in North Sikkim (22 percent) and lowest in East Sikkim (4 percent).

5.2 Immunization of Children

The immunization of children against six serious but preventable diseases namely, tuberculosis, diphtheria, pertusis, poliomyelitis and measles is the main component of the child survival programme. As part of the National Health Policy, the National Immunization Programme is being implemented on a priority basis. The Government of India initiated the Expanded Programme on Immunization (EPI) in 1978 with the objective of reducing morbidity, mortality and disabilities among children from six diseases.

The Universal Immunization Programme (UIP) was introduced in 1985-86 with the objective of covering at least 85 percent of all infants against the six vaccine preventable

diseases by 1990. This scheme has been introduced in every district of the country. The standard immunization schedule developed for the child immunization programme specifies the age at which each vaccine should be administered and the number of doses to be given. Routine vaccinations received by infants and children are usually recorded on a vaccination card that is issued for the child.

In the first phase of Round II, all the women with last and last but one living child born after January 1, 1999 were asked whether the child/children had received the vaccination against polio, tuberculosis (BCG), diphtheria, whooping cough (pertussis), tetanus (DPT) and measles, and for the second phase, the reference period was from January 1, 2001. For Polio and DPT, further information on polio at birth and number of doses was asked. Children who received BCG, three doses of DPT and polio (excluding polio 0) and measles are considered to be fully vaccinated. Information on the source of immunization for last dose and in case where immunization was not given, the reason for not giving immunization was also compiled.

Table 5.4, Figures 5.2 and 5.3 presents vaccination coverage rates for children in the age group 12-25 months. Only 53 percent of the children are fully vaccinated, and around less than one percent have not received any routine vaccination. Coverage of each vaccination is much higher than the percentage fully vaccinated. BCG, the first and second dose of DPT and Polio vaccine has each been given to more than three-fourths of children (Figure 5.3). Only 35 percent of the children have received three doses of DPT and 60 percent of the children received 3 drops of Polio, and 83 percent of the children have been vaccinated against measles. Moreover, not all children who begin the DPT and polio vaccination series go on to complete them. The differences between the percentage of children receiving the first and third doses is 16-percentage point for DPT and 28 percentage points for polio.

There has been some improvement in full vaccination coverage in Sikkim since the time of Round I in 1998-99. These data indicate that despite the progress that has been made in immunization coverage for children in Sikkim, coverage levels are still low and a large proportion of children who received some early vaccinations dropped out of the programme before receiving all of the recommended vaccinations.

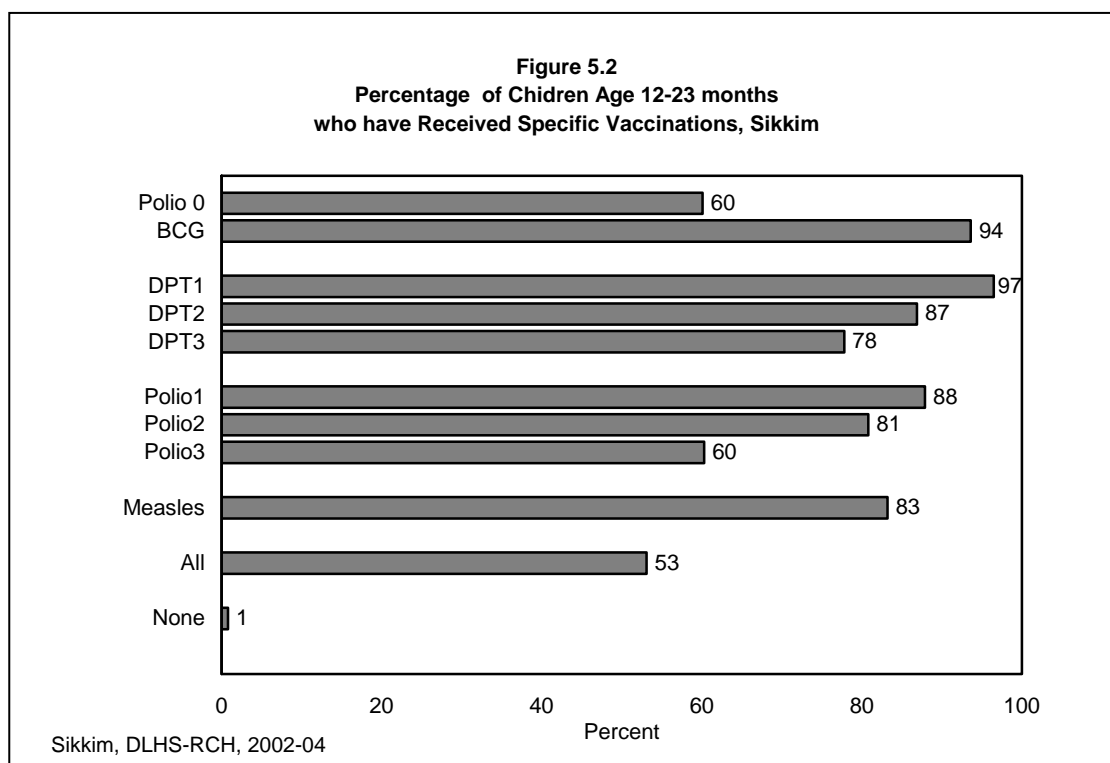
Table 5.4 VACCINATION OF CHILDREN

Percentage of children age 12-23 months who received vaccination according to some selected background characteristics, Sikkim, 2002-04

Background characteristic	Polio 0	BCG	DPT			Polio			Measles	Full ¹ vaccination	No vaccination	Number of children
			1	2	3	1	2	3				
Residence												
Rural	55.2	95.9	96.0	87.1	76.5	86.0	77.8	58.5	82.7	51.2	1.0	325
Urban	90.1	79.5	100.0	85.8	85.8	99.7	98.8	71.5	86.5	64.6	0.0	54
Sex of the child												
Male	60.2	94.2	95.2	88.2	80.7	86.1	81.2	66.9	84.1	58.5	1.0	186
Female	60.1	93.0	97.9	85.7	75.0	89.7	80.3	54.0	82.3	47.8	0.7	192
Birth order												
1	70.9	91.0	97.6	86.6	76.6	86.1	77.2	60.5	81.0	52.6	2.0	152
2	54.3	96.5	97.7	91.3	79.8	90.6	86.5	62.4	88.7	56.6	0.0	109
3	64.4	95.6	91.5	80.0	71.7	88.8	82.3	55.8	85.0	46.9	0.0	54
4+	40.7	93.0	96.2	86.0	82.6	86.8	78.2	60.2	77.6	53.7	0.1	64
Mother's education												
Non-literate	46.5	92.0	93.3	80.9	72.5	83.4	71.6	51.3	75.0	42.8	0.1	91
0-9@ years	60.3	93.8	97.9	88.7	80.5	90.6	84.1	61.6	84.7	56.1	1.2	214
10 years and above	76.7	94.8	96.5	89.1	76.5	85.6	82.4	67.8	89.2	57.3	0.6	73
Religion												
Hindu	61.2	90.9	94.7	82.9	72.7	85.8	76.4	54.4	78.4	47.1	1.3	235
Christian	57.4	98.9	99.5	93.3	85.9	90.1	86.1	68.4	91.6	60.6	0.1	110
Buddhist	(58.3)	(94.4)	(100.0)	(94.4)	(88.9)	(91.7)	(86.1)	(66.7)	(83.3)	(61.1)	(0.0)	33
Caste/tribe #												
Scheduled caste	(66.7)	(84.8)	(93.9)	(90.9)	(78.8)	(78.8)	(72.7)	(60.6)	(78.8)	(51.5)	(3.0)	36
Scheduled tribe	56.9	98.2	98.7	92.4	86.0	88.7	85.8	69.3	89.8	60.7	0.0	125
Other backward class	57.6	90.3	98.0	83.1	73.0	88.2	78.4	50.6	81.2	44.8	0.0	128
Other	65.2	97.6	93.0	85.2	73.1	88.0	76.8	57.4	76.7	50.7	1.6	84
Standard of living index												
Low	47.0	94.4	96.2	82.4	70.9	86.8	74.8	54.2	76.3	44.1	0.6	158
Medium	65.2	93.2	96.6	88.4	77.9	87.8	82.7	59.2	86.5	51.8	1.5	148
High	78.6	92.6	97.0	93.9	92.8	90.5	89.8	76.0	91.7	75.4	0.0	72
Total	60.1	93.6	96.5	86.9	77.8	87.9	80.8	60.3	83.2	53.1	0.8	379

Note: Table includes only last and last but one living child born since 1.1.1999/1.1.2001. @ Literate mothers with no years of schooling are included. # Total figure may not add to N due to do not know and missing cases. ¹ BCG, three injection of DPT, three doses of Polio (excluding Polio 0) and measles. () Based on less than 50 unweighted cases

The data indicates that the coverage of each type of vaccine is more in urban areas than in rural areas. Sixty-five percent of the children in urban areas had received all the recommended vaccinations by the time of the survey, compared with 51 percent in rural areas. Differentials in rural-urban against polio 0 may be observed from the table. Ninety percent of the children have received polio vaccine at the time of birth in urban areas whereas a little more than half (55 percent) it received the same in the rural areas.



Male children (59 percent) are more likely than female children (48 percent) to be fully vaccinated. Male children are also much more likely than female children to have received most of the individual vaccinations. The relationship between vaccination coverage and birth order is consistently negative for almost all vaccinations. A large majority of first-order births occur to younger women who are more likely than older women to utilize child health care services. As with the use of child health care services, there is a positive relationship between mother's education and children's vaccination coverage. Only 43 percent children of non-literate mothers are fully vaccinated compared to 56 percent of children with mothers' education below high school and 57 percent of mothers who have at least completed high school. Christian children and Buddhist children are much more likely than Hindu children to have received each of the recommended vaccinations. Children from Scheduled tribes and scheduled castes are more likely to have BCG, DPT-1, DPT-2, Polio-1, and Polio-3 and measles vaccinations, than children from other backward classes. The standard of living index of the household has a strong positive relationship with vaccination coverage. Seventy-five percent of children from households with a high standard of living are fully vaccinated, whereas only 44 percent of children are from households with a low standard of living are fully vaccinated.

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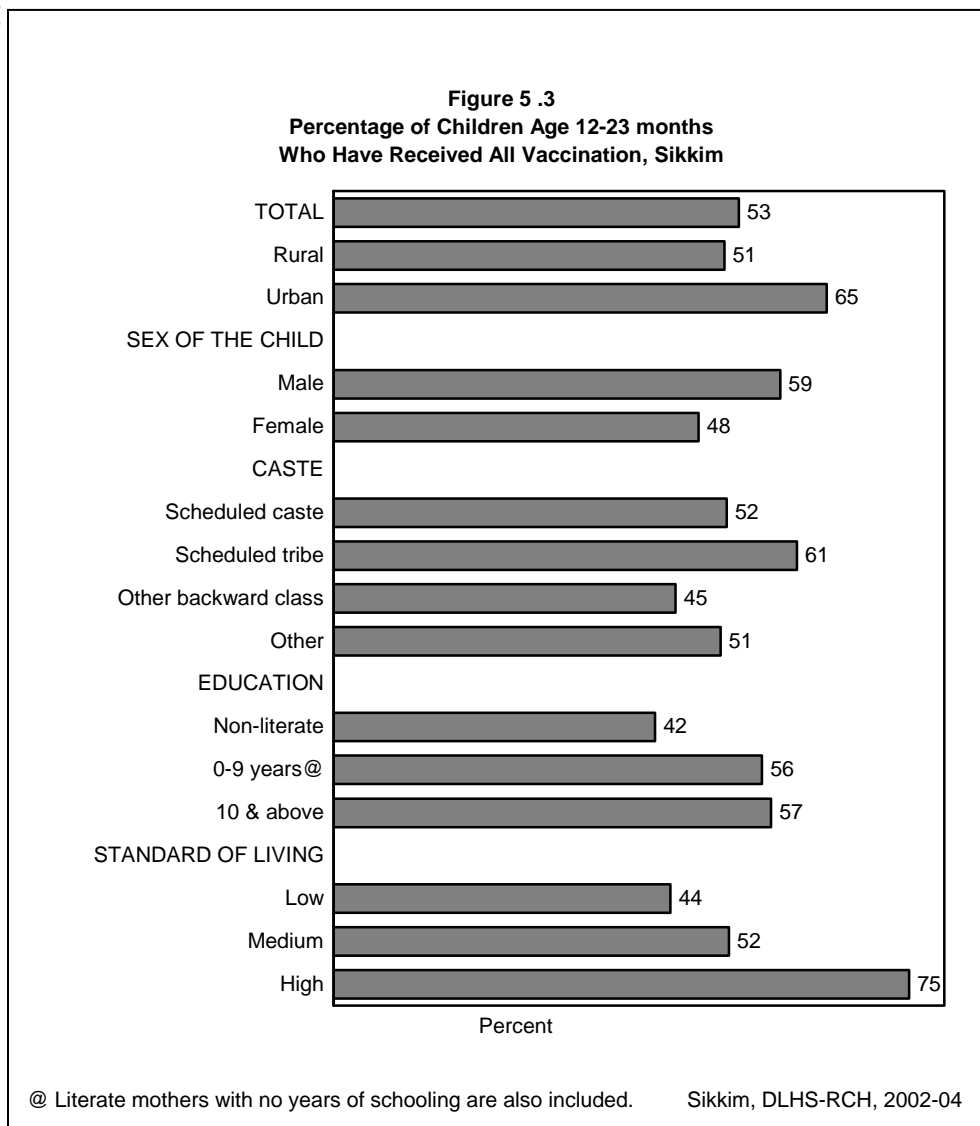
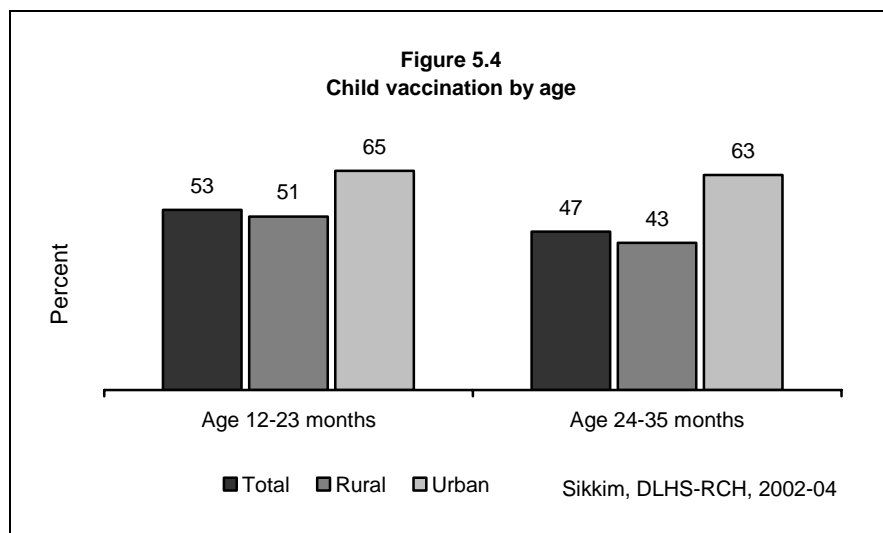


Table 5.5 shows the percentage of children in the age group 12-23 months and 24-35 months with a vaccination card, and the percentage who received various vaccinations during the first year of life by current age of children and place of residence. The interviewer was shown this vaccination card.

The proportion of children fully vaccinated by age 12 months decreased slightly from 53 percent for children in the age group 12-23 months to 47 percent for children in the age group 24-35 months. A rural-urban differential for the coverage of full vaccination is also observed. Fifty-one percent of children in the age group 12-23 months are fully vaccinated against 43 percent of children in the age group 24-35 months in rural areas, and this gap is very minor in urban areas (Figure 5.4). About 65 percent of children in the age group 12-23 months have received all vaccinations in urban areas compared to 63 percent with children in the age group 24-35 months. Younger children aged 12-23 months are more likely to receive each type of vaccine except Polio-3, DPT-3 and measles.

Table 5.5 CHILDHOOD VACCINATION RECEIVED BY 12 MONTHS OF AGE						
Percentage of children age 12-23 months and 24-35 months with a vaccination card that was shown to the interviewer and percentage who received specific vaccinations by 12 months of age according to residence, Sikkim, 2002-04						
Vaccination status	Total		Rural		Urban	
	12-23 months	24-35 months	12-23 months	24-35 months	12-23 months	24-35 months
Vaccination card shown to interviewer	42.6	44.2	41.0	43.2	52.3	49.1
Percentage vaccinated by 12 months of age						
Polio 0	60.1	58.5	55.2	53.1	90.1	86.4
BCG	93.6	88.7	95.9	89.5	79.5	84.6
Polio doses						
No Polio	3.9	10.3	4.5	10.8	0.0	7.6
1	7.2	3.3	8.2	3.3	0.9	3.8
2	20.4	16.3	19.3	16.7	27.3	14.3
3	60.3	59.6	58.5	57.4	71.5	70.4
Don't remember	8.2	10.5	9.5	11.8	0.3	3.9
DPT injection						
No DPT	2.8	9.2	3.2	9.9	0.0	5.6
1	9.6	4.6	8.9	3.6	14.2	9.9
2	9.1	15.6	10.6	18.1	0.0	2.7
3	77.8	69.5	76.5	67.2	85.8	81.2
Don't remember	0.7	1.1	0.8	1.2	0.0	0.6
Measles	83.2	81.9	82.7	82.7	86.5	77.6
Full ¹ vaccination	53.1	46.7	51.2	43.4	64.6	63.4
No vaccination at all	0.8	5.2	1.0	5.1	0.0	5.6
Number of children	379	316	325	264	54	52
Note: Table includes only last and last but one living child born since 1.1.1999/1.1.2001						
¹ BCG, three injection of DPT, three doses of Polio (excluding Polio 0) and measles						

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5.3 Source of Immunization

Table 5.6 gives the percent distribution of children under three years of age who have received any vaccination by the source of last vaccine, according to place of residence and availability of health facilities in the village. The sub-centre is the primary provider of childhood vaccinations in Sikkim. Most of the children (87 percent) were immunized at the government health facilities and only one percent at private health facilities. Further, among the children immunized, 32 percent of them had received vaccination from the Government/Municipal hospital, 34 percent from PHC's, and 20 percent from Sub-centre. The percentage of children receiving vaccination from the private sector is slightly more in urban areas (3 percent) than in rural areas (1 percent). Even in urban areas, however, 96 percent of children received their vaccination from the government health facility. Children from those villages where health facilities are available are slightly more likely to receive vaccination from the government health facility.

Table 5.6 SOURCE OF CHILDHOOD VACCINATION					
Percent distribution of children under age 3 who have received any vaccination by source of last vaccination, according to place of residence and availability of health facilities in the village, Sikkim, 2002-04					
Source of vaccination	Total	Residence		Availability of health facility ¹ in the village	
		Rural	Urban	Yes	No
Government health sector					
Government/municipal hospital	31.8	26.3	61.6	28.8	24.7
Community/primary health centre	34.2	34.4	33.4	36.1	33.4
Sub-centre	20.3	23.9	1.1	21.6	25.4
RCH/MCP camp	0.3	0.3	0.0	0.2	0.4
Private health sector					
Private hospital	0.5	0.6	0.0	0.6	0.6
Private doctor	0.7	0.4	2.6	0.3	0.4
ISM ² health facility	0.3	0.3	0.0	0.6	0.2
Other	8.8	10.3	0.9	6.4	12.7
Do not remember	0.9	1.1	0.0	1.4	0.9
Missing	2.1	2.4	0.4	4.0	1.4
Total percent	100.0	100.0	100.0	100.0	100.0
Number of children	1,019	858	160	328	530
Note: Table includes last and last but one living children born in the three years preceding the survey ¹ Includes sub-centre, primary health centre, Community health centre or referral hospital, government hospital, and government dispensary within the village ² Either government or private health facility of Indian System of Medicine					

5.4 Vitamin A and IFA Supplements

Vitamin A deficiency is one of the most common nutritional deficiency disorders in the world, affecting more than 250 million children worldwide (Bolem et. al., 1997). The child survival programme also includes administration of five doses of Vitamin A for prevention of night blindness and distribution of IFA for iron supplement. In Round II, mothers of children born during the three years before the survey were asked whether their children had received a dose of Vitamin A and IFA tablets/syrup. Those who said that their children had received a dose of Vitamin A and IFA tablets/syrup were further asked how many doses were given. Table 5.7 shows the percentage of children in the age group 12-35 months who received at least one dose of Vitamin A and IFA tablets/syrup by selected background characteristics. In the state of Sikkim as a whole, 50 percent of the children received at least one dose of Vitamin A, and only nine percent received IFA tablets/syrup. This indicates that a fifty percent children in Sikkim did not receive Vitamin A supplements and very few children received IFA tablets/syrup supplementation.

Table 5.7 VITAMIN A AND IFA SUPPLEMENTATION FOR CHILDREN			
Percentage of children age 12-35 months who have received at least one dose of Vitamin A and iron folic acid tablets/syrup, according to selected background characteristics, Sikkim, 2002-04			
Background characteristic	Percentage who received at least one dose of vitamin A	Percentage who received iron folic acid tablets/syrup	Number of children
Age of the child			
12-23 months	48.5	8.4	379
24-35 months	51.5	9.7	316
Sex of the child			
Male	53.3	9.7	371
Female	45.9	8.1	324
Birth order			
1	49.5	8.8	289
2	51.4	8.3	189
3	56.7	10.4	105
4+	41.7	9.0	112
Residence			
Rural	47.8	9.3	589
Urban	61.1	7.0	106
Mother's education			
Non-literate	39.8	8.7	173
0-9 years@	49.8	9.6	380
10 years and above	62.5	7.4	142
Religion			
Hindu	47.6	9.5	435
Buddhist	49.4	7.7	196
Other	66.8	8.6	63
Caste/tribe #			
Scheduled caste	49.5	12.8	70
Scheduled tribe	51.1	7.9	227
Other backward class	53.2	8.7	255
Other	44.3	9.7	134
Standard of living index			
Low	39.7	7.6	285
Medium	50.9	8.9	283
High	70.2	12.2	127
Availability of health facility in the village¹			
Yes	44.9	7.9	362
No	52.5	11.6	227
Total	49.9	8.9	695
Note: Table includes last and last but one living children born in the three years preceding the survey. @ Literate mother with no years of schooling are also included here. # Total figure may not add to N due to do not know and missing cases. ¹ Includes sub-centre, primary health centre, Community health centre or referral hospital, government hospital, and government dispensary within the village.			

Children in the age group 24-35 months are more likely to receive at least one dose of Vitamin A and IFA tablets/syrup each than children in the age group 12-23 months. Male children are more likely to receive Vitamin A than female children and it is the same in case of IFA tablets/syrup. Children living in urban areas, children whose mother completed high school and above, children living in households with a high standard of living, and children living in

those villages where health facilities are available are more likely to receive a dose of Vitamin A and IFA tablets/syrup. Children of birth order 3 are much less likely than children of birth order 1, 2, or 4 to receive any dose of vitamin A and IFA tablets/syrup. Similarly, children from Schedule castes are less likely to receive at least one dose of Vitamin A and a dose of IFA tablets/syrup than other caste category.

Table 5.8 CHILDHOOD VACCINATION BY DISTRICT								
Percentage of children who received specific vaccinations and Vitamin A supplementation by district, Sikkim, 2002-04								
District	Percentage vaccinated							Percentage who received at least one dose of Vitamin 'A'
	Polio 0	BCG	DPT3	Polio3	Measles	Full ¹	None	
East	71.6	89.8	81.6	76.1	92.5	69.1	0.9	66.1
North	77.7	94.8	63.5	43.0	70.0	30.1	1.2	35.3
South	65.6	93.0	62.1	24.6	67.7	22.2	1.6	43.0
West	36.5	98.3	87.1	55.5	80.0	47.9	0.0	27.5
Sikkim	59.4	91.4	74.0	60.0	82.6	50.2	0.8	49.9

Note: Table includes only last and last but one living child born since 1.1.1999/1.1.2001
¹ BCG, three injection of DPT, three doses of Polio (excluding Polio 0) and measles

5.5 Immunization Coverage by District

The coverage of vaccination rates for all vaccines for children in the age group 12-23 months in each district is presented in Table 5.8. There are inter-district differentials in the coverage for different vaccinations, and for children receiving all vaccinations and those that did not receive any vaccination at all. The percentage of children who are fully vaccinated ranges from 22 percent in South Sikkim to 69 percent in East Sikkim. In 3 out of 4 districts, namely North Sikkim, South Sikkim and West Sikkim the coverage rate of full immunization is below the state average of 50 percent. Two percent of children in South Sikkim district were not vaccinated at all, and in three districts, the percentage of children not vaccinated is higher than the state average of 0.8 percent. In nearly all the districts, relatively fewer children have received the Polio0 vaccine than any of the other vaccinations. The coverage of polio drops at the time of birth varies from the lowest in West Sikkim (37 percent) to the highest in North Sikkim (78 percent).

District wise variations in the percentage of children who received at least one dose of Vitamin A are also shown in Table 5.8. The percentage of children in the age group 12-35 months who received at least one dose of Vitamin 'A' supplements ranges from 28 percent in West Sikkim to 66 percent in East Sikkim. North, South and West districts stand out as having percentage below the state average of 50 percent to receive at least one dose of Vitamin A.

5.6 Child Morbidity and Treatment

This section discusses the awareness, prevalence and treatment of diarrhoea and acute respiratory infection (ARI). Mothers of surviving children born during the three years preceding the survey were asked if their children suffered from cough and cold or diarrhoea during the two weeks preceding the survey, and if so, the type of treatment that had been given. Accuracy of all these measures is affected by the reliability of the mother's recall of when the diseases occurred.

5.7 Awareness of Diarrhoea

Diarrhoea is a major killer disease of children under five years of age. Deaths from acute diarrhoea are mostly due to dehydration resulting from loss of water and electrolytes. An attempt was made to collect data on awareness of diarrhoea management and the practice followed during the episode of diarrhoea. This has been presented in Table 5.9.

In Sikkim, 85 percent of the mothers with births three years preceding the survey were aware of what to do when a child had diarrhoea, as compared to 70 percent in Round I and 46 percent were aware of ORS, Forty-three percent of the women were aware of salt and sugar solution. Some of the women also reported that they would continue normal food (2 percent), continue breastfeeding (2 percent), and give plenty of fluids (5 percent), and about 31 percent of women did not know what to give a child who had diarrhoea. As expected, knowledge of ORS is higher among urban women (58 percent) than rural women (44 percent), and among high school and above educated women (66 percent) as compared to non-literate women (37 percent). Among women belonging to Schedule Tribes, scheduled caste, other backward classes and from other caste group knowledge about ORS is more or less the same. Sixty-three percent of women with children having a high standard of living know about ORS and it declines to 48 percent for women with a medium standard of living and 37 percent with a low standard of living. Knowledge of ORS is more among 25-34 years age groups than among younger women and among older women. The availability of health facilities in the village has very minor effect on the knowledge of diarrhoea management among the women.

Table 5.9 AWARENESS OF DIARRHOEA

Percentage of women who are aware of diarrhoea management, type of practice followed if child gets diarrhoea, and percentage of women whose child suffered¹ from diarrhoea by selected background characteristics, Sikkim, 2002-04

Background characteristic	Knowledge of diarrhoea management	Type of practices to be followed do if child gets diarrhoea*					Do not know	Number of women
		Give ORS	Salt and sugar solution	Continue normal food	Continue breastfeeding	Give plenty of fluids		
Age								
15-24	82.0	44.9	37.8	1.2	1.1	4.6	38.0	481
25-34	86.1	47.4	46.0	2.3	2.8	4.7	25.3	567
35-44	89.3	45.0	44.4	4.3	4.4	3.7	29.9	109
Residence								
Rural	85.0	44.2	41.3	1.9	2.3	4.9	33.3	996
Urban	83.0	58.3	50.0	2.4	2.3	2.7	17.0	161
Mother's education								
Non-literate	78.8	36.5	33.7	0.4	3.2	3.0	41.4	269
0-9@ years	83.4	43.2	41.9	1.2	1.4	4.2	33.2	653
10 and above	95.2	65.6	54.3	6.0	3.6	7.5	12.8	235
Religion								
Hindu	84.0	45.1	42.5	2.1	2.7	5.5	31.8	736
Christian	95.4	62.6	48.0	2.5	3.2	3.3	18.6	84
Buddhist	84.5	44.7	41.5	1.9	0.9	3.0	32.4	313
Caste/tribe#								
Scheduled caste	91.4	45.5	57.2	0.0	1.0	3.2	26.4	106
Scheduled tribe	88.2	46.2	42.8	2.0	1.6	3.6	33.9	370
Other backward class	82.5	46.3	45.4	2.0	2.5	5.3	29.2	453
Other	79.6	46.9	27.3	2.8	3.1	5.3	31.6	218
Standard of living index								
Low	80.5	37.0	38.4	1.4	2.5	4.4	43.4	473
Medium	84.8	48.4	42.3	1.7	1.8	4.2	27.1	488
High	94.7	62.7	52.7	4.3	2.9	5.9	10.8	196
Availability of health facility² in the village								
Yes	86.5	43.8	39.1	1.8	2.5	5.2	36.3	613
No	82.6	44.8	44.7	2.1	1.9	4.3	28.5	382
Total	84.7	46.2	42.5	2.0	2.3	4.6	31.0	1,157

Note: Table based on women with living children born since 01.01.1999 for phase - I /01.01.2001 for phase - II. ¹ Last two weeks prior to survey. Total includes 24 women in other religion who were not shown separately. @ Literate mother with no years of schooling are included. # Total figure may not add to N due to do not know and missing cases. ² Includes sub-centre, primary health center, Community health centre or referral hospital, government hospital, and government dispensary within the village.

5.7.1 Treatment of Diarrhoea

During the two weeks before the survey, 10 percent of the women reported that their children suffered from diarrhoea (Table 5.10). Women, whose children had diarrhoea, were further asked about treatment with ORS, any other medical treatment and source of treatment. About 48 percent of the women mentioned that they gave ORS therapy, and 64 percent of the women said that their child had been treated at health facility. Use of ORS for the treatment of childhood diarrhoea in Sikkim is relatively high among urban women than among rural women.

It was observed that a relatively high proportion of women from those villages where health facilities were not available within the village used ORS for the treatment of childhood diarrhoea.

Table 5.10 TREATMENT OF DIARRHOEA					
Percentage of women who sought treatment whose child suffered from diarrhoea and by source of treatment, according to place of residence and availability of health facility in the village, 2002-04					
Sought treatment/ source of treatment	Total	Residence		Availability of health facility ² in the village	
		Rural	Urban	Yes	No
Percentage of women whose child suffered ¹ from diarrhoea	10.3	9.8	13.7	10.2	9.1
Number of women	1,157	996	161	613	382
Percentage of women whose child suffered ¹ from diarrhoea treated with ORS	48.0	46.7	(56.3)	49.9	(55.3)
Percentage of women whose child suffered ¹ from diarrhoea sought treatment	63.9	59.5	(75.0)	69.2	(44.7)
Number of women	119	97	22	62	35
Source of treatment					
Government health facility					
Hospital/dispensary	27.9	29.6	*	(27.0)	*
CHC/ Rural hospital	0.5	0.6	*	(2.7)	*
Primary health centre	28.1	29.3	*	(18.9)	*
Sub centre	7.8	10.3	*	(13.5)	*
Private health facility					
Private hospital/clinic	30.8	23.7	*	(18.9)	*
ISM ³ facility	28.1	33.5	*	(29.7)	*
Home remedy	3.0	4.0	*	(2.7)	*
Other	1.8	2.4	*	(13.5)	*
Percent distribution of women who seek treatment by					
Doctor	77.5	77.0	*	(67.6)	*
ANM/Nurse/LHV	19.2	18.6	*	(27.0)	*
Relative/friends	0.4	0.5	*	(2.7)	*
ISM	2.9	3.8	*	(2.7)	*
Total percent	100.0	100.0	100.0	100.0	100.0
Number of women	76	58	18	43	15
Note: Table based on women with living children born since 01.01.1999 for phase - I /01.01.2001 for phase - II.					
¹ Last two weeks prior to survey. ² Includes sub-centre, primary health centre, Community health centre or referral hospital, government hospital, and government dispensary within the village. ³ Either government or private health facility of Indian System of Medicine* Percentages not shown: Based on few cases. () Based on less than 50 unweighted cases					

Among those mothers whose children suffered from diarrhoea during the last two weeks before the survey and those women who consulted or obtained advice, about 31 percent of women visited private hospitals/clinics and 28 percent of women treated their children through the Indian System of Medicine.

5.7.2 Awareness of Pneumonia

Another major killer disease among infants and children is Acute Respiratory Infections (ARI) including pneumonia. Early diagnosis and treatment with antibiotics can prevent a large proportion of ARI/pneumonia deaths. An attempt was made to understand the awareness level of pneumonia, and the proportion of children who had suffered from pneumonia during the last two weeks before the survey and their health seeking behaviour. This is presented in Table 5.11. It was found that a low proportion (40 percent) of women with births three years preceding the survey in Sikkim were aware of danger signs of pneumonia. The figure was slightly up from 37 percent in Round I A relatively high proportion of women in urban areas (44 percent) were aware of the danger signs of pneumonia as compared to women from rural areas (39 percent). Knowledge of danger signs of pneumonia is higher among the age group 25-34 years old women (45 percent), Christian women (54 percent), scheduled tribes (42 percent), highly educated women (50 percent), women living in high standard of living household (50 percent), and women living in those villages without health facilities (43 percent).

Women, who were aware of the danger signs of pneumonia, were further asked about different types of signs of pneumonia. Most of the women mentioned about 'difficulty in breathing' (59 percent), 'pain in chest and productive cough' (29 percent), 'wheezing / whistling' (16 percent), 'chest in drawing' (36 percent), 'not able to drink or take a feed' (47 percent), 'rapid breathing' (17 percent), 'condition get worse than before' (13 percent) and 'excessive drowsy and difficulty in keeping awake' (13 percent).

5.7.3 Treatment of Pneumonia

About 11 percent of women reported that their child had suffered from pneumonia during two weeks before the survey, the corresponding figures were 10 percent in rural areas and 19 percent in urban areas (Table 5.12). The incidence of pneumonia varies considerably with availability of health facilities in the villages.

Table 5.12 also shows that the percentage of women whose children suffered from ARI symptoms in the last two weeks before the survey who sought advice/treatment and taken to a health facility or provider. Seventy-eight percent of women received some advice or treatment whose children were ill with ARI. This percentage is relatively low in rural areas (77 percent) than in urban areas (87 percent) and village without health facilities (58 percent) than village with health facility (84 percent).

Among them who got advice for children ill with ARI, 48 percent of women visited private hospital/clinic, and 41 percent went to government hospital/dispensary and less than one percent of them obtained treatment through home remedies.

Table 5.11 AWARENESS OF PNEUMONIA

Percentage of women who are aware of danger signs of pneumonia by signs by selected background characteristics and availability of health facility in the village, Sikkim, 2002-04

Background characteristic	Percentage of women aware of danger signs of pneumonia	Number of women	Danger signs							Number of women	
			Difficulty in breathing	Chest in-drawing	Not able to drink or take a feeding	Excessive drowsy and difficulty in keeping awake	Pain in chest and productive cough	Conditions get worse than before	Wheezing/whistling		Rapid breathing
Age											
15- 24	34.5	481	55.9	31.6	46.3	15.9	32.7	7.7	19.5	16.4	166
25-34	45.2	567	59.5	37.1	47.5	11.6	22.6	14.5	13.9	15.0	256
35-44	32.9	109	(51.0)	(43.1)	(52.9)	(9.8)	(41.2)	(15.7)	(7.8)	(17.6)	36
Residence											
Rural	38.8	996	59.1	38.2	47.5	14.5	29.6	14.2	17.2	16.9	386
Urban	44.1	161	57.3	25.2	45.0	5.0	23.7	7.1	10.8	14.8	71
Mother's education											
Non-literate	32.8	269	45.8	35.3	39.7	13.1	26.3	12.6	13.6	14.3	88
0-9@ years	38.7	653	57.9	34.3	48.9	13.8	28.2	11.9	18.3	16.5	252
10 and above	49.8	235	70.5	41.0	49.0	11.2	31.4	15.8	13.6	18.7	117
Religion											
Hindu	36.0	736	58.3	35.5	48.2	14.8	27.6	15.9	16.7	16.8	265
Christian	54.1	84	(68.4)	(50.0)	(39.5)	(15.8)	(39.5)	(7.9)	(7.9)	(13.2)	45
Buddhist	44.0	313	57.4	33.9	49.2	7.9	30.5	9.3	16.8	14.8	138
Caste/tribe#											
Scheduled caste	39.5	106	(48.8)	(34.1)	(56.1)	(12.2)	(29.3)	(4.9)	(9.8)	(12.2)	42
Scheduled tribe	42.1	370	56.8	30.3	46.9	12.3	28.2	7.8	17.5	14.9	156
Other backward class	39.2	453	59.3	43.5	41.1	12.6	33.4	17.9	21.5	24.2	178
Other	35.9	218	66.6	31.2	57.7	12.8	25.2	15.2	2.4	7.2	78
Standard of living index											
Low	36.0	473	58.2	30.9	47.1	15.6	26.5	12.5	15.9	15.9	171
Medium	38.9	488	54.2	39.0	49.6	12.7	32.1	12.9	20.3	17.1	190
High	49.7	196	68.8	40.0	42.4	9.0	25.5	14.2	8.8	17.1	97
Availability of health facility² in the village											
Yes	36.5	613	59.1	40.9	46.1	13.5	31.2	13.2	14.9	17.3	224
No	42.5	382	58.9	34.6	49.5	15.8	27.3	15.5	20.3	16.4	162
Total	39.6	1,157	58.8	36.2	47.2	13.0	28.6	13.1	16.2	16.6	458

Note: Table based on women with living children born since 01.01.1999 for phase - I /01.01.2001 for phase - II. ¹ Last two weeks prior to survey. @ Literate mother with no years of schooling are included. # Total figure may not add to N due to do not know and missing cases. ² Includes sub-centre, primary health centre, Community health centre or referral hospital, government hospital, and government dispensary within the village. Total includes 9 women with other religion who are not shown separately.() Based on less than 50 unweighted cases

Table 5.12 TREATMENT OF PNEUMONIA					
Percentage of women who sought treatment whose child suffered ¹ from cough and cold and source of treatment, according to place of residence and availability of health facility in the village, Sikkim, 2002-04					
Sought treatment/ source of treatment	Total	Residence		Availability of health facility ² in the village	
		Rural	Urban	Yes	No
Percentage of women whose child suffered from cough, cold and difficulty in breathing	11.2	10.0	18.5	11.4	7.7
Number of women	1,157	966	161	613	382
Percentage of women sought treatment whose child suffered from cough and cold	78.4	76.5	(87.0)	83.7	(58.2)
Number of women	129	100	30	70	29
Source of treatment					
Government health facility					
Hospital/dispensary	41.3	46.7	(35.0)	56.6	*
UHC/UHP/UFWC	0.3	0.4	(0.0)	0.5	*
Primary health centre	15.1	11.3	(25.0)	7.3	*
Sub centre	3.2	4.2	(0.0)	3.5	*
Private health facility					
Private hospital clinic	47.7	46.0	(45.0)	44.2	*
ISM ³ facility	0.1	0.0	(5.0)	0.0	*
Other	0.7	0.9	(0.0)	0.3	*
Percent distribution of women who seek treatment by					
Doctor	94.7	93.0	(95.0)	93.7	*
ANM/Nurse/LHV	5.3	7.0	(5.0)	6.3	*
Total percent	100.0	100.0	100.0	100.0	100.0
Number of women	101	76	25	59	17
Note: Table based on women with living children born since 01.01.1999 for phase - I /01.01.2001 for phase - II.					
¹ Last two weeks prior to survey. ² Includes sub-centre, primary health centre, Community health centre or referral hospital, government hospital, and government dispensary within the village. ³ Either government or private health facility of Indian System of Medicine () Based on less than 50 unweighted cases.* Percentages not shown: based on few cases					

5.7.4 Awareness of Diarrhoea, ORS and Pneumonia and Incidence of Diarrhoea and Pneumonia by District

Table 5.13 presents the knowledge of diarrhoea management, knowledge of ORS, and incidence of diarrhoea by district. Although knowledge of diarrhoea management is high in almost all districts but knowledge about ORS is among half of the respondents. Knowledge of ORS is also not common, and it is lowest in West Sikkim (39 percent). Women in East Sikkim (48 percent) also have relatively low level of knowledge of ORS. The incidence of diarrhoea is 10 percent in the state as a whole and it varies from less than one percent in South to 17 percent in East Sikkim. Table 5.13 also shows differentials in the awareness of danger signs of pneumonia and incidence of pneumonia. In comparison to awareness about diarrhoea management, the awareness of danger signs of pneumonia is quite low. It is the lowest in West Sikkim (24 percent) and highest in North Sikkim (54 percent). Incidence of ARI symptoms is comparatively low in

nearly all the districts in Sikkim. It is highest in North Sikkim (18 percent), East Sikkim (17 percent) and lowest in South Sikkim (2 percent).

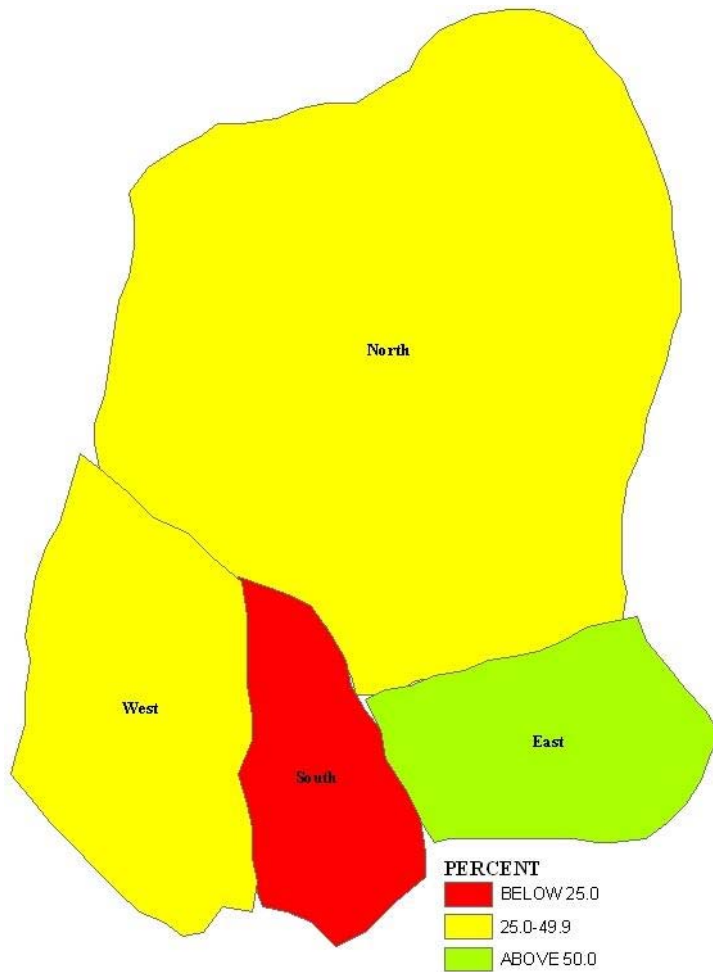
Table 5.13 KNOWLEDGE OF DIARRHOEA MANAGEMENT AND PNEUMONIA BY DISTRICT					
Percentage of women by awareness of diarrhoea management, ORS, danger signs of pneumonia and whose child had suffered from diarrhoea and pneumonia during last two weeks prior to survey by district, Sikkim, 2002-04					
District	Percentage of women aware of		Percentage of women whose child suffered ¹ from diarrhoea	Percentage of women aware of danger signs of pneumonia	Percentage of women whose child suffered ¹ from pneumonia
	Diarrhoea Management	ORS			
East	87.7	47.6	16.9	48.1	17.1
North	78.6	60.0	12.6	54.0	17.7
South	63.6	50.3	0.3	30.4	2.1
West	96.6	39.2	3.2	24.1	4.0
Sikkim	84.7	46.2	10.3	39.6	11.2

Note: Table based on women with last and last but one living children born since 01.01.1999 /01.01.2001. ¹ Last two weeks prior to survey.

Under the RCH programme, the government health facilities are strengthened to provide treatment of ARI. However, the percentage of women who visited to a government health facility for treatment of their children sick with ARI symptoms was very low.

MAP-5

Percentage of Children (age 12-23 months), Who Have Received Full Vaccination



CHAPTER VI

FAMILY PLANNING

The Reproductive and Child Health Programme has been implemented with a new philosophy and direction to meet the health care needs of women and children. It envisages the provision of couples to control their fertility and have sexual relations free from the fear of pregnancy. Provision of free contraceptive services to all the needy couples is one of the components of the RCH programme. In DLHS-RCH a separate section on family planning was canvassed to all the eligible women to assess the knowledge and practice of various family planning methods. The information on source of currently adopted contraceptive method, source of supply of the method and health problems related to contraceptive use were collected from current users. The current non-users were asked about the past status of contraceptive use, reason for not using contraceptives currently and future intention to adopt a family planning method.

An attempt was made to understand why male methods of family planning especially that of vasectomy was not in common use. The husbands of sampled eligible women were asked about the contraceptive method they would recommend to a couple who was not desirous of any additional children. They were also asked about the reasons for not preferring male methods and their knowledge about the no-scalpel vasectomy. This chapter presents the results of data on contraceptive practices collected from both the sampled women and their husbands.

6.1 Knowledge of Family Planning Methods

Lack of knowledge of various contraceptive choices can be a major barrier to promotion and use of contraceptives among couples. In DLHS-RCH information on knowledge of contraceptives was obtained by asking a question, "Which are the family planning methods you know?" to each sampled eligible women. The knowledge of no-scalpel vasectomy was also asked to the husbands of eligible women. If the respondent did not recognise the name of the family planning method, he was given a brief description on how the particular method was to be used. The DLHS-RCH assesses the knowledge of female sterilisation, male sterilisation including NSV, IUD, Pills, condom and traditional methods along similar lines.

The extent of knowledge of contraceptive methods among currently married women for specific methods and selected background characteristics are shown in Table 6.1 and Figure 6.1. Knowledge of any method including any modern contraceptive method is almost universal in the state of Sikkim. The knowledge of any method and any modern method do not vary much by residence. The knowledge of modern spacing method among currently married women is around 99 percent, and 100 percent among the women with an urban residence. There are large differentials in knowledge of all modern methods with respect to the aforesaid background characteristics. For instance, 48 percent of women from rural areas are aware about all modern methods compared to 64 percent of their urban counterparts.

Table 6.1 KNOWLEDGE OF CONTRACEPTIVE METHODS					
Percentage of currently married women age 15-44 years who know any contraceptive method by specific method and selected background characteristics, Sikkim, 2002-04					
Contraceptive methods	Total	Residence		Availability of health facility in the village ³	
		Rural	Urban	No	Yes
Any method	99.1	99.0	100.0	98.6	99.3
Any modern method	99.1	99.0	100.0	98.5	99.3
Any modern spacing method ¹	95.7	95.3	98.6	93.8	96.3
All modern methods ²	50.3	48.3	64.2	44.5	50.7
Female sterilization	97.4	97.1	99.3	94.9	98.5
Tubectomy	57.4	54.6	76.8	50.2	57.3
Laparoscopy	43.9	40.5	68.0	39.1	41.4
Male sterilization					
Vasectomy	69.9	68.1	82.5	65.1	70.0
No-scalpel vasectomy	34.3	33.1	42.5	26.2	37.4
	28.4	26.5	41.5	22.0	29.2
IUD/Loop	79.7	78.4	88.8	75.3	80.3
Pills	92.3	91.6	96.7	89.4	93.0
Daily	61.8	59.1	80.9	52.8	62.9
Weekly	34.8	32.5	50.6	27.4	35.7
Condom/Nirodh	66.2	64.5	77.9	61.2	66.6
Sponge (today)	12.1	9.9	28.1	11.8	8.6
Injectables	36.4	33.4	57.2	29.9	35.6
Norplant	7.7	7.3	10.8	7.8	6.9
Contraceptive herbs	11.0	10.5	14.6	7.9	12.1
Any traditional method	45.3	40.7	77.8	40.7	40.7
Any other Indian system of medicinal contraceptives	0.6	0.6	0.6	0.8	0.4
Number of women	4,039	3,534	505	1,344	2,190

Note:¹ Include IUD, pills and condom. ² Include Female sterilization, Male sterilization, IUD, pills and condom
³ Includes sub-centre, primary health centre, community health centre or referral hospital, government hospital, and government dispensary within the village.

Female sterilisation is the most widely known method of all contraceptive methods in Sikkim followed by Pills. Overall, 97 percent of currently married women are aware of female sterilization and 70 percent knew about male sterilization. There is very little rural - urban difference in knowledge of female sterilization but it is not the case of male sterilization. A sizable number of urban women (83 percent) know about male sterilization as compared to 68 percent of rural women. There are differentials in spacing methods such as IUD/Loop, Pill and condom users with respect to the background characteristics. The best-known spacing methods are Pills (92 percent) and IUD/Loop (80 percent). Only 66 percent of women know about the condom. There is a large differential in knowledge of spacing methods by residence only 65 percent of the rural women know condom compared to 78 percent of urban women. The modern spacing methods, Pill and IUD are known by 92 and 78 percent of rural women respectively while the corresponding figures in urban areas are 97 and 89 percent respectively of eligible women respondents. The knowledge of these spacing methods remains low as compared to knowledge of sterilization.

In Sikkim, only 45 percent of the women are aware of a traditional method and less than one percent are aware of other contraceptives of the Indian System of Medicine. It is also observed that women from villages with a health facility are slightly more aware about modern spacing methods.

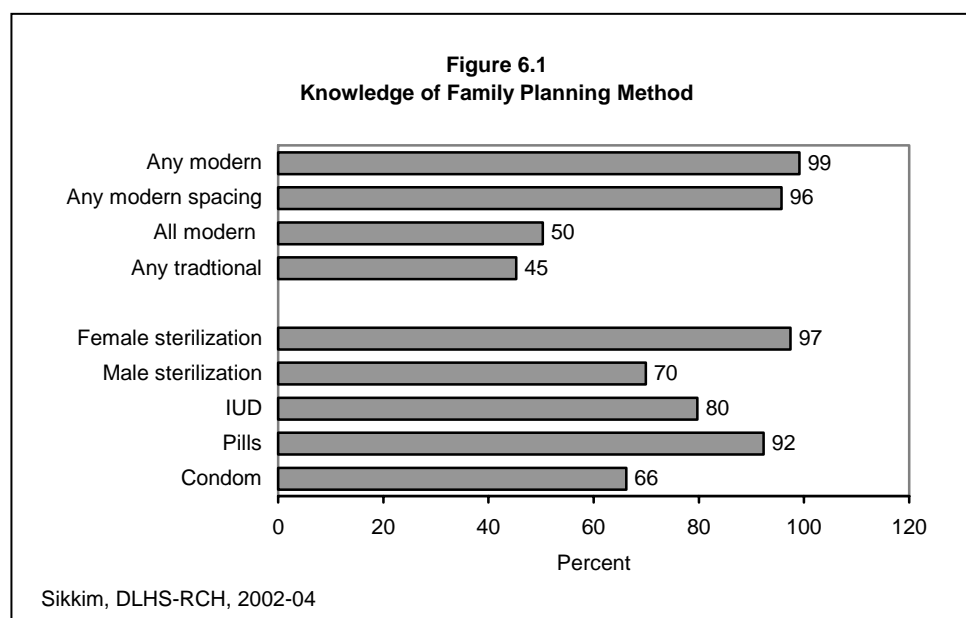


Table 6.2 KNOWLEDGE OF CONTRACEPTIVE METHODS BY DISTRICT

Percentage of currently married women age 15-44 years who know any contraceptive method by specific method and district, Sikkim, 2002-04

Districts	Any method	Any modern ¹ method	Any modern spacing ² method	All modern ³ methods	Male sterilization	Female sterilization	IUD	Pill	Condom /Nirodh	Any traditional method
East	99.3	99.3	95.3	59.7	78.0	97.2	82.9	92.8	72.6	72.0
North	94.5	94.3	88.8	21.9	41.6	90.3	77.6	86.4	36.0	3.3
South	99.9	99.9	97.2	19.7	40.5	98.9	67.3	89.7	49.8	6.9
West	99.6	99.5	97.8	74.8	95.2	98.8	89.7	96.9	81.2	45.7
Sikkim	99.1	99.1	95.7	50.3	69.9	97.4	79.7	92.3	66.2	45.3

Note:¹ Includes Female sterilization, Male sterilization, IUD, Pills and Condom. ² Includes IUD, Pills and Condom. ³ Includes Female sterilization & Male sterilization & IUD & Pills and Condom.

6.1.1 Knowledge of Family Planning Methods by Districts

Table 6.2 shows the knowledge of contraceptive methods by districts in Sikkim. In all districts more than 99 percent of women know about contraceptives including modern methods. A large differential is noticed in the knowledge of all modern methods by districts. The awareness ranges from 20 percent women in South Sikkim to 75 percent in West district. The knowledge of female sterilization, is the lowest in North Sikkim (90 percent) and the highest in South and West district (99 percent). Knowledge about IUD/Loop is 67 in South Sikkim and highest in West

Sikkim (90 percent). Whereas the knowledge of pill lowest in North Sikkim (86 percent) and highest in West Sikkim (97 percent). As for any traditional method, awareness is 72 percent in East district and the least in North district (3 percent).

6.1.2 Knowledge of No-Scalpel Vasectomy (NSV)

Knowledge of no-scalpel vasectomy among the husbands of currently married women in the state of Sikkim is shown in Table 6.3. About fifty-one percent of the husbands know about the no-scalpel vasectomy. In rural areas, 50 percent of husbands know about NSV compared to 63 percent in urban areas. For women residing in villages with a health facility, 48 percent of their husbands are aware of No-scalpel vasectomy and it is a little more, that is, 52 percent for those living in villages without health facilities. Among the husbands who know about NSV, 50 percent reported that NSV is simpler than a conventional family planning method, 46 percent feel that reported as NSV does not lead to any complication and 38 percent reported that NSV does not affect a man's sexual performance. Only 37 percent of the husbands in villages with a health facility reported that, NSV does not affect sexual performance compared to 39 percent of husbands in villages without a health facility.

Table 6.3 KNOWLEDGE OF NO-SCALPEL VASECTOMY (NSV)					
Husbands knowledge of NSV by residence and availability of health facility in the village, Sikkim, 2002-04					
Knowledge of NSV	Total	Residence		Availability of health facility in the village ¹	
		Rural	Urban	No	Yes
Percentage of husband who had knowledge about NSV	51.2	49.5	63.3	52.0	47.9
Number of husbands	3,060	2,678	382	1,047	1,631
Who know that NSV is simpler than conventional vasectomy	50.4	48.4	61.5	48.1	48.6
Who feel that NSV does not lead to any complication	46.1	46.2	45.6	48.5	44.6
Who feel that NSV does not affect man's sexual performance	37.8	37.9	37.5	39.4	36.8
Number of husbands	1,568	1,326	242	545	781

Note: ¹ Includes sub-centre, primary health centre, community health centre or referral hospital, government hospital, and government dispensary within the village.

6.1.3 Knowledge of No-Scalpel Vasectomy (NSV) by Districts

No-scalpel vasectomy awareness by districts in Sikkim are provided in Table 6.4. The districts in which at least 50 percent of husbands know about NSV are East Sikkim (70 percent) and West Sikkim (55 percent). That NSV does not lead to any complications was reported by 59 percent of the husbands in North and South district, followed by 46 percent in East district and only 38 percent in West Sikkim. The responses that reported that the NSV does not affect a man's sexual performance ranged from 32 percent in West Sikkim to highest in East Sikkim (39 percent).

Table 6.4 NO-SCALPEL VASECTOMY BY DISTRICT				
Percentage of husband of eligible women by knowledge of NSV by district, Sikkim, 2002-04				
Districts	Knowledge about NSV	NSV is simpler than conventional method	Who reported NSV does not lead to any complication	Who reported NSV does not affect man's sexual performance
East	70.1	55.4	46.2	39.2
North	22.0	58.3	58.6	36.6
South	17.0	59.2	58.7	37.0
West	54.6	31.3	38.4	32.4
Sikkim	51.2	50.4	46.1	37.8

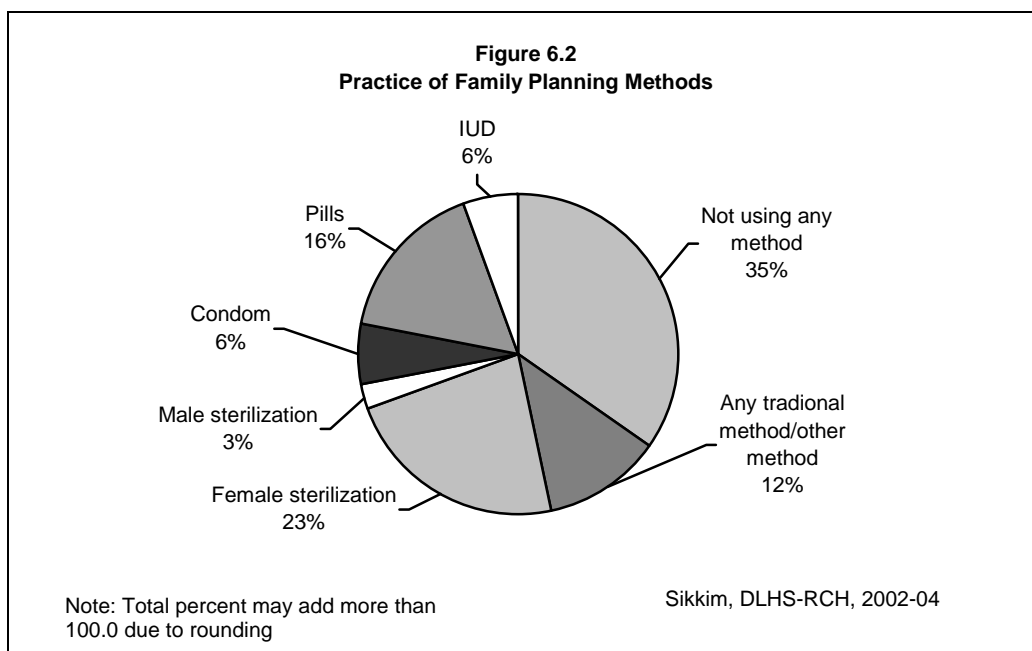
6.2 Current use of Family Planning Methods

Table 6.5 and Figure 6.2 provide the information on current use of family planning methods for currently married women in Sikkim. At the time of DLHS-RCH, 65 percent of currently married women were using some method of contraception. Current contraceptive use is slightly higher in urban areas (69 percent) than in rural areas (65 percent). Use of modern method is reported by 55 percent of the women, the breakdown of which is 26 percent for permanent methods and 28 percent for spacing methods. Among the users of sterilization methods most prefer female sterilization, which invalidates the use of male sterilization (3 percent).

The use of traditional methods is reported by 10 percent of the women of which 3 percent are using withdrawal and 7 percent follow the rhythm or periodic abstinence practice. The rural-urban differential is slightly high in the case of traditional methods, where 16 percent of the urban women are using this means of contraception compared to 9 percent in rural areas.

Table 6.5 CONTRACEPTIVE PREVALENCE RATE													
Percentage of currently married women age 15-44 years currently using any contraceptive method by selected background characteristics, Sikkim, 2002-04													
Method	Any method	Any modern ¹ method	Any modern spacing method ²	Any sterilization	Male sterilization	Female sterilization	IUD/ Loop	Pill	Condom / Nirodh	Any traditional method ³	Rhythm/ periodic abstinence	Withdrawal	Number of women
Residence													
Rural	64.8	55.5	27.9	25.8	2.8	23.0	5.8	16.6	5.5	9.3	6.2	2.9	3,534
Urban	69.2	53.5	28.6	23.2	0.3	22.9	4.9	15.1	8.5	15.7	11.0	4.7	505
Education													
Non-literate	62.8	56.1	23.3	32.3	2.9	29.4	4.9	14.6	3.8	6.8	5.9	0.6	1,056
0-9@ years	66.0	55.9	29.9	23.8	2.6	21.2	5.7	18.6	5.6	10.1	6.3	3.8	2,191
10 years & above	66.7	52.4	28.6	21.0	1.4	19.6	6.6	12.6	9.4	14.3	9.7	4.6	791
Religion													
Hindu	64.1	54.6	26.9	26.2	2.2	24.0	5.1	15.2	6.5	9.6	6.8	2.6	2,646
Muslim	57.7	42.2	23.4	18.8	1.8	17.0	5.7	11.1	6.6	15.5	5.5	8.3	58
Christian	75.3	56.2	27.9	28.2	1.4	26.9	5.0	18.8	4.2	19.1	11.4	7.7	232
Buddhist	66.3	57.1	30.6	23.2	3.3	19.9	7.0	18.9	4.7	9.2	6.0	3.1	1,081
Other	79.7	79.7	38.6	41.1	0.0	41.1	12.0	26.6	0.0	0.0	0.0	0.0	21
Caste/tribe#													
Scheduled caste	67.8	57.1	30.6	24.5	3.7	20.8	4.8	19.9	6.0	10.7	7.2	3.5	267
Scheduled tribe	66.2	55.9	30.2	22.5	2.6	19.9	7.2	18.3	4.7	10.3	6.9	3.2	1,154
Other backward class	65.7	54.3	27.0	26.0	2.6	23.4	5.5	15.8	5.7	11.3	7.3	4.0	1,681
Standard of living index													
Low	58.0	51.7	30.0	20.9	2.6	18.2	5.9	18.0	6.1	6.3	4.9	1.1	1,374
Medium	68.4	56.9	27.2	27.8	2.9	24.9	5.4	17.2	4.5	11.5	7.8	3.6	1,794
High	70.6	57.5	26.2	28.1	1.3	26.8	5.7	12.2	8.3	13.1	7.8	5.3	870
Availability of health facility in the village ⁴													
No	63.7	54.6	26.8	26.3	3.8	22.5	5.9	15.2	5.7	9.2	5.5	3.5	1,344
Yes	65.4	56.1	28.5	25.5	2.2	23.4	5.7	17.5	5.4	9.3	6.7	2.5	2,190
Total	65.3	55.3	27.9	25.5	2.5	23.0	5.7	16.4	5.9	10.1	6.8	3.1	4,039

Note: Total includes 21 women in other religion who were not shown separately.¹ Include Female sterilization, Male sterilization, IUD, Pills and Condom. ² Include IUD, Pills and Condom. ³ Include Rhythm/Periodic abstinence, Withdrawal and Other traditional method. @ Literate women with no years of schooling are also included. #Total figure may not add to N due to don't know and missing cases. ⁴ Includes sub-centre, primary health centre, community health centre or referral hospital, government hospital, and government dispensary within the village.



Current use of contraception is high among women of scheduled castes (68 percent) than among scheduled tribe women (34 percent) and women from other backward classes (66 percent). The current use is also marginally high among the women who have 10 or more years of schooling (67 percent) than the women who have less than 10 years of schooling (66 percent) and also among non-literate women (63 percent). Similarly, current contraceptive use varies positively with respect to the standard of living of the women, increasing the prevalence rate from 58 percent to 71 percent for women from the lowest to the highest standard of living households. The availability of the health facility in the village is not an important factor in motivating eligible women to use contraceptives. Sixty-five percent of the women living in villages with a health facility are currently under contraception and this is higher than the women from villages deprived of a health facility (64 percent). The current use of the traditional method is also higher among women with a higher education level and with a high standard of living than their counterparts not on par with these categories of women.

6.2.1 Current Use of Family Planning Methods by Districts

Table 6.6 presents a picture of current contraceptive use in the districts of Sikkim. The contraceptive use is a couple concepts as family planning methods can be used either by women or by their husbands. In most of the districts, the current use of contraception exceeds 60 percent of eligible women except for the North district. (see Map-6). The state figure of current spacing methods use is 28 percent and it ranges from 26 percent in East district to 32 percent in South Sikkim. The variation in contraceptive prevalence at district level is basically due to the variation in the use of spacing methods while both modern and traditional contraceptive uses do not show much variation across districts.

Table 6.6 CONTRACEPTIVE PREVALENCE BY DISTRICT									
Percentage of currently married women age 15-44 years currently using any contraceptive method by district, Sikkim, 2002-04									
Districts	Any method	Any modern ¹ method	Any modern spacing ² method	Male sterilization	Female sterilization	IUD	Pill	Condom / Nirodh	Any traditional ³ method
East	69.0	53.7	26.4	2.3	22.1	5.2	15.0	6.2	15.3
North	49.4	48.7	28.5	1.9	17.4	5.1	22.7	0.7	0.7
South	60.4	60.4	32.4	1.6	26.2	6.0	16.7	9.7	0.0
West	66.7	53.3	26.5	3.3	21.9	6.3	18.2	2.0	13.4
Sikkim	65.3	55.3	27.9	2.5	23.0	5.7	16.4	5.9	10.1

Note:¹ Include Female sterilization, Male sterilization, IUD, Pills and Condom ² Include IUD, Pills and Condom ³ Include Rhythm/Periodic abstinence, Withdrawal and Other traditional method

The pattern of use of contraceptive methods in Sikkim is different from the general existing pattern in India. The contraceptive prevalence rate of 10 percent for traditional methods in the state is lower than that in other states in the country. The use of oral Pills exceeds 16 percent in the districts of North, South and West. In the districts the use of condom ranges from a low of less than one percent in North district to a high of 10 percent in South Sikkim.

6.2.2 Current Use and Ever Use of Family Planning Methods by Women

Table 6.7 provides information on current contraceptive use and ever used of contraception by age and number of surviving children, living sons and daughters. The current use of any method of contraception among currently married women in the 15-19 years age group is 27 percent and this attains a peak of 78 percent in the age group, 35-39 years. A similar age pattern of contraceptive use is also observed both in case of modern and traditional methods. The use of traditional method is 9 percent for the women aged 35-39 years and 10 percent for the women aged 40-44 years and it is least (4 percent) for the women in younger age groups 15-19 years. The use of modern methods ranges from 23 percent for women in the age group 15-19 years to 68 percent for women in the age group 35-39 years.

Table 6.7 USE OF CONTRACEPTION BY WOMEN

Percentage of currently married women in 15-44 years by current use and ever use of contraception according to selected demographic characteristics, Sikkim, 2002-04

Demographic Characteristic	Percentage of women/husbands using				Percentage of women/husbands by contraceptive status		Number of women
	Any modern method ¹	Any traditional method ²	Any method	Not using any method	Ever used	Never used	
Age-group							
15-19	22.8	3.8	26.7	73.3	31.6	68.4	144
20-24	39.5	9.7	49.2	50.8	62.1	37.9	741
25-29	52.5	11.5	64.0	36.0	73.5	26.4	1,034
30-34	64.7	10.3	75.0	25.0	84.0	16.0	831
35-39	68.2	9.3	77.5	22.5	85.3	14.7	713
40-44	58.9	10.2	69.1	30.9	77.0	22.9	576
Surviving children							
0	15.6	4.6	20.2	79.8	26.9	73.1	431
1	42.2	16.1	58.4	41.6	71.0	29.0	1,000
2	68.5	9.4	77.9	22.1	87.1	12.9	1,270
3 or more	65.3	7.9	73.2	26.8	81.0	19.0	1,337
Surviving sons							
0	36.1	9.6	45.7	54.3	56.4	43.6	1,152
1	60.2	11.7	71.9	28.1	81.0	19.0	1,687
2 or more	66.8	8.2	74.9	25.1	83.3	16.7	1,199
Surviving daughters							
0	43.5	10.9	54.4	45.6	63.6	36.4	1,460
1	61.8	10.5	72.3	27.7	81.4	18.6	1,543
2 or more	62.2	8.2	70.3	29.7	80.2	19.8	1,036
All women	55.3	10.1	65.3	34.7	74.7	25.3	4,039

Note:¹ Include Female sterilization, Male sterilization, IUD, Pills and Condom. ² Include Rhythm/Periodic abstinence, Withdrawal and Other traditional method.

It is crucial to understand the association between the number of living children and contraceptive use. The contraceptive use is high among the women who have three or more surviving children invariably of methods in Sikkim. The use of any method of contraception is 75 percent for the women who have two or more sons and is marginally higher than the women who have two or more daughters (70 percent). The same trend can be observed in the case of use of any modern method which is 67 percent for the women who have two or more surviving sons and it is higher than the women who have two or more daughters (62 percent).

6.2.3 Current Use and Ever Use of Family Planning Methods as Reported by Husbands

Information pertaining to current use of family planning methods among the husbands of currently married women in Sikkim by age and number of surviving children, sons and daughters are given in Table 6.8. The current use of any method of contraception among the husbands (aged below 25 years) of currently married women is 42 percent and it gradually picks up with

the age of husband, to a peak of 73 percent in the age group, 35-44 years. Similar age patterns of contraceptive use are observed both in the case of modern methods. Among the husbands in the age group, 35-44 years the use of traditional methods is 10 percent and it is 8 percent among the husbands in the younger age group of below 25 years. The use of modern methods ranges from 35 percent for husbands below 25 years of age to 63percent for the husbands in the age group 35-44 years.

Table 6.8 USE OF CONTRACEPTION BY MEN					
Percentage of husband of currently married women by current use and ever use of contraception by selected demographic variables, Sikkim, 2002-04.					
Demographic Characteristics	Percentage of husbands/women using				Number of men
	Any modern method ¹	Any traditional method ²	Any method	Not using any method	
Age-group					
<25	34.6	7.6	42.2	57.8	230
25-34	51.6	10.4	62.1	37.9	1,178
35-44	63.4	9.9	73.3	26.7	1,087
45+	62.0	8.8	70.7	29.3	565
Surviving children					
0	20.7	4.6	25.3	74.7	290
1	42.1	15.1	57.3	42.7	738
2	68.1	8.6	76.8	23.2	944
3 or more	65.5	8.4	73.9	26.1	1,088
Surviving sons					
0	39.1	8.8	47.9	52.1	804
1	60.2	11.5	71.7	28.3	1,285
2 or more	65.8	8.2	74.0	26.0	971
Surviving daughters					
0	45.2	10.4	55.5	44.5	1,062
1	61.5	9.8	71.2	28.8	1,180
2 or more	63.8	8.8	72.7	27.3	818
All men	56.4	9.7	66.2	33.8	3,060
Note: ¹ Include Female sterilization, Male sterilization, IUD, Pills and Condom.					
² Include Rhythm/Periodic abstinence, Withdrawal and Other traditional method.					

6.3 Reasons for Not Using Male Methods

The DLHS-RCH asked husbands of currently married women about the contraceptive methods that he or his wife was using currently. The husbands who were not using male methods were further asked the reasons for it. Table 6.9 provides information about reasons for not using male contraceptive methods in Sikkim. Among all the husbands interviewed, 69 percent reported about female methods. Reporting of female methods is higher in rural areas (70 percent) than in urban areas (60 percent). The reasons cited for not preferring the male methods are fear of weakness (45 percent), greater popularity of female methods (50 percent), lack of sexual pleasure (4 percent), fear of method failure (7 percent) and fear of operation (11 percent). Four percent reported fear of impotency as one of the reasons for not using male methods. However, all the reasons cited for not using male methods are reported much more in urban areas than in

rural areas. The expression for fear of weakness is almost the same in urban as well as rural areas. Popularity of female methods as a reason for not using male methods of contraception is more in urban areas (55 percent) than in rural areas (50 percent).

Table 6.9 REASONS FOR NOT USING MALE METHODS			
Percentage of husbands with their choice of family planning methods and reasons for not accepting male methods according to residence, Sikkim, 2002-04			
Female method users and reason for not accepting male methods	Total	Residence	
		Rural	Urban
Percentage of husband who have reported female methods	68.7	70.0	60.2
Number of men	2,025	1,751	274
Reasons for not accepting male methods*			
Fear of impotency	3.6	2.4	12.6
Lack of sexual pleasure	4.1	3.0	12.2
Fear of method failure	6.8	5.7	15.0
Fear of operation	10.6	9.5	18.6
Fear of weakness	45.1	44.2	52.1
Female methods are more popular	50.2	49.5	55.4
Other	4.6	3.5	12.7
Number of men	1,391	1,226	165

Note: * Percentages may add to more than 100.0 because multiple responses could be recorded.

6.4 Source of Contraceptive Methods

To assess the various sources of contraceptive methods, DLHS-RCH collected information on source of obtaining methods. Table 6.10 and Figure 6.3 show the percent distribution of current users of modern contraceptives by source of contraceptives. Family planning methods and services in Sikkim are provided primarily through a network of government hospitals. The services are also provided by private hospitals and clinics, as well as non-governmental organisations (NGOs). Modern spacing methods like IUD, Pill and condom are available through both the government and private sectors. Government/municipal hospitals are the main source for female sterilization (62 percent) followed by community health centres or primary health centres (25 percent), family planning camps or RCH camp (less than one percent) and private hospital (8 percent). For male sterilization as well the aforesaid are the main sources with the exception of 3 percent obtaining the service from Government Doctor. Among the IUD users, 37 percent reported the source as government/municipal hospital and 24 percent from the community health centres and 11 percent from sub-centre and 10 percent from private hospital. It is found that the chemist is the main source for Pills (44 percent) and condom (49 percent).

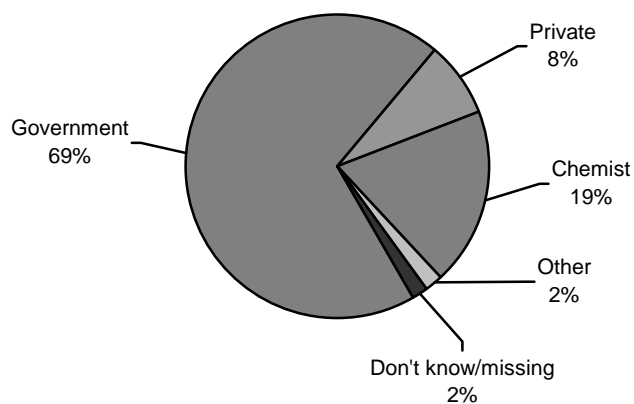
Table 6.10 SOURCE OF MODERN CONTRACEPTIVE METHODS

Percent distribution of current users of modern contraceptive methods by method and source of supply, Sikkim, 2002-04

Source	Contraceptive method					All modern methods ¹
	Female sterilization	Male sterilization	IUD/ Loop	Pills	Condom / Nirodh	
Government medical centre	89.0	98.0	73.0	48.6	35.7	69.4
Government/Municipal hospital	61.6	39.4	36.9	12.9	15.2	37.9
CHC/PHC	24.7	49.8	24.4	21.1	16.9	23.9
Sub-centre	1.1	6.0	10.8	14.1	3.6	6.6
Government doctor	0.1	2.7	0.9	0.2	0.0	0.3
Government nurse/ ANM	0.7	0.0	0.0	0.0	0.0	0.3
Family planning/RCH camp	0.3	0.0	0.0	0.2	0.0	0.2
Out reach/MCP clinic in village	0.0	0.0	0.0	0.1	0.0	0.0
Mobile clinic	0.5	0.1	0.0	0.0	0.0	0.2
Private medical centre	10.1	1.8	24.9	3.0	0.0	8.0
Private hospital	8.4	1.8	9.7	2.6	0.0	5.5
Private doctor	1.5	0.0	15.2	0.4	0.0	2.4
Private nurse	0.1	0.0	0.0	0.0	0.0	0.0
Chemist	NA	NA	NA	44.0	48.7	18.9
Other	0.6	0.2	2.1	4.0	1.3	1.9
Do not know	0.2	0.0	0.0	0.4	14.3	1.8
Missing	0.1	0.0	0.0	0.0	0.0	0.0
Total percent	100.0	100.0	100.0	100.0	100.0	100.0
Number of users	930	99	229	663	237	2,158

Note:¹ Includes female sterilization, male sterilization, IUD, Pills or condom. CHC: Community health centre, PHC: Primary health centre.

Figure 6.3
Source of Family Planning Among Current
Users of Modern Contraceptive Methods



Note: Total percent may add more than 100.0 due to rounding

Sikkim, DLHS-RCH, 2002-04

6.5 Problems with Current Use of Contraceptive Methods

Women who were using a modern contraceptive method were asked if they had experienced any problems related with the current methods they are using. Table 6.11 shows the percentage of current contraceptive users who reported specific health problems, treatment seeking behaviour and their satisfaction about the method. The analysis of the method specific problems reveals that 10 percent of the sterilized women have problem with the contraceptive methods in use. The most common problems experienced by sterilized women are weakness or inability to work (40 percent), white discharge (11 percent), dizziness (7 percent), body ache or backache (54 percent), cramps (14 percent), irregular periods (9 percent) and excessive bleeding (14 percent). With regard to the modern spacing methods, 8 percent of women had problems in using Pills and 7 percent in using IUD. The most common problems of Pill users were weakness/inability to work (44 percent), dizziness (15 percent), white discharge (15 percent), nausea or vomiting (21 percent), body ache or backache (17 percent) and irregular periods (19 percent).

Health problems/side effect	Type of method		
	Female sterilizations	IUD/loop	Pill
Women who were informed about all the available methods	70.1	0.0	0.0
Women who were informed about the side effects before adoption of the method	39.6	52.2	43.7
Women who had side effect/health problem due to use of contraceptive method	9.9	6.9	8.4
Number of current users	930	229	663
Type of health problems/side effects¹			
Weakness/inability to work	40.4	*	44.0
Body ache/ backache	54.4	*	16.8
Cramps	14.1	*	12.2
Weight gain	16.1	*	7.8
Dizziness	7.0	*	15.1
Nausea/vomiting	0.6	*	20.9
Breast tenderness	3.9	*	0.1
Irregular periods	8.5	*	19.2
Excessive bleeding	13.5	*	9.2
Spotting	0.0	*	0.9
White discharge	11.2	*	14.7
Other	0.0	*	0.0
Number of users with side effects	92	16	56
Note: ¹ Percentages may add to more than 100.0 because multiple problems could be recorded. * Percentage not shown: based on few cases.			

6.6 Treatment for Health Problems with Current Use of Contraception

The study of respondents who sought treatment for contraceptive related health problems reveals that 6 percent of the sterilized women sought treatment and 3 percent in the case of Pills. Regarding the satisfaction about the method, 94 percent of the sterilized women reported satisfaction with sterilization. In the case of spacing methods, 93 percent of women using Pills and 94percent of women using IUD were satisfied with the respective methods.

Those women who had sought treatment for contraceptive use related problems, majority of them have taken treatment from Government hospitals/ dispensaries For female sterilization related health problems, 40 percent had taken treatment from Government hospitals/ dispensaries, 17 percent from private hospitals/ clinics, 5 percent from Indian System of Medicine health facilities.

Health problems/side effect	Type of method		
	Female sterilizations	IUD/loop	Pill
Women who had follow up visit by health worker after adoption of method	6.1	6.7	3.3
Women who are satisfied with method of current use	94.0	94.1	93.3
Number of current users	930	229	663
Women who sought treatment for the health problem	68.6	*	11.3
Number of women with side effects	92	16	56
Source of treatments			
Government health facility			
Government hospital/dispensary			
PHC	39.6	*	*
Sub-centre	36.8	*	*
	8.4	*	*
Private health facility			
Private hospital/clinic	17.4	*	*
ISM health facility ¹	5.4	*	*
Chemist/Medical shop	5.9	*	*
Home remedy	3.9	*	*
Number of women with side effects	63	5	6
Note: ¹ Either government or Private. * Percentage not shown: based on few cases.			

6.7 Advice to Non-Users and their Future Intention to Use Contraception

Information about non-users, who were advised by the ANM/health worker to adopt contraceptives and their future intention, to use by preferred method according to their background characteristics are presented in Table 6.13. In DLHS-RCH currently married women who were not using any method of contraception, were asked about advice given by ANM/health worker for adoption of any contraceptive method. It is evident that 23 percent of the women were advised by ANM/health worker to adopt any family planning method in Sikkim. Among rural women, 23 percent were advised by ANM/health worker to adopt any method and it is higher than the urban women (18 percent) who were advised so.

Table 6.13 ADVICE ON CONTRACEPTIVE USE					
Percentage of current non-users ¹ who were advised by the ANM/health worker to use contraception by suggested method according to place of residence and availability of health facility in the village, Sikkim, 2002-04					
Advise/future intension to use	Total	Residence		Availability of health facility in the village ²	
		Rural	Urban	No	Yes
Percentage of current non-users advised by ANM/health worker to use of contraceptive method	22.4	23.1	17.1	19.9	25.1
Number of non-users	1,226	1,091	136	425	665
Percent distribution of women who were advised by method					
Female sterilization	65.9	65.7	*	56.6	70.3
Male sterilization	2.7	2.9	*	2.3	3.2
IUD/loop	11.3	11.8	*	10.6	12.4
Pill	16.1	15.8	*	20.4	13.4
Condom/Nirodh	1.1	1.2	*	3.6	0.0
Rhythmic /periodic abstinence	0.3	0.3	*	0.0	0.5
Withdrawal	0.1	0.1	*	0.0	0.2
Other	2.5	2.2	*	6.6	0.0
Total percent	100.0	100.0	100.0	100.0	100.0
Number of non-users	275	251	23	85	167

Note:¹ Exclude women in menopause or those who have undergone hysterectomy.
² Includes sub-centre, primary health centre, community health centre or referral hospital, government hospital, and government dispensary within the village. * Percentage not shown; based on few cases.

The recommended contraceptive methods by ANM/health worker is dominated by female sterilization (66 percent) and Pill (16 percent). Only 11 percent were advised either to adopt IUD/loop and Condom/Nirodh (11 percent) as spacing methods. Male sterilization has been advised to 3 percent. This pattern of advice also emerges irrespective of residence and availability of health facility in the village.

6.7.1 Future Intentions

Among the non-users, 41 percent of women have expressed their intention to use any method of contraception in the future. The intention to use any method of contraception is higher in urban areas (48 percent) than in rural areas (40 percent).

Among the women who intended to use permanent methods of contraception, 67 percent preferred female sterilization whereas only three percent of the women preferred male sterilization. In case of temporary methods, the preferred methods by women are oral Pills (17 percent), rhythm/periodic abstinence (less than one percent), condoms (1 percent), IUD (7 percent) and other methods (5 percent) respectively.

Thirty-one percent of the husbands intended to use contraception in the future, among them 31 percent belong to rural areas and 28 from urban areas. Method wise choice in intention to use contraception is dominated female sterilization being reported by 70 percent, followed by Pills (12 percent), IUD/Loop (10 percent), condom (2 percent) and withdrawal (less than one percent)

Table 6.14 FUTURE INTENTION TO USE						
Percentage of current non-users* who were intended to use contraception in future by preferred method according to place of residence, Sikkim, 2002-04						
Future intention to use/method	Women			Husband		
	Total	Rural	Urban	Total	Rural	Urban
Percentage of respondents who intend to use contraceptive in future	41.1	40.2	48.2	31.0	31.3	28.4
Number of non-users	1,226	1,091	136	988	892	96
Percent distribution of non-user who were preferred to use family methods by preferred method						
Female sterilization	67.2	67.2	67.2	69.7	68.6	(66.7)
Male sterilization	3.0	3.2	1.4	3.4	3.8	(0.0)
IUD/copper-T/loop	7.3	7.8	3.8	10.2	11.1	(5.1)
Oral pills	16.6	15.2	25.5	11.5	11.1	(23.1)
Condom/Nirodh	0.8	0.9	0.0	1.5	1.5	(2.6)
Rhythm/periodic abstinence	0.2	0.3	0.0	0.5	0.6	(0.0)
Withdrawal	-	-	-	0.7	0.8	(0.0)
Other	5.0	5.4	2.1	2.4	2.5	(2.6)
Total percent	100.0	100.0	100.0	100.0	100.0	100.0
Number of non-users	504	438	65	307	279	27

* Exclude women who are in menopause or those who have undergone hysterectomy. () Based on less than 50 unweighted cases

6.7.2 Future Intention to Use Among Women by Number of Living Children

Currently married women who were not using any contraceptive method at the time of survey were asked about their intentions to use a method in the future. Those women who intended to use contraceptives in the future were further asked about preferred methods. This type of information aids the managers and programmers to identify the potential groups of future users and to provide the type of contraceptives that are likely to be in demand. Table 6.15 provides the information on intention to use contraception in future according to number of living children and residence background in Sikkim. Among the current non-users, around 14 percent of the women intended to use contraception within the next twelve months. Only 8 percent of women wanted to use within one to two years whereas 19 percent reported their intention to use contraceptives after two years. About 40 percent are not sure of their intention to use, where as 19 percent reported no intention to use. The intention of using contraception is high among the women who have two or more living children compared to the women who have either one or no living children. Around 61 percent of the women who have no living children reported that they are yet to decide about the use of contraceptives.

Table 6.15 FUTURE USE OF CONTRACEPTION BY NUMBER OF LIVING CHILDREN

Percent distribution of currently married women* who were not currently using any contraceptive method by intention to use in the future, according to number of living children and residence, Sikkim, 2002-04

Intention to use in the future	Number of living children					Total
	0	1	2	3	4+	
	Total					
Intends to use in next 12 months	0.8	9.4	17.6	32.2	29.1	13.8
One to two years	1.4	11.4	12.2	5.5	9.8	8.1
More than two years	23.3	28.5	16.2	9.8	3.5	19.2
Does not intend to use	13.5	16.2	19.7	22.0	32.9	19.1
Not yet decided	61.0	34.6	34.2	30.5	24.6	39.7
Total percent	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	325	357	252	123	169	1,226
	Rural					
Intends to use in next 12 months	0.8	9.1	18.0	33.3	29.3	14.1
One to two years	1.6	11.7	11.9	5.7	9.8	8.3
More than two years	21.5	27.7	15.0	7.2	2.7	17.9
Does not intend to use	14.3	16.0	19.9	23.7	33.5	19.6
Not yet decided	61.7	35.4	35.2	30.1	24.7	40.1
Total percent	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	281	321	224	113	152	1,091
	Urban					
Intends to use in next 12 months	0.6	12.0	14.5	*	*	11.5
One to two years	0.0	7.9	15.0	*	*	6.8
More than two years	34.6	34.8	25.9	*	*	29.9
Does not intend to use	8.6	18.2	18.3	*	*	15.3
Not yet decided	56.3	27.1	26.3	*	*	36.5
Total percent	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	44	36	28	10	18	136

Note:* Exclude women who are in menopause or those who have undergone hysterectomy.

6.8 Reasons for Discontinuation and Non-Use of Contraception

Currently married non-pregnant women who were not using any contraceptive method at the time of survey were categorised as past users and never users according to their contraceptive experience. In DLHS-RCH, women who had discontinued contraceptive use were asked about the main reason for discontinuation. The survey also asked women who had never used contraceptives about the main reason for not doing so. Table 6.16 shows the main reason for not using contraceptives among both the past never users and current non users. Among the past users, around 39 percent of the women mentioned that they discontinued the use because they had wanted child, method failed/became pregnant (4 percent), weakness/inability to work (19 percent), irregular periods (7 percent), and method was inconvenient (less than one percent) and other reasons (8 percent). For urban and rural women 4 percent have reported method failure/become pregnant due to discontinuation. In urban areas, 20 percent of women reported as weakness/inability to work as reason for discontinuing the use and it is the same is 20 percent among rural women.

Table 6.16 REASONS FOR DISCONTINUATION OF CONTRACEPTION			
Percent distribution of women who were past users (current non-users) by reason for discontinuation of the contraceptive method according to place of residence, Sikkim, 2002-04			
Reasons	Total	Place of residence	
		Rural	Urban
Reason for discontinuation			
Wanted child	38.6	39.6	(31.1)
Method failed/became pregnant	4.4	4.0	(4.4)
Supply not available	2.2	1.9	(2.2)
Difficult to get method	1.2	1.3	(2.2)
Weakness/inability to work	19.3	19.9	(20.0)
Body ache/ Backache	7.3	6.9	(11.1)
Weight gain	2.3	2.5	(0.0)
Dizziness	1.4	1.5	(4.4)
Nausea/vomiting	2.5	2.0	(4.4)
Breast tenderness	1.9	2.1	(0.0)
Irregular periods	6.7	7.3	(2.2)
Excessive bleeding	1.9	1.6	(8.9)
White discharge	0.0	0.0	(2.2)
Lack of pleasure	1.2	1.3	(0.0)
Method was inconvenient	0.5	0.6	(0.0)
Other	7.6	6.8	(6.7)
Missing	0.7	0.7	(0.0)
Total percent	100.0	100.0	100.0
Number of past users	376	342	34
Note:() Based on less than 50 unweighted cases			

6.8.1 Reasons for Not Using Contraceptive Methods

DLHS asked women and husbands who are currently not using any contraception and main reasons why they were not currently using a method. The reported main reasons for not using contraceptives are, worry about side-effects (21 percent), health does not permit (23 percent), lack of knowledge about family planning methods (7 percent), opposed to family planning (8 percent), against the religion (2 percent) and afraid of sterilization (7 percent). About 24 percent of the women reported other reasons for not using contraception. As far as rural-urban differentials are concerned, a little variation is observed in the reasons for not using any contraceptive.

Table 6.17 REASON FOR NOT USING CONTRACEPTIVE METHOD

Percentage of current non-users who were currently not using contraceptive method by reason according to place of residence, Sikkim, 2002-04

Reason	Women			Husband*		
	Total	Rural	Urban	Total	Rural	Urban
Lack of Knowledge about FP method	6.7	5.9	12.6	29.7	30.3	25.1
Against the Religion	1.8	1.6	3.0	4.8	5.4	0.3
Opposed to family planning	8.4	8.7	6.1	6.1	5.6	8.9
Not like existing method	0.6	0.4	1.9	1.2	0.7	5.0
Afraid of sterilization	7.4	7.6	5.7	2.2	2.0	3.1
Can not work after sterilization	2.9	3.3	0.1	3.7	3.1	7.9
Worry about side effects	21.1	20.8	22.9	3.0	3.0	3.1
Costs too much	0.3	0.3	0.3	6.8	6.8	7.3
Health does not permit	22.8	22.9	22.1	15.3	16.9	3.9
Hard/inconvenient to get method	1.0	1.2	0.0	9.4	8.2	18.5
Inconvenient to use method	0.8	0.9	0.0	0.6	0.7	0.0
Difficult to become pregnant	2.0	2.0	2.1	6.0	6.6	1.9
Wife is pregnant ¹	-	-	-	0.4	0.4	0.0
Other	24.4	24.6	23.1	9.6	8.8	15.1
Missing	0.0	0.0	0.0	1.3	1.5	0.0
Total percent	100.0	100.0	100.0	100.0	100.0	100.0
Number of current non-users	737	648	89	431	377	53

Note: ¹ Not applicable for women. * Excluding not decided cases on timing of next child.

6.9 Unmet Need for Family Planning Services

Unmet need for family planning is one of the indicators to assess the effectiveness of the family planning programme. Policy makers and family planning programme planners use this to know the demand for family planning services/supplies. Unmet need is defined in this report separately for limiting and spacing. Unmet need for spacing includes the proportion of currently married women who are neither in menopause nor had hysterectomy nor are currently pregnant and who want more children after two years or later and are currently not using any family planning method. The women who are not sure about whether and when to have next child, are also included in unmet need for spacing. The women who are not sure about the timing of the next child are also included in the unmet need for spacing. Unmet need for limiting includes the proportion of currently married women who are neither in menopause nor had hysterectomy nor are currently pregnant and do not want any more children but are currently not using any family planning method. Total unmet need refers to the totality of unmet for limiting and spacing. Table 6.18 provides the information about unmet need for limiting and spacing in Sikkim by background characteristics.

The unmet need is high for women below 20 years, mainly for spacing rather than for limiting. Unmet need is also relatively high for women aged 20-24 years (12 percent and 8 percent) for both spacing and limiting. Among the older women of age 25-29 years, 18 percent have unmet need, and mostly for limiting. Among the women age 30 years and above, unmet need is for limiting (13 percent). The rural women and urban women unmet need of 18 percent each. The unmet need for family planning is higher (23 percent) among the non-literate women than among the women with 0-9 years of schooling (17 percent) and 10 or more years of schooling (15 percent) women. Christian women have lesser unmet need for family planning (13

percent) compared to the Hindu women (19 percent) or Muslim women (32 percent) and Buddhist women (19 percent). Unmet need for family planning is higher (20 percent) for Scheduled caste followed by other backward class (19 percent), other caste (18 percent) and Scheduled tribe (17 percent) women.

Table 6.18 UNMET NEED FOR FAMILY PLANNING SERVICES				
Percentage of currently married women with unmet need for family planning services by selected background characteristics, Sikkim, 2002-04				
Background Characteristic	Unmet need for FP			Number of women
	Spacing ¹	Limiting ²	Total	
Age				
15-19	16.7	8.2	24.9	144
20-24	11.6	8.3	19.9	741
25-29	5.1	13.0	18.1	1,034
30-34	3.2	12.7	15.9	831
35-39	2.8	15.5	18.3	713
40-44	0.4	17.3	17.7	576
Residence				
Rural	5.1	13.2	18.3	3,534
Urban	6.4	11.1	17.5	505
Education				
Illiterate	3.6	19.8	23.4	1,056
0-9 @ years	6.1	10.6	16.7	2,191
10 years and above	5.1	10.3	15.4	791
Religion				
Hindu	5.6	13.8	19.3	2,646
Muslim	2.7	29.1	31.8	58
Christian	4.3	8.9	13.2	232
Buddhist	4.7	11.2	15.9	1,081
Caste/tribe#				
Scheduled caste	4.0	15.5	19.5	267
Scheduled tribe	5.1	12.0	17.1	1,154
Other backward class	6.1	12.8	18.9	1,681
Others	4.4	13.7	18.1	897
Number of living children				
0	10.9	1.9	12.8	431
1	12.3	9.1	21.4	1,000
2	1.8	13.9	15.8	1,270
3	2.0	14.5	16.4	682
4+	0.8	22.5	23.3	655
Standard of living Index				
Low	5.7	16.3	22.0	1,374
Medium	5.4	11.7	17.1	1,794
High	4.2	10.3	14.5	870
All women	5.2	12.9	18.2	4,039
<p>Note:¹ Unmet need for spacing includes the proportion of currently married women who are neither in menopause or had hysterectomy nor are currently pregnant and who want more children after two years or later and are currently not using any family planning method. The women who are not sure about whether and when to have next child are also included in unmet need for spacing. ² Unmet need for limiting includes the proportion of currently married women who are neither in menopause or had hysterectomy nor are currently pregnant and do not want any more children but are currently not using any family planning method. Total unmet need refers to unmet for limiting and spacing.</p> <p>@ Literate women with no years of schooling are also included. # The total figure may not add to N due to do not know and missing cases. Note: Total includes 21 women in other religion who were not shown separately.</p>				

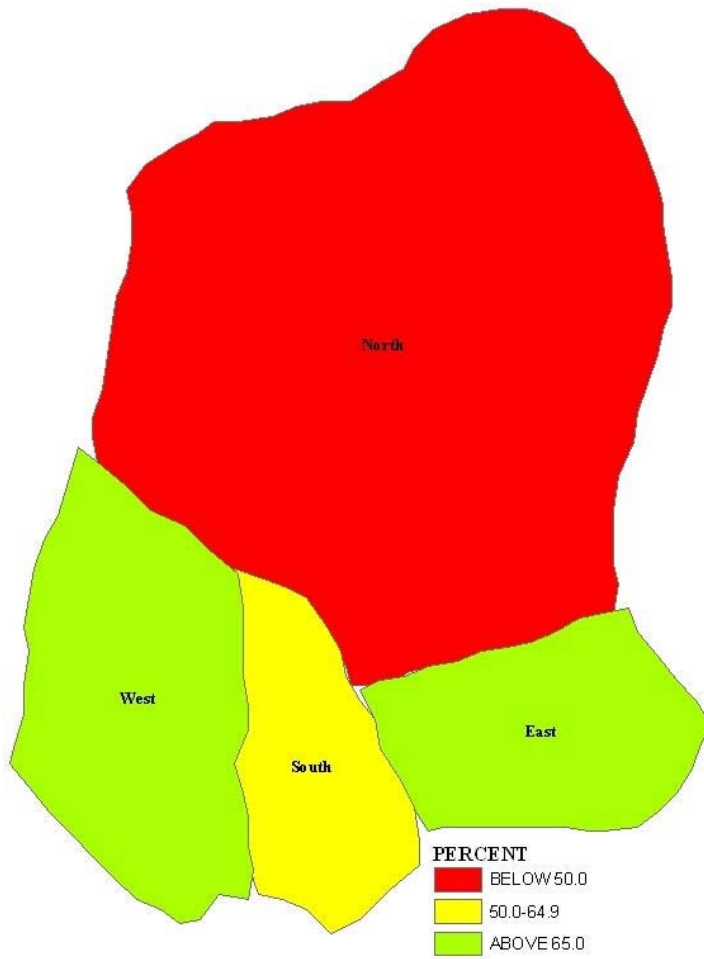
Women in low standard of living have high (22 percent) unmet need than the women of medium (17 percent) and high standard of living (15 percent). Unmet need is much higher for the women with 4 or more living children (23 percent) than women with either no children (13 percent) or two or more children (16 percent). Among the women with no children or one child the unmet need is mainly for spacing, where as for women with two children or more unmet need is exclusively for limiting.

6.9.1 Unmet Need for Family Planning Services by Districts

Table 6.19 provides the information about unmet need for limiting, spacing and total by district. The unmet need for family planning services for state is 18 percent and it ranges from 17 percent in South district to 34 percent in North district. In 3, out of 4 districts unmet need for family planning is more than state average. Unmet need for limiting was found lowest in South Sikkim (11 percent) followed by East Sikkim (12 percent), West Sikkim (15 percent) and highest in North Sikkim (25 percent). Similarly, unmet need for spacing was lowest at 3 percent in West Sikkim to 10 percent in North Sikkim. It may also observe that in all the districts of Sikkim unmet need for limiting was more than spacing.

Table 6.19 UNMET NEED BY DISTRICT			
Percentage of currently married women with unmet need by district, Sikkim, 2002-04			
Districts	Unmet need for		
	Spacing	Limiting	Total
East	5.7	11.7	17.5
North	9.5	24.8	34.3
South	5.5	11.2	16.7
West	2.7	14.8	17.5
Sikkim	5.2	12.9	18.2

MAP-6
Current use of Any Family Planning Method



CHAPTER VII

ACCESSIBILITY AND PERCEPTION ABOUT GOVERNMENT HEALTH FACILITIES

The government health facilities at all the levels provide various RCH services. Auxiliary Nurse Midwife (ANM), family planning worker or male health worker play a key role in delivering the services to the community. Health workers are expected to make regular visits to all the households in their assigned area. During these contacts, the health workers are supposed to monitor various aspects of the health of women and children, provide information related to health and family planning, counsel and motivate to adopt appropriate health and family planning practices, and deliver other selected services. These contacts are also important as they enhance the creditability of services and establish necessary rapport with the clients. In order to assess the extent of utilisation of government health facilities by all eligible women and to find out whether ANM/health workers reach the households for providing RCH services, a separate section in the women's questionnaire was canvassed to all the eligible women. This chapter deals with the accessibility and the opinion of women about the services provided by the government health workers. The quality of care offered by the government health programme as perceived by currently married women is also presented.

7.1 Home Visit by Health Workers

Table 7.1 shows the percentage of currently married women visited by health workers at home during the three months prior to the survey. Less than one percent of the women in Sikkim reported that the health worker visited them at their residence at least once in last three months preceding the survey. Younger women seemed less likely to report a home visit than older women but in all three age groups the percentage of women who reported at least one home visit was less than one percent. The percentage of women in Sikkim receiving home visits is higher in rural areas (0.8 percent) than in urban areas (0 percent). Buddhist women reported 1 percent home visits. In the rest of the categories the reporting percentage was less than one percent. Home visits were less common for women residing in the villages with a health facility.

Women who reported a home visit during the three months preceding the survey were asked who visited their household during the past three months and whether they were satisfied with the kind of services/advice received, and the time spent by these health workers. Among women who received services at home, less than 1 percent received services. There were less rural-urban differentials by visit of households by health worker.

7.2 Home Visit by Health Workers by Districts

In all the districts in Sikkim, health workers visited less than one percent of the women at home (Table 7.2) except in North Sikkim which reported 3 percent.

Table 7.1 HOME VISIT BY HEALTH WORKER		
Percentage of women who had home visit by health worker in the 3 months preceding the survey by selected background characteristics, Sikkim, 2002-04		
Background characteristic	Percentage with home visit	Number of women
Age		
15-24	0.4	885
25-34	0.9	1,865
35-44	0.8	1,289
Residence		
Rural	0.8	3,534
Urban	0.0	505
		1,056
Education		
Non-literate	0.7	2,191
0-9 years@	0.7	791
10 and above	0.9	2,646
Religion		
Hindu	0.6	58
Muslim	0.0	232
Christian	0.3	1,081
Buddhist	1.1	267
Caste/tribe#		
Scheduled caste	0.1	1,154
Scheduled tribe	0.9	1,681
Other backward class	0.8	897
Other	0.8	
Standard of living index		
Low	0.7	1,374
Medium	0.9	1,794
High	0.6	870
Availability of health facility² in the village		
No	0.9	2,190
Yes	0.7	1,344
Total	0.8	3,534

Note.: Total includes 21 cases with other religious group were not shown separately. @ Literate women with no years of schooling are also included. # Total number may not add to N due to do not know and missing cases. ² Includes sub-center, primary health center, Community health center or referral hospital, government hospital, and government dispensary within the village.

Table 7.2 HOME VISIT BY HEALTH WORKER BY DISTRICT	
Percentage of women who had home visit by health worker in the 3 months preceding the survey by district, Sikkim, 2002-04	
District	Percentage with home visit
East	0.4
North	3.2
South	0.5
West	0.9
Sikkim	0.7

7.3 Matters Discussed during Home visits or Visits to Health Facilities

Women who were visited at home by a family planning worker, as well as those who visited government health facility or other health facility during the three months preceding the survey were asked about the different topics discussed with the workers during any of these visits. Table 7.3 shows the percentage of women who discussed the health and family planning or any health related matters to the health workers during home visits or visits to a health facility during the past three months. There are 12 pregnant woman or women with children born during the reference period, and other women includes 15 current users and 4 current non-users, who were visited by health workers at home.

The major focus of discussion during visits to a health facility was treatment of a health problem (25 percent), family planning (10 percent) and disease prevention (29 percent). In addition, discussions were also made on immunization (20 percent), antenatal care (12 percent) and childcare (15 percent). Discussions about family planning were mentioned more often by current users of contraception (18 percent) than pregnant women or women with child born after reference period (9 percent). As expected, pregnant women or women with child born after reference period were much more likely than other women to report that they discussed childcare, immunization, antenatal care, postpartum care, and breastfeeding. A higher proportion of current contraceptive users and current non-users discussed, disease prevention, treatment of health problems, sanitation/cleanliness and other health related matters during home visit by health workers past three months preceding the survey.

Table 7.3 MATTER DISCUSSED DURING CONTACT WITH A HEALTH WORKER

Percentage of women who were visited by health worker in the three months preceding the survey, and percentage of women who visited health facility, and the percentage of women¹ who discussed specific topics with the health worker, Sikkim, 2002-04

Topic discussed	Pregnant women or women with children after reference period ²	Other women		Total
		Current contraceptive users	Current nonusers	
During home visit				
Family planning	*	*	*	(44.7)
Breastfeeding	*	*	*	(8.5)
Supplementary feeding	*	*	*	(0.0)
Immunization	*	*	*	(34.0)
Nutrition	*	*	*	(23.4)
Diseases prevention	*	*	*	(6.4)
Treatment of health problem	*	*	*	(8.5)
Antenatal care	*	*	*	(6.4)
Delivery care	*	*	*	(6.4)
Postpartum care	*	*	*	(0.0)
Childcare	*	*	*	(14.9)
Sanitation / cleanliness	*	*	*	(12.8)
Oral rehydration	*	*	*	(4.3)
Other	*	*	*	(0.0)
Number of women	12	15	04	30
During visit to health facility				
Family planning	8.7	17.8	0.9	10.2
Breastfeeding	4.1	1.2	0.0	2.9
Supplementary feeding	1.7	0.0	0.0	1.1
Immunization	31.6	0.0	0.6	19.8
Nutrition	3.5	0.0	0.0	2.2
Diseases prevention	2.2	5.6	4.6	3.4
Treatment of health problem	17.5	48.9	46.1	28.9
Antenatal care	30.2	12.6	27.0	25.2
Delivery care	17.1	1.3	10.6	12.2
Postpartum care	2.3	0.0	2.0	1.8
Childcare	15.2	13.4	13.2	14.5
Sanitation / cleanliness	2.0	2.2	0.1	1.9
Oral rehydration	0.6	0.0	0.0	0.4
Other	0.6	1.2	2.1	0.9
Number of women	358	148	66	572
Note: Percentage add to more than 100.0 due to multiple responses. ¹ Women who visited private health facility are not included. () : Based on less than 50 unweighted cases. * Percentage not shown- based on few cases.				
² Reference period for phase I, January 1 st 1999 and for phase II, January 1 st .2001				

The topic discussed most often during home visits by women was treatment of health problems 44 percent, Childcare 15 percent, antenatal care 25 percent and immunization and other less than 1 percent each. Only ten percent women reported that they discussed family planning during the visit. During visit to health facility about 18 percent of the pregnant women or women with children born during reference period discussed on treatment of a health problem, 15 percent discussed about childcare, 32 percent discussed immunization and 30.2 percent discussed antenatal care. A few pregnant women or women with children born after reference period also discussed about delivery care, postpartum care, breastfeeding, nutrition, oral re-hydration and breastfeeding during visit to health facility. A higher proportion of current users and non-users discussed on treatment of health problems, disease prevention, and other health related problems than pregnant women with children after reference period during visit to health facility in three months prior to survey.

7.4 Visit to Health Facility

Table 7.4 presents the percentage of currently married women who needed to visit health facility and visited the health facility by residence and availability of health facility in the village. Around 51 percent of women needed to visit health facility but did not visit in comparison with 19 percent of women who needed to visit health facility and visited in past three months of the survey. The proportion of such women was higher in urban areas (28 percent) than in rural areas (18 percent). Among them who visited any health facility, 68 percent of women reported that they had visited a government hospital/dispensary, (39 percent in rural areas and 44 percent in urban areas).

Table 7.4 VISIT TO HEALTH FACILITY					
Percentage of women who need to visit health facility and visited, and percent distribution of women visited health facility by type of health facility and according to place of residence and availability of health facilities in the village, Sikkim, 2002-04					
Health facility	Total	Residence		Availability of health facility ¹ in the village	
		Rural	Urban	No	Yes
Percentage of women who needed to visit health facility and not visited	50.7	48.8	64.4	56.7	43.9
Percentage of women who needed to visit health facility and visited	19.3	18.2	27.5	16.4	19.2
Number of women	4,039	3,534	505	1,344	2,190
Government health facility					
Hospital / CHC / FRU / RH	34.9	33.4	41.7	34.8	32.8
Dispensary	5.0	5.5	2.3	4.2	6.2
Primary health center	23.6	25.7	14.0	31.5	22.6
Sub-center	8.3	10.0	0.0	9.1	10.5
Private health facility					
Hospital	25.0	22.6	36.2	19.0	24.4
Dispensary	0.8	0.3	3.1	0.3	0.3
ISM ² hospital/dispensary	1.7	1.4	2.7	0.5	1.9
Other	0.9	1.1	0.0	0.6	1.3
Total percent	100.0	100.0	100.0	100.0	100.0
Number of women	780	642	138	221	421
Note: CHC: Community health center, FRU: First referral unit, RH: Referral Hospital. ¹ Includes sub-center, primary health center, Community health center or referral hospital, government hospital, and government dispensary within the village. ² Either government or private health facility of Indian System of Medicine.					

Only 26 percent of the women visited a private hospital/dispensary. 68 percent of those who visited a Government health facility, 35 percent visited a hospital/CHC/FRU/RH, 8 percent visited sub-centres, and 24 percent visited primary health centre and only 5 percent visited to government dispensary. Two percent of the women reported that they visited Indian system of medicine hospital/ dispensary either government or private. There are not many differences in visit to any health facility according to availability of health facility in the village in the past three months of the survey.

7.5 Visit to Health Facility by Districts

Table 7.5 presents the percentage of currently married women who needed to visit health facility and visited the health facility by districts. 70 percent of currently married women in North Sikkim and 17 percent in West Sikkim, needed to visit a health facility, but they did not visit. Out of 4, in 3 districts i.e West Sikkim, North Sikkim and South Sikkim more than 10 percent of the women visited health facility for their health problems In South Sikkim only 6 percent of women visited health facility when needed. The state average for number of women who visited government health facility is higher (73 percent) than that of number of women visiting private health facility (27 percent).

Table 7.5 VISIT TO HEALTH FACILITY BY DISTRICT				
Percentage of women who needed to visit health facility, but not visited and percentage of women who visited health facility by type of health facility and by district, Sikkim, 2002-04				
Districts	Percentage of women who need to visit health facility, but not visited	Percentage of women who need to visit health facility and visited	Percentage of women who visited to	
			Government health facility	Private health facility
East	61.2	28.9	64.4	35.6
North	70.4	10.5	75.0	21.1
South	55.9	6.2	95.5	4.5
West	16.8	17.4	90.3	6.0
Sikkim	50.7	19.3	72.5	26.9

7.6 Client's Perception of Quality of Government Health Services

Utilization of services is an essential indicator reflecting the quality of services. Better quality of services would have a higher utilization rate, which is very important from the policy point of view. Unless clients are satisfied with the services provided by the government, efforts made by the government will be wasted. In order to assess the utilization of government health facilities, a question was asked whether they had visited any health facility for their health problem during past three months to the survey. Those who visited the government health facility were asked their perceptions about quality of services, (personal manner like courtesy, respect, sensitivity, and friendliness of the physician and staff, technical skills and quality like thoroughness, carefulness, and competence and waiting time for receiving the services) and same is presented in Table 7.6. Women in general perceived that the quality of services, personal manner as well technical skills and quality of physician, ANM/nurse and other staff was good. Majority of the respondents perceived that personal manner (courtesy, respect, sensitivity, and friendliness) and technical skills (thoroughness, carefulness, and competence) of the physician, nurses and other staff were good, a few respondents mentioned that personal manners of the physician (2 percent) and his technical skills(2 percent) and personal manners of the nurse (2 percent) was excellent.

Table 7.6 QUALITY OF GOVERNMENT HEALTH FACILITY			
Percentage of women who visited government health facility and rated quality and availability of services during most recent visit to a government health facility in the three months preceding the survey, Sikkim , 2002-04			
Quality indicator	Poor	Good	Excellent
The convenience of the health facility location	17.7	81.4	0.9
Length ¹ of time spend towards waiting	33.4	65.3	1.2
Personal manner ² of the physician ⁵	3.6	94.1	2.3
The technical skills and quality ³ of the physician ⁵	3.9	94.4	1.8
Personal manner ² of nurse	7.3	90.7	2.0
The technical skills and quality ³ of nurse	7.2	90.9	1.8
Personal manner of other staff ⁵	3.4	95.1	1.5
The technical skills and quality of other ⁴ staff	7.6	91.2	1.2
The explanation of what was done to her	7.3	90.1	2.6
Medical, surgical and diagnostic equipment	20.6	79.1	0.3
General comfort	18.8	80.5	0.7
Note: ¹ Poor indicate long waiting time, good indicate average waiting time, and excellent indicate short waiting time. ² Courtesy, respect, sensitivity, friendliness. ³ Thoroughness, carefulness, competence ⁴ Including paramedical staff. ⁵ Includes hospital/community health center/ first referral unit/ referral hospital, dispensary, and primacy health center last visit made by women.			

7.7 Reason for not visiting Government Health Centre

Women who visited the private health centre were asked the main reason for not visiting the government health centre and the results are presented in Table 7.7. Forty-three percent of the currently married women reported heavy rush as one of the reason for not visiting the government health centre for their health problems, as expected this reason is more reported by urban women (53 percent) than rural women (39 percent), and women from those village where health facilities are available (39 percent). About 16 percent reported non availability of Doctors/health workers as a reason for not visiting a government health centre and due to poor quality of service, 18 percent in rural area and 7 percent in urban area. Other reasons for not visiting government health centres were: time is not suited (10 percent) and doctor/ health workers do not examine properly (6 percent).

Table 7.7 REASON FOR NOT PREFERRING GOVERNMENT HEALTH FACILITY
Percent distribution of women who visited private health facility by reason for not visiting government health facility and according to residence and availability of health facilities in the village, Sikkim, 2002-04

Reason	Total	Residence		Availability of health facility ¹ in the village	
		Rural	Urban	No	Yes
Not conveniently located	3.9	4.5	2.6	(3.4)	4.4
Time is not suited	10.0	11.0	7.3	(3.4)	13.5
Poor quality of services	14.9	18.4	5.6	(27.6)	19.9
Heavy rush	42.6	38.6	53.2	(27.6)	38.6
Non/rare-availability of doctors/health workers	16.2	16.3	16.1	(13.8)	17.4
Doctors/health workers do not examine properly	5.9	5.2	7.8	(10.3)	2.0
Medicine not/rarely given or of bad quality	1.3	1.2	1.5	(3.4)	0.2
Doctors/paramedical staff does not behave properly	1.2	1.7	0.0	(0.0)	2.3
Referred by government doctor	1.8	1.5	2.7	(3.4)	0.0
Other	2.1	1.7	3.2	(6.9)	1.7
Total percent	100.0	100.0	100.0	(100.0)	100.0
Number of women	208	152	56	43	109

Note:¹ Includes sub-center, primary health center, Community health center or referral hospital, government hospital, and government dispensary within the village. () Based on less than 50 unweighted cases.

7.8 Family Planning Information and Advice Received

Women who are currently not using any contraceptive method were asked whether they were ever advised by ANM or family planning health worker to adopt family planning method and method advised during any of the contact. Seventeen percent of currently non-users said that they had advices or discussion on method of family planning with ANM or family planning health worker (Table 7.8). The most frequently discussed method was female sterilization (66 percent) and pills (16 percent). Only 1 percent of women received advices to adopt condom and 3 percent to adopt male sterilization as a contraceptive method. Discussions about traditional method, such as rhythm or withdrawal were rare. There is no much variation by types of residence in terms of family planning information and advice received.

7.9 Availability of Pills and Condom

To explore difficulties faced in the procurement of condoms and pills, current users of these methods were asked that they had been able to get their supply whenever needed. The results are presented in Table 7.9. Only 13 percent of condom users and 14 percent of pills users reported that they had a problem in getting these methods. A little higher proportion of rural women than urban women had problems in getting a supply of condom.

Table 7.8 ADVISE TO ADOPT FAMILY PLANNING METHOD			
Percentage of current non-users who reported ever advised to adopt family planning method by method of family planning by ANM/health worker, according to residence, Sikkim, 2002-04			
Advice/method	Total	Rural	Urban
Percentage of non-users who were advised to adopt family planning method	22.4	23.1	17.1
Number of women	1,226	1,091	136
Method			
Female sterilization	65.9	65.7	*
Male sterilization	2.7	2.9	*
IUD	11.3	11.8	*
Pills	16.1	15.8	*
Condom	1.1	1.2	*
Rhythm/periodic abstinence	0.3	0.3	*
Withdrawal	0.1	0.1	*
Other	2.5	2.2	*
Missing			
Total percent	100.0	100.0	100.0
Number of women	275	251	23
Note:* Percentage not shown - Based on few cases.			

Table 7.9 AVAILABILITY OF REGULAR SUPPLY OF CONDOMS/PILLS		
Percentage of current condom or pill users who ever had a problem getting a supply of condoms/pills by residence, Sikkim, 2002-04		
Method/residence	Percentage who had a problem getting supply	Number of users
Condom		
Rural	13.7	586
Urban	5.1	76
Total	12.7	663
Pills		
Rural		
Urban	17.3	194
Total	(0.0)	43
	14.2	237
Note:() Based on less than 50 unweighted cases.		

7.10 Quality of Care of Family Planning Services

Several aspects of quality of care of family planning services were also investigated. Current user of a sterilization was asked whether the person or centre where sterilization had been performed, informed her about other alternative methods of family planning; and further it was asked whether she was told by a ANM or health worker about possible side effects of the modern method at the time she accepted the method; whether she received any follow-up care after accepting the method. Tables 7.10 and 7.11 present the results of this investigation.

Around 71 percent of sterilized women reported that ANM or health worker informed them about alternative methods that they could use (Table 7.10) before adopting sterilization. Around 71 percent of sterilized women received such information by a ANM or health worker in the government health facilities compared to around 73 percent of women who were sterilized in private health facilities.

Table 7.10 INFORMATION OF OTHER MODERN METHOD BEFORE STERILIZATION				
Percentage of current users of sterilization who were informed about other modern method by the source where they get sterilized, according to the source of sterilization and residence, Sikkim, 2002-04				
Source of sterilization	Total	Rural	Urban	Number of users
Government health facility	71.4	69.2	91.0	917
Private health facility	73.3	66.5	92.6	95
Total	70.7	68.1	91.1	1,029
Note: Total includes 3,5, 2, 4 and 2 women who said that they sterilized at Family planning or RCH camp/ village session, mobile clinic, and by chemist, and who do not know including missing information of place/source of sterilization, are not shown separately.				

Table 7.11 INFORMATION ON SIDE EFFECT AND FOLLOW-UP FOR CURRENT METHOD			
Percentage of current users of modern contraceptive methods who were told about side effects or other problems of current method by a health worker or ANM/Nurse at the time of accepting the method and percentage who received follow-up services after accepting the method by current method and according to place of residence, Sikkim, 2002-04			
Information/follow-up	Total	Rural	Urban
Told about side effects			
Sterilization	40.0	38.5	52.1
Other modern method	38.9	37.1	51.7
Any modern method	39.5	37.8	51.7
Received follow-up			
Sterilization	6.1	6.5	2.6
Other modern method	3.6	3.8	2.8
Any modern method	4.8	5.1	2.7

Another important facet of informed contraceptive choice is being fully informed about any side effects and any other problems associated with the method. In Sikkim, only 40 percent of users of any modern method were informed about possible side effects or health problems associated with their current method. Thirty-nine percent of acceptors of sterilization in rural area and 52 percent in urban area reported that they were informed about side effects. Among users of modern method other than sterilization, 37 percent of rural users and 52 percent of urban users were informed about side effects. It is clear from the result that ANM or health workers in Sikkim are not providing sufficient information to couples who need to make an informed choice about contraceptive methods. The situation with respect to follow-up services is also not encouraging. Follow-up services among sterilization users are slightly higher than user of modern methods. About seven percent of sterilization users in rural area and 3 percent in urban area reported that they received follow-up services by ANM

or health worker. Only 5 percent of the users of other modern method received follow-up services. In all, only 5 percent of the users of any modern method in rural area and 3 percent in urban areas received follow-up services.

7.11 Quality of Care Indicators for Contraceptive Users by District

Table 7.12 shows inter-district variations in the percentage of users of sterilization who were told about alternative methods before adopting sterilization and about side effects or other problems related to the current method or users of modern contraceptive methods, and the percentage of users who received follow-up services.

Table 7.12 QUALITY OF CARE INDICATORS FOR CONTRACEPTIVE USERS BY DISTRICT						
Among currently married women who are current users of modern contraceptive methods, quality of care indicators related to the use of their current contraceptive method by district, Sikkim, 2002-04						
District	Percentage informed about other methods before getting sterilization ¹	Percentage told about side effects or other problems with method ²		Percentage who received follow-up ²		Percentage non-user told ever had advised to adopt contraceptive method
		Sterilization	Other modern method	Sterilization	Other modern method	
East	88.5	57.1	54.7	7.6	4.5	23.2
North	62.6	44.9	36.7	6.8	5.2	16.3
South	35.9	36.8	30.2	6.8	3.8	7.1
West	83.9	6.1	16.0	0.4	0.8	38.4
Sikkim	70.7	40.0	38.9	6.1	3.6	22.4

Note: ¹ At the time of accepting the current method.
² By a health worker or ANM/Nurse after accepting the current method. (): Based on less than 25 cases

The percentage of sterilization-users who were told about alternate method is lowest in South Sikkim (36 percent) but it is highest in East Sikkim (89 percent). There are also large inter-district variations in the percentage of sterilization- users and users of modern contraceptive methods who were told about the possible side effect. In case of sterilization, the proportion varied from a low of 6 percent in West Sikkim to a high of 57 percent in East Sikkim. For other modern contraceptive methods, 56 percent users in East Sikkim and a minimum of 16 percent of users in West Sikkim were told about the side effects of the method. Follow-up services are slightly better for acceptors of sterilization than for other modern methods in most of the districts of Sikkim. Table 7.12 also shows district wise variation in the percentage of currently non-users who were ever advised to adopt contraceptive methods, which varies from a low 7 percent in South Sikkim to a high of 38 percent in West Sikkim.

Overall, the quality of care for family planning and health services is far from satisfactory in many of the district of Sikkim; almost all districts need to work much more to improve their health and family planning services, particularly services that are provided by the government sector.

7.12 Quality of Care of Maternal Health Care

Information on few other aspects of quality of care in terms of maternal care was also collected. Women with last live/still births during three years preceding the survey were asked whether the Doctor/ANM/health worker advised you to go to health facility for delivery when they were pregnant, and received any follow-up care after delivering the baby within 2 weeks of delivery and received follow care at least one visit within six weeks of delivery. The same information is presented in Table 7.13.

Table 7.13 ADVISED TO HAVE DELIVERY AT HEALTH FACILITY AND FOLLOW-UP SERVICES FOR POSTPARTUM CHECK-UP			
Percentage of women* who were advised to have delivery at health facility by doctor/ health worker and percentage who receive follow-up services within 2 weeks and within 6 weeks of delivery by ANM, according to residence, Sikkim, 2002-04			
Advise/follow-up service	Total	Rural	Urban
Percentage of women who were advised to have delivery at health facility	59.3	57.2	71.9
Percentage of women who were visited within 2 weeks of delivery	2.0	2.1	1.3
Percentage of women who were visited at least once within 6 weeks of delivery	2.8	3.1	1.3
Number of women	1,146	984	162
Note:* Women who had their last live/still birth during three years preceding the survey			

About fifty-nine percent of the women with last live/still births during three years preceding the survey reported that they were advised by doctor or health worker to have delivery in health facility. Women from urban areas (72 percent) were more likely than rural areas (57 percent) to get advised to deliver their child at health facility.

In district wise variation, the percentage varies from as low as 32 percent in South Sikkim to as high as 74 percent in East Sikkim (Table 7.14). In all the districts, more than 30 percent women were advised for deliver their child in health facility.

Table 7.14 QUALITY OF CARE INDICATORS FOR MATERNAL CARE			
Among currently married women* who are given last live/still birth three years preceding the survey, quality of care indicators related to delivery care by district, Sikkim, 2002-04			
District	Percentage of women		
	Advised to have delivery at health facility by doctor/ health worker	Visited within 2 weeks of delivery by ANM	Visited at least one within 6 weeks of delivery by ANM
East	73.5	2.7	2.7
North	33.5	3.6	4.2
South	31.9	0.0	2.6
West	57.6	1.1	2.2
Sikkim	59.3	2.0	2.8

Two percent of the women reported that they were visited by an ANM within two weeks of delivery; such visit was only 2 percent in rural areas and 1 percent in urban areas. Only 3 percent of the women in rural area and one percent in urban areas received at least one follow-up service within six weeks of delivery. Not more than 2 percent women received postpartum check-up within 2 weeks of delivery in any district of Sikkim, and the proportion of women who had at least one postpartum check-up within six weeks of delivery varied from a low of 2 percent in West Sikkim to high of 4 percent in North Sikkim (Table 7.14).

CHAPTER – VIII

REPRODUCTIVE HEALTH PROBLEMS AND AWARENESS OF RTIs/STIs AND HIV/AIDS

One of the important components of the Reproductive and Child Health Programme is to have a healthy sexual life without any fear of contracting disease. With this approach, the RCH programme places a lot of emphasis on promoting and encouraging healthy sexual behaviour among couples through various Information, Education and Communication (IEC) activities. Health workers are also expected to educate women and men about Reproductive Tract Infections (RTIs) and Sexually Transmitted Infections (STIs) and motivate those people with RTI/STI problems to seek medical help. The DLHS-RCH has made an attempt to collect information on awareness and prevalence of RTI/STI. Apart from this, information on knowledge of HIV/AIDS, source of information and ways of avoiding AIDS were also collected.

8.1 Awareness of RTI/STI

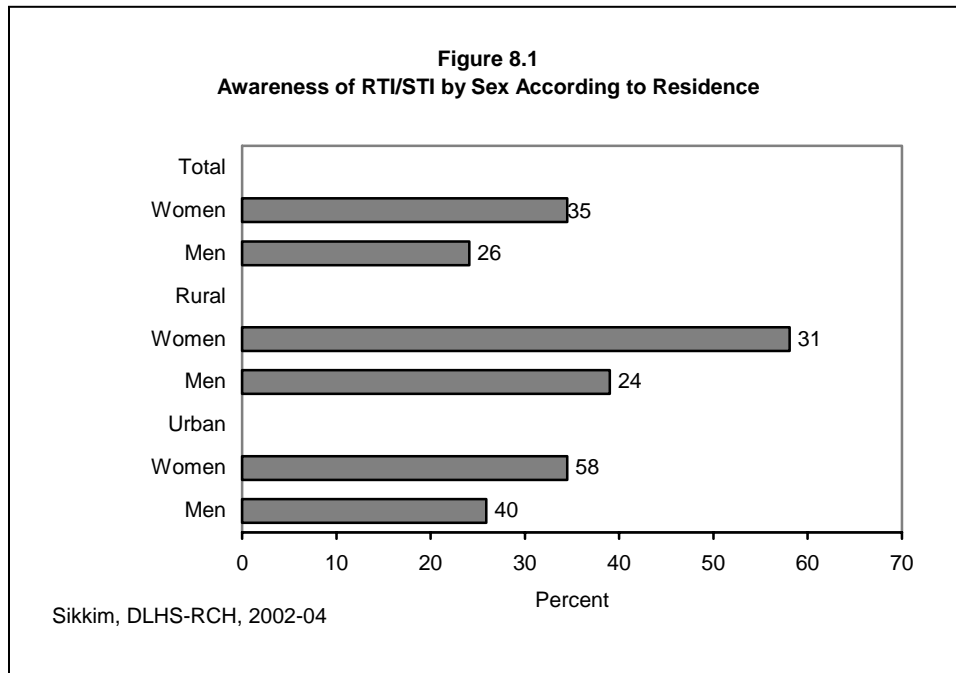
An attempt was made to assess whether couples were aware of RTI/STI. Currently married women and their husbands were asked about their awareness of RTI/STI and if they were aware, they were further questioned about the source of information and mode of transmission of the disease.

Table 8.1 shows the percentage of women aware of RTI/STI by background characteristics. About 34.5 percent of the women in Sikkim were aware of RTI/STI. The proportion of women who were aware of RTI/STI is higher in urban areas (58.1 percent) than in rural areas (31.1 percent) as shown in Figure 8.1. Awareness of RTI/STI is lower among older women, non-literate women, women from Muslim religion, other caste women and women from households with a low standard of living. Awareness of RTI/STI increases from 11.1 percent among non-literate women to 67.4 percent among women who have completed 10 or more years of schooling. The standard of living index shows a positive relationship with awareness of RTI/STI, ranging from 15 percent among women with a low standard of living to 62.6 percent among women with a high standard of living.

Those women who had heard of RTI/STI were further asked about the source of information of RTI/STI, which is also presented in Table 8.1. About 14.6 percent of the women reported that they received information of RTI/STI from television and 50.1 percent from friends or relatives. Other sources of information of RTI/STI as reported by women were newspaper or books or magazines (20 percent), radio (11.1 percent), slogans or posters or pamphlets or wall hoardings (7.7 percent) and community meetings (9.1 percent). About 21.1 percent of women received this information from doctors and 27.8 percent from health workers, and about 1.9 percent of the women reported that they had heard of RTI/STI from other sources.

Table 8.2 shows the percentage of husbands of currently married women who heard of RTI/STI by specific source of information according to some selected background characteristics. In Sikkim, the percentage of men who heard of RTI/STI is lower than that of women (Figure 8.1). Only 26 percent of the men had heard of RTI/STI. Men from urban areas

and men aged 25-34 years were relatively more aware of RTI/STI. Men who are non-literate and those belonging to other backward classes are less likely to report awareness of RTI/STI. The level of awareness of RTI/STI increases with an increase in education level and standard of living. Only 3.8 percent of non-literate men were aware of RTI/STI as compared to 52.2 percent of men who had completed 10 or more years of schooling. About 14 percent of men from households with a low standard of living were aware of RTI/STI as compared to 40.3 percent of men with a high standard of living.



The television is the most prominent source of information about RTI/STI for men in Sikkim. About 38.7 percent of men who knew about RTI/STI received information from television. Other important sources of information about RTI/STI are newspapers or books or magazines (33.8 percent), radio (18.3 percent), slogans or posters or pamphlets or wall hoardings (22.9 percent) and relatives or friends (34.1 percent). About 28.1 percent of the men received this information from a doctor, 11.8 percent from community meetings, 29.1 percent from health workers and 3.6 percent mentioned that they had received information about RTI/STI from school teachers. About 4.3 percent of the men reported that they had heard of RTI/STI from other sources. The television is the most important source of information of RTI/STI in all the groups. The 'television' is a bigger source of information of RTI/STI for men who are from urban areas than for those who come from rural areas. The differences in the knowledge of RTI/STI from television as a source of information by educational level and standard of living are quite visible. About 29.2 percent of men who had completed 0-9 years of schooling had heard of RTI/STI from television, which increased to 44.1 percent for men who have completed 10 or more years of schooling. Men from rural areas, men who have completed 0-9 years of schooling, men belonging to Buddhist religion, men from other backward classes, men with a medium standard of living and younger men are more prone to receive information from relatives or friends.

Table 8.1 SOURCE OF KNOWLEDGE ABOUT RTI/STI AMONG WOMEN

Percentage of currently married women aged 15 - 44 who have heard about RTI/STI and among women who have heard about RTI/STI, percentage who received information from specific sources by selected background characteristics, Sikkim, 2002-04.

Background Characteristic	Percentage who have heard about RTI/STI	Number of Women	Among those who have heard about RTI/STI, percentage who received information from.										Number of women who have heard about RTI/STI	
			Radio	Television	Newspaper/ Books/ Magazines	Slogan/ Pamphlets/ Posters/ Wall Hoardings	Doctor	Health worker	School teacher	Community Meeting	Relative/ Friends	Others		
Age group (years)														
15-19	31.2	144	(3.6)	(14.3)	(10.7)	(3.6)	(14.3)	(17.9)	(0.0)	(0.0)	(85.7)	(0.0)	45	
20-24	30.7	741	10.2	16.6	21.1	7.5	19.0	27.6	2.9	9.4	52.9	1.1	228	
25-29	36.2	1,034	11.5	13.7	23.6	9.1	22.6	33.0	2.1	6.8	42.7	2.3	374	
30-34	37.0	831	11.6	15.8	18.3	6.8	20.3	26.7	1.3	9.6	50.9	3.2	308	
35-39	37.1	713	13.8	12.7	21.1	8.1	20.6	24.6	4.6	11.8	46.5	1.1	264	
40-44	30.0	576	7.8	14.2	14.4	7.6	24.1	25.8	1.7	11.6	57.9	1.6	173	
Residence														
Rural	31.1	3,534	13.0	14.8	17.4	8.1	23.0	31.0	2.5	10.9	48.1	2.0	1,098	
Urban	58.1	505	4.0	13.9	29.9	6.1	14.1	15.9	2.1	2.6	57.7	1.7	293	
Education														
Non-literate	11.1	1,056	13.9	2.9	0.5	0.1	14.9	29.0	3.5	7.1	52.0	2.4	117	
0-9 years@	33.8	2191	12.2	10.8	7.3	4.8	18.0	27.9	1.7	10.8	54.7	2.1	741	
10 and above	67.4	791	8.9	22.5	42.0	13.5	26.7	27.5	3.1	7.3	43.3	1.6	533	
Religion														
Hindu	34.0	2,646	11.5	13.7	16.6	7.4	19.9	29.8	2.1	9.5	50.0	1.4	899	
Muslim	25.1	58	*	*	*	*	*	*	*	*	*	*	15	
Christian	48.4	232	3.0	11.3	27.3	11.9	15.9	23.9	2.7	3.0	50.4	4.7	112	
Buddhist	33.3	1,081	13.0	17.9	26.3	7.4	25.4	25.2	3.0	10.6	50.6	2.5	360	
Caste/tribe#														
Scheduled caste	44.7	267	6.8	8.6	14.8	7.3	13.4	18.5	1.1	8.3	60.7	1.4	119	
Scheduled tribe	36.6	1,154	11.2	17.8	26.1	7.3	26.0	26.6	3.0	11.3	48.6	1.7	422	
Other backward class	36.3	1,681	13.6	11.4	18.2	5.9	16.9	32.6	2.1	8.7	51.9	1.8	611	
Other	25.3	897	7.0	20.4	16.3	12.8	28.2	21.9	2.9	6.4	43.2	1.7	227	
Standard of living index														
Low	15.0	1,374	13.9	6.2	3.4	3.7	19.3	38.7	2.6	10.1	42.0	3.6	206	
Medium	35.7	1,794	13.9	13.1	13.9	5.5	19.1	26.2	2.4	10.6	54.2	0.8	640	
High	62.6	870	6.7	19.7	33.6	11.9	24.1	25.7	2.4	7.1	48.4	2.6	545	
Total	34.5	4,039	11.1	14.6	20.0	7.7	21.1	27.8	2.4	9.1	50.1	1.9	1,391	

Note: Total includes 21 women in other religion who were not shown separately. # Total figure may not add to N due to do not know and missing cases.

@ Literate women with no year of schooling are also included.() Based on less than 50 unweighted cases.* Percentages not shown: based on few cases

Table 8.2 SOURCE OF KNOWLEDGE ABOUT RTI/STI AMONG MEN

Percentage of husbands of eligible women who have heard about RTI/STI and among men who have heard about RTI/STI, percentage who received information from specific sources by selected background characteristics, Sikkim, 2002-04.

Background characteristic	Percentage who have heard about RTI/STI	Number of men	Among those who have heard about RTI/STI, percentage who received information from.										Number of men who have heard about RTI/STI	
			Radio	Television	Newspaper/ Books/ Magazines	Slogan/ Pamphlets/ Posters/ Wall Hoardings	Doctor	Health worker	School teacher	Community Meeting	Relative/ Friends	Others		
Age group (years)														
< 25	28.6	230	8.6	33.0	22.7	20.2	32.4	37.3	12.1	5.9	36.4	6.4	66	
25-34	28.9	1,178	17.8	37.3	31.5	26.2	30.0	29.5	4.0	10.0	34.2	3.6	340	
35-44	26.8	1,087	19.6	39.1	37.2	20.7	23.0	27.2	1.8	16.1	34.4	4.6	291	
45+	17.0	565	22.6	46.8	39.3	19.7	33.9	28.3	2.0	9.5	31.7	4.4	96	
Residence														
Rural	24.1	2,678	21.2	37.0	31.5	23.6	30.0	30.7	3.3	12.7	34.4	4.1	644	
Urban	39.0	382	5.5	46.5	43.8	19.6	20.0	22.6	5.1	8.0	32.8	5.4	149	
Education														
Non-literate	3.8	*	*	*	*	*	*	*	*	*	*	*	14	
0-9@ years	15.8	1,708	21.8	29.2	13.0	12.4	29.5	28.4	2.0	15.7	39.9	5.1	271	
10 and above	52.2	974	16.1	44.1	45.7	28.9	27.2	29.6	4.6	9.5	31.6	3.6	508	
Religion														
Hindu	27.1	1,970	18.8	38.4	31.5	22.8	29.0	29.5	4.2	12.2	34.4	4.9	535	
Christian	25.1	188	(22.6)	(39.6)	(54.7)	(11.3)	(32.1)	(28.3)	(7.5)	(5.7)	(20.8)	(1.9)	47	
Buddhist	23.8	846	19.7	38.7	33.9	25.7	28.5	31.5	1.6	12.3	35.9	3.5	202	
Other	17.1	56	*	*	*	*	*	*	*	*	*	*	10	
Caste/tribe[#]														
Scheduled caste	29.4	227	9.8	48.5	25.5	27.1	16.6	31.3	8.1	12.9	18.6	10.9	67	
Scheduled tribe	25.3	902	17.9	35.7	36.2	21.4	26.0	32.5	2.1	12.2	36.8	4.2	228	
Other backward class	22.1	1,249	22.1	39.7	27.4	23.3	27.0	30.1	3.2	12.8	38.9	4.1	277	
Other	32.9	650	16.3	38.3	41.7	22.2	34.8	24.4	3.2	10.0	29.9	2.8	214	
Standard of living index														
Low	14.0	1,010	22.1	29.1	21.4	17.6	35.8	32.8	3.3	14.8	34.1	2.9	142	
Medium	27.5	1,365	22.3	38.6	24.8	22.9	26.0	29.0	4.5	12.1	39.9	4.0	375	
High	40.3	686	10.9	44.0	52.5	25.5	27.0	27.4	2.6	9.9	26.4	5.5	276	
Total	25.9	3,060	18.3	38.7	33.8	22.9	28.1	29.1	3.6	11.8	34.1	4.3	793	

Note: Literate men with no year of schooling are also included. #Total figure may not add to N due to do not know and missing cases.() Based on less than 50 unweighted cases.

* Percentages not shown: based on few cases

8.1.1 Knowledge of Mode of Transmission of RTI/STI

Women who were aware of RTI/STI were asked about the mode of transmission. This is presented in Table 8.3. Among women who reported knowledge of RTI/STI, 37.7 percent of them did not know anything further about the mode of transmission of this disease. This proportion is relatively higher among urban women, young women, non-literate women, and women from Christian religion, women from scheduled-castes and women coming from households with low standard of living. About 41.2 percent of urban women do not know about the mode of transmission of RTI/STI compared to 36.7 percent of rural women. Lack of personal hygiene was mentioned by 19.6 percent of women and heterosexual intercourse by 46.6 percent of women as mode of transmission of RTI/STI. Only 4.9 percent of women reported homosexual intercourse and one percent reported other modes of transmission of RTI/STI.

Table 8.3 SOURCE OF KNOWLEDGE ABOUT MODE OF TRANSMISSION OF RTI/STI AMONG WOMEN
Percentage of currently married women aged 15-44 who have heard of RTI/STI, knowledge of mode of transmission by selected background characteristics, Sikkim, 2002-04

Background characteristic	Percentage by knowledge of mode of transmission					Number of women who have heard of RTI/STI
	Homosexual intercourse	Heterosexual intercourse	Lack of personnel hygiene	Other	Do not know	
Age						
15-19	(10.7)	(28.6)	(17.9)	(0.0)	(50.0)	45
20-24	7.4	42.6	18.9	0.6	41.2	228
25-29	3.6	50.7	18.4	0.7	34.2	374
30-34	4.6	49.5	16.8	2.0	37.9	308
35-39	4.9	48.4	24.5	0.6	33.1	264
40-44	3.7	38.9	20.8	1.2	44.5	173
Residence						
Rural	6.0	47.1	19.3	1.1	36.7	1,098
Urban	0.7	44.5	20.7	0.5	41.2	293
Education						
Non-literate	2.2	31.1	11.5	0.2	56.4	117
0-9@ years	2.9	43.7	13.9	0.9	43.7	741
10 years and above	8.2	54.0	29.2	1.3	25.1	533
Religion						
Hindu	5.1	47.0	16.5	0.8	38.2	899
Christian	0.8	41.3	22.6	0.6	43.8	112
Buddhist	4.9	46.1	26.9	1.6	35.1	360
Caste/tribe[#]						
Scheduled caste	3.2	36.0	14.7	0.0	49.5	119
Scheduled tribe	2.9	45.6	26.2	1.4	38.1	422
Other backward class	2.1	51.3	19.2	0.7	34.7	611
Other	17.0	41.6	11.6	1.5	37.9	227
Standard of living index						
Low	7.6	42.2	16.6	0.4	43.1	206
Medium	4.3	45.6	13.3	1.0	40.9	640
High	4.5	49.4	28.2	1.2	31.8	545
Total	4.9	46.6	19.6	1.0	37.7	1,391

Note: Total includes 15 Muslim women and 5 in other religion who were not shown separately. #Total figure may not add to N due to do not know and missing cases. @ Literate women with no year of schooling are also included. () Based on less than 50 unweighted cases.

Table 8.4 presents the knowledge of mode of transmission of RTI/STI among men. Among men who had heard of RTI/STI, 17.2 percent of them mentioned that they did not know any thing about the mode of transmission of this disease. The percentage of men who did not know about the mode of transmission is higher among younger men, non-literate men, Hindu men, men from scheduled castes and men from households with a low standard of living. Among the men who knew the modes of transmission of RTI/STI, 65.8 percent mentioned heterosexual intercourse, 22.8 percent reported lack of personal hygiene, 16.8 percent mentioned homosexual intercourse and 3.5 percent reported other modes of transmission.

Table 8.4 SOURCE OF KNOWLEDGE ABOUT MODE OF TRANSMISSION OF RTI/STI AMONG MEN						
Percentage of husbands of currently married women who have heard of RTI/STI , knowledge of mode of transmission by selected background characteristics, Sikkim, 2002-04						
Background characteristic	Percentage by knowledge of mode of transmission					Number of men who have heard of RTI/STI
	Homosexual intercourse	Heterosexual intercourse	Lack of personnel hygiene	Other	Do not know	
Age						
<25	17.7	52.5	22.1	4.8	31.6	66
25-34	19.4	64.0	24.3	2.1	17.5	340
35-44	14.1	69.0	20.7	4.1	14.7	291
45+	15.6	71.7	24.5	5.8	14.2	96
Residence						
Rural	20.5	63.3	25.3	2.5	16.7	644
Urban	1.1	76.6	12.0	7.8	19.4	149
Education						
0-9@ years	11.5	60.3	17.1	2.7	25.6	271
10 years and above	19.9	69.3	26.3	4.0	12.0	508
Religion						
Hindu	17.5	63.2	22.0	3.5	19.1	535
Christian	(9.4)	(84.9)	(30.2)	(3.8)	(7.5)	47
Buddhist	17.3	68.2	25.2	2.1	15.0	202
Caste/tribe[#]						
Scheduled caste	6.2	66.3	12.4	12.8	19.9	67
Scheduled tribe	12.2	67.6	25.3	1.6	15.6	228
Other backward class	15.2	66.7	23.1	3.0	19.1	277
Other	27.3	62.4	22.7	3.3	15.8	214
Standard of living index						
Low	21.9	59.7	34.5	0.6	24.0	142
Medium	19.7	60.3	18.2	3.4	17.8	375
High	10.4	76.4	23.2	5.1	12.9	276
Total	16.8	65.8	22.8	3.5	17.2	793

Note: Total includes 14 non-literate men and 10 in other religion who were not shown separately. Total includes 8 men with other religion who were not shown separately. () Based on less than 50 unweighted cases@ Literate men with no years of schooling are also included. # Total figure may not add to N due to do not know and missing cases.

8.2 Prevalence of RTI/STI

In DLHS-RCH, information was collected on the common symptoms of reproductive tract infections and sexually transmitted infections from women and their husbands, and information on menstruation related problems in the three months immediately preceding the survey.

The prevalence of reproductive tract infections and sexually transmitted infections is judged by their symptoms. All the respondents were told about symptoms of RTI/STI, and were asked whether they had any of them. In case of the presence of at least one symptom, they were further asked whether they sought treatment for such problems, and if they had sought treatment, details regarding the source of treatment were also recorded. The topic of RTI/STI is quite sensitive. The culture of silence prevents people from discussing such topics in front of others. In spite of intensive training of the investigators, the respondent might have hesitated in reporting the symptoms of RTI/STI. What gets reported in the survey though may not have given the exact prevalence, but may have given the lower limit for it.

Table 8.5 and Figure 8.2 show that almost half of the currently married women (39.5 percent) reported at least one reproductive health problem. The main problems reported by women were 'low backache' (24.4 percent), 'pain in lower abdomen' (12.5 percent), 'frequent / painful passage of urine' (5.9 percent), 'itching over vulva' (5 percent), 'swelling in the groin' (1.2 percent) and 'fever' (3.4 percent). Other symptoms of reproductive health problems reported by women were 'painful sexual intercourse' (4.4 percent), 'involuntary escape of urine while coughing or sneezing' (3.4 percent), 'some mass coming out of vagina' (2.3 percent) and 'boils/ ulcers/ warts around vulva' (2.2 percent). Very few women reported 'bleeding after sexual intercourse' (1.6 percent) and 'swelling / lump in breast' (0.6 percent). The prevalence of most of the reproductive health problems is more among urban than rural women.

Table 8.5 SYMPTOMS OF RTI/STI AMONG WOMEN			
Percentage of currently married women aged 15-44 who reported any symptoms RTI/STI and specific symptoms during three months prior to survey, according to residence, Sikkim, 2002-04			
Symptoms	Total	Residence	
		Rural	Urban
Percentage of women reported any RTI/STI symptoms	39.5	38.7	44.9
Symptoms			
Itching over vulva	5.0	5.2	4.1
Boils/ ulcers/ warts around vulva	2.2	2.2	2.2
Pain in lower abdomen not related to menses	12.5	12.6	11.4
Low backache	24.4	24.0	27.6
Pain during sexual intercourse	4.4	4.1	6.3
Bleeding after sexual intercourse	1.6	1.8	0.1
Swelling in the groin	1.2	1.2	0.7
Frequent / painful passage of urine	5.9	5.6	7.9
Fever	3.4	3.1	5.2
Some mass coming out of vagina	2.3	2.3	2.1
Any involuntary escape of urine while coughing or sneezing	3.4	2.8	7.4
Swelling / lump in breast	0.6	0.6	0.9
Number of women	4,039	3,534	505

Figure 8.2
Symptoms of RTI/STI among Women

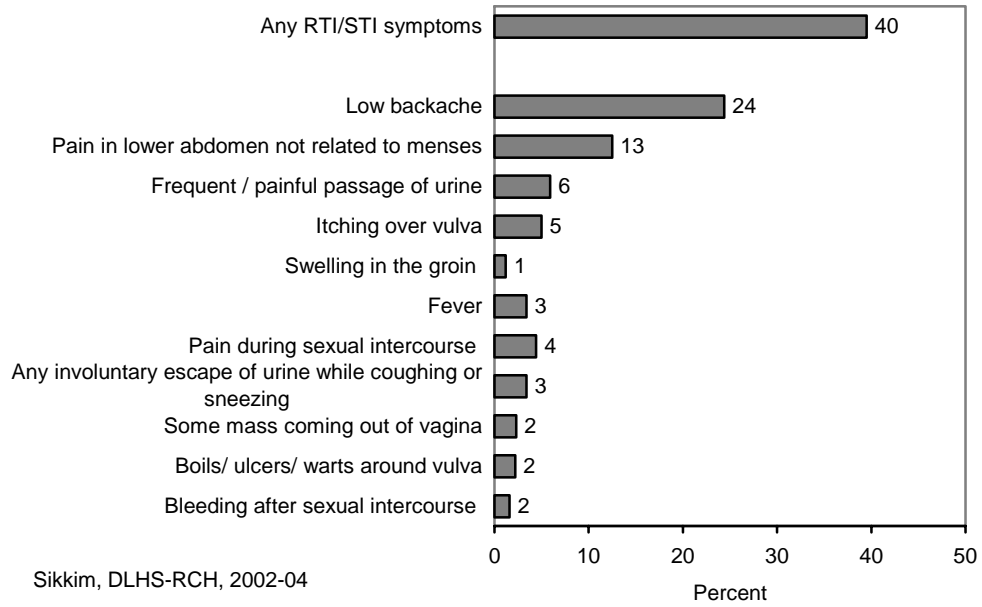


Figure 8.3
Symptoms of RTI/STI among Husbands

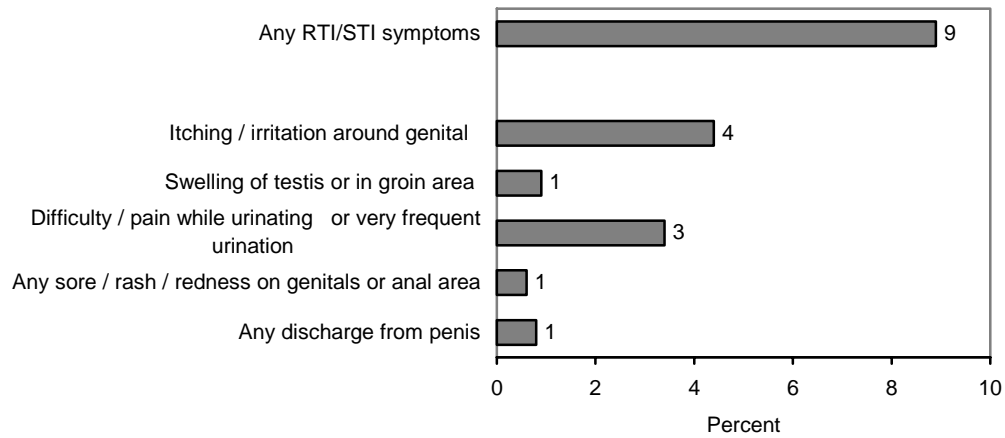


Table 8.6 and Figure 8.3 show the prevalence of reproductive health problems among husbands of currently married women. The prevalence of RTI/STI among men was judged by the reporting of symptoms. About 8.9 percent of men reported experiencing at least one symptom of reproductive health problem in the last three months preceding the survey. The prevalence of reproductive health problems is higher among urban men (13.1 percent) than among rural men (8.3 percent). The problems of reproductive health experienced by men are ‘difficulty / pain while urinating or very frequent urination (3.4 percent), ‘discharge from penis’ (0.8 percent), ‘itching / irritation around genitals’ (4.4 percent), ‘sore / rash / redness on genitals or anal area’ (0.6 percent) and ‘swelling of testes or in groin area’ (0.9 percent).

Table 8.6 SYMPTOMS OF RTI/STI AMONG MEN			
Percentage of husbands of currently married women who reported any symptoms RTI/STI and specific symptoms during three months prior to survey and sought treatment for RTI/STI by source of treatment, according to residence, Sikkim, 2002-04			
Symptoms and treatment	Total	Residence	
		Rural	Urban
Percentage of men reported any RTI/STI symptoms	8.9	8.3	13.1
Symptoms			
Any discharge from penis	0.8	0.8	1.4
Any sore / rash / redness on genitals or anal area	0.6	0.6	0.5
Difficulty / pain while urinating or very frequent urination	3.4	2.9	6.3
Swelling of testis or in groin area	0.9	0.7	2.5
Itching / irritation around genital	4.4	4.4	4.7
Number of men	3,060	2,678	382
Percentage of men sought treatment for any RTI/STI ¹	33.0	34.2	27.9
Number of men	272	222	50
Percentage sought treatment at health facility²			
Government health facility³			
Primary health centre	79.9	80.3	*
Sub centre	24.9	25.1	*
	0.1	0.2	*
Private health facility⁴			
	6.9	8.1	*
ISM⁵ facility			
	5.2	3.7	*
Chemist/ medical shop			
	1.5	0.2	*
Other			
	6.9	8.1	*
Percentage obtained treatment from²			
Doctor	82.6	85.3	*
Male health worker	14.8	13.2	*
Traditional healer	0.0	0.0	*
Relative/friends	0.0	0.0	*
ISM practitioner	0.0	0.0	*
Home remedy	2.1	2.5	*
Chemist medical shop	4.0	3.2	*
Other	0.0	0.0	*
Number of men	90	76	14
Note: ¹ Based on men with any symptoms of RTI/STI ² Percentage may add more than 100.0 due to multiple responses and based on who sought treatment. ³ Includes Government municipal hospital, dispensary, UHC/ UHP /UWFC, CHC/ rural hospital, Primary health centre, sub-centre. ⁴ Includes private hospital/ clinic, non-governmental / trust hospital/clinic, ⁵ Either government or private hospital/clinic of Indian system of medicine.* Percentages not shown: based on few cases			

Among men who reported reproductive health problems, 33 percent of them sought treatment, which comprises of 34.2 percent of rural men and 27.9 percent of urban men. Among them about 79.9 percent visited a government health facility, including a primary health centre (24.9 percent) and sub-centre (0.1 percent) whereas only 6.9 percent visited a private health facility. About 5.2 percent of men were treated by the Indian system of medicine, 1.5 percent obtained treatment from a chemist or medical shop and about 6.9 percent of the men reported that they were treated at other sources. A relatively higher proportion of men from rural areas utilised the government health facility and sub centre than private health facility, ISM facility and chemist or medical shop for treatment. A large proportion of men saw a doctor (82.6 percent). About 14.8 percent of the men went to a male health worker and 2.1 percent of the men used home remedies. Another 4 percent of the men obtained treatment from chemist/medical shop.

The DLHS-RCH also collected information from currently married women on symptoms of RTIs, that is, on abnormal vaginal discharge, texture, colour and odour of discharge in the three months immediately preceding the survey. The prevalence of reproductive health problems among currently married women is estimated from women's experiences. Table 8.7 shows the asymptotic prevalence of vaginal discharge related problems among currently married women in Sikkim during the three months preceding the survey according to residence. About 5 percent of the women reported problems related to vaginal discharge. The prevalence of vaginal discharge problem is same among rural women (5 percent) and among urban women (5 percent).

Among the women who had reported symptoms of vaginal discharge, 40 percent went for treatment, a higher percentage (50 percent) from urban areas compared to their rural counterparts (38 percent). A considerable proportion (27.9 percent) visited private health facilities but majority of women visited government health facility (69.8 percent). About 0.4 percent sought home remedy, 13.8 percent went to the Primary Health Centre and 2.7 percent of the women visited other places for treatment. The proportion of women who visited government health facility is higher (74.9 percent) than the proportion of women who visited a private health facility in rural areas (22.3 percent). A significantly high proportion (92.5 percent) of the women in the state of Sikkim obtained treatment from doctors for their problems. Around 7.5 percent women were treated by ANM/Nurse/Midwife/LHV.

Table 8.7 ABNORMAL VAGINAL DISCHARGE			
Percentage of currently married women aged 15-44 who reported had any abnormal vaginal discharge during three months prior to survey and percentage who sought treatment and source of treatment according to residence, Sikkim, 2002-04			
Symptoms and treatment	Total	Residence	
		Rural	Urban
Percentage of women reported abnormal vaginal discharge	5.0	5.0	5.0
Number of women	4,039	3,534	505
Percentage of women sought treatment for vaginal discharge ¹	40.0	38.0	(50.0)
Number of women	202	177	25
Percentage sought treatment at health facility²			
Government health facility ³	69.8	74.9	*
Primary health centre	13.8	14.2	*
Sub centre	1.1	1.3	*
Private health facility ⁴	27.9	22.3	*
ISM ⁵ facility	0.0	0.0	*
Home remedy	0.4	0.4	*
Other	2.7	3.3	*
Percent distribution of women who obtained treatment from²			
Doctor	92.5	91.0	*
ANM/nurse/midwife/LHV	7.5	9.0	*
Total percent	100.0	100.0	100.0
Number of women	81	67	13
Note: ¹ Based on women who reported having vaginal discharge. ² Based on women who sought treatment for vaginal discharge. ³ Includes Government municipal hospital, dispensary, UHC/ UHP /UWFC, CHC/ rural hospital, Primary health centre, sub-centre and out reach/ MCP clinic in village. ⁴ Includes private hospital/ clinic, non-governmental / trust hospital/clinic, chemist/ medical shop. ⁵ Either government or private hospital/clinic of Indian system of medicine, ⁶ Includes <i>dai</i> (trained or untrained), relative or friends and chemist/ medical shop. () Based on less than 50 unweighted cases. * Percentages not shown: based on few cases.			

8.3 Menstruation Related Problems

Table 8.8 shows the percentage of women who had menstruation problems and who sought treatment during the three months preceding the survey. Table 8.8 shows that around 10 percent women in Sikkim had menstruation problems and the figures are 9.5 percent and 13.5 percent in the rural and urban areas respectively. The main symptoms of menstrual problems that were reported by the women in Sikkim were painful periods (39.1 percent), delayed periods (25 percent) and frequent or short period (22.8 percent).

Table 8.8 MENSTRUATION RELATED PROBLEMS			
Percentage of currently married women aged 15-44 who had any menstruation related problem during three months prior to survey and percentage who sought treatment and source of treatment according to residence, Sikkim, 2002-04			
Symptoms and treatment	Total	Residence	
		Rural	Urban
Percentage of women with any menstruation related problem	10.0	9.5	13.5
Number of Women	3,110	2,704	406
<i>Symptoms¹</i>			
No period	4.5	5.4	0.0
Painful period	39.1	41.6	27.3
Frequent or short period	22.8	22.6	23.6
Delayed period	25.0	23.3	32.7
Prolonged bleeding	3.8	4.3	1.8
Excessive bleeding	14.7	14.8	14.5
Continuous bleeding	2.9	2.7	3.6
Scanty bleeding	5.8	5.4	7.3
Inter-menstrual bleeding	1.3	0.8	3.6
Percentage of women sought treatment who had any menstruation related problems	37.2	35.8	43.6
Number of Women	312	257	55
Percentage sought treatment at health facility ⁶			
Government health facility ²	66.4	70.7	*
Primary health centre	23.3	23.9	*
Sub centre	4.3	5.4	*
Private health facility ³	33.6	29.3	*
ISM ⁴ facility	4.3	4.3	*
Other	2.6	3.3	*
Percentage of women obtained treatment from ⁶			
Doctor	88.8	85.9	*
ANM/nurse/midwife/LHV	12.1	15.2	*
Other health professionals ⁵	2.6	3.3	*
Other	0.9	1.1	*
Number of women	116	92	24
Note: ¹ Based on women who reported any menstruated related problems. ² Includes Government municipal hospital, dispensary, UHC/ UHP /UWFC, CHC/ rural hospital, Primary health centre, sub-centre and out reach/ MCP clinic in village. ³ Includes private hospital/ clinic, non-governmental / trust hospital/clinic, chemist/ medical shop. ⁴ Either government or private hospital/clinic of Indian system of medicine, ⁵ Includes <i>dai</i> (trained or untrained), relative or friends and chemist/ medical shop. ⁶ Multiple responses. * Percentages not shown: based on few cases			

The prevalence of painful periods is more among rural women as compared to delayed periods, which were prevalent more among urban women. Among the women who had menstrual problems, about 37.2 percent sought treatment in the state and the figures for urban and rural areas are 43.6 percent and 35.8 percent respectively. The private health facility and government

health facility are the main sources of treatment for menstrual problems. Around 33.6 percent of women sought treatment at a private health facility and as many as 66.4 percent sought treatments at a government health facility. About 4.3 percent of the women sought treatment at an ISM facility. Most of the women went to a doctor for treatment (88.8 percent).

8.4 Prevalence of RTIs/STIs by District

Table 8.9 presents the prevalence of RTIs/STIs among currently married women and their husbands by districts. The percentage of women who reported any symptoms of RTIs/STIs is lowest in West district (9.2 percent) and highest in East Sikkim (49 percent). The problems related to abnormal vaginal discharge ranges from 1.1 percent in South Sikkim to 8.4 percent in East Sikkim. In comparison to women, fewer men from all districts of Sikkim reported symptoms of RTIs/STIs. Men from North district (1.2 percent) reported the lowest prevalence of symptoms of RTIs/STIs and men from East Sikkim (14.9 percent) reported the highest prevalence.

The percentage of women who have sought treatment for RTIs (abnormal vaginal discharge) ranges from 34 percent in North Sikkim to 41.2 percent in East Sikkim and for men who have sought treatment; it ranges from zero percent in South Sikkim to 37.7 percent in East Sikkim.

Table 8.9 REPRODUCTIVE HEALTH CARE INDICATORS BY DISTRICT					
Percentage of currently married women and their husbands who reported reproductive health problems and percentage who sought treatment for the problems by district, Sikkim, 2002-04					
District	Percentage of women			Percentage of men	
	With any symptoms of RTI/STI	Reported any abnormal vaginal discharge	Sought treatment for abnormal vaginal discharge	With any symptoms of RTI/STI	Sought treatment for RTI/STI problems
East	49.0	8.4	41.2	14.9	37.7
North	43.9	3.0	34.0	1.2	(21.1)
South	46.7	1.1	(40.1)	3.4	0.0
West	9.2	2.2	(39.5)	3.3	16.6
Sikkim	39.5	5.0	40.0	8.9	33.0

Note:() Based on less number of cases.

8.5 HIV/AIDS

Acquired Immune Deficiency Syndrome (AIDS) is an illness caused by the Human Immune Virus (HIV), which weakens the immune system and leads to death through secondary infection such as tuberculosis or pneumonia. The virus is generally transmitted through sexual contact, through the placenta of HIV-infected women to their children or through contact with contaminated needles (injections) or blood. Prevalence of HIV and AIDS has been on the rise for more than a decade in India and has reached alarming proportions in recent years. To prevent HIV transmission, the government has been making various efforts.

DLHS-RCH has collected information on the general state of awareness of HIV/AIDS, its transmission, its prevention and common misconceptions about HIV/AIDS. All the currently married women in the age group 15-44 years and their husbands were first asked if they had ever heard of an illness called HIV/AIDS. Respondents who had heard of HIV/AIDS were further asked about their source of information, mode of transmission and correct knowledge of HIV/AIDS transfusion.

8.5.1 Knowledge of HIV/AIDS

Table 8.10 shows the percentage of women who had heard about HIV/AIDS by some selected background characteristics. About 72.1 percent of currently married women in Sikkim have heard of HIV/AIDS, which is higher than RCH Round – I. In Round-I only 47.2 percent of currently married women were aware of HIV/AIDS.

Knowledge of HIV/AIDS is slightly lower among rural women, non-literate women, Muslim women, women from scheduled castes, women from households with a low standard of living and older women. About 82.8 percent of urban women had heard about HIV/AIDS compared to 70.5 percent of rural women. Knowledge of HIV/AIDS steadily increased with increase in educational level and household standard of living. Only about 38 percent of the non-literate women had heard of HIV/AIDS as against 97.5 percent of women who had completed 10 or more years of schooling. Similarly, about half of the women (50 percent) with a low standard of living had heard of HIV/AIDS as against 94.8 percent of women with a high standard of living. Older women above the age of 40 years have the least knowledge of HIV/AIDS as compared to women from other age groups. Muslim women (53.7 percent) were less aware of HIV/AIDS compared to Hindu women (69.5 percent) and Christian women (85.5 percent). Women from scheduled tribes category were more knowledgeable about HIV/AIDS (76.6 percent) than women belonging to other backward classes (74 percent), scheduled castes (74.8 percent) and women belonging to other caste category (62 percent).

The government has been using mass media such as television, radio and newspapers extensively to increase awareness among the general public about HIV/AIDS and its prevention. Table 8.10 shows the percentage of currently married women who were aware of HIV/AIDS from different sources. The most prominent source of information about HIV/AIDS is television. About 51.5 percent of women reported that television was their source of information about HIV/AIDS, followed by newspapers, books or magazines (17.8 percent), radio (18.4 percent), slogans or pamphlets or posters or wall hoardings (23.8 percent) and relatives or friends (38.8 percent). About 27.8 percent of the women reported that a doctor had informed them about HIV/AIDS and 41.5 percent of the women received information of HIV/AIDS from a health worker. A comparatively high proportion of rural women received information about HIV/AIDS from the radio, health worker and community meetings.

Table 8.10 SOURCE OF KNOWLEDGE ABOUT HIV/AIDS AMONG WOMEN

Percentage of currently married women aged 15 - 44 who have heard about HIV/AIDS and among women who have heard about HIV/AIDS, percentage who received information from specific sources by selected background characteristics, Sikkim, 2002-04.

Background characteristic	Percentage who have heard about HIV/AIDS	Number of Women	Among those who have heard about HIV/AIDS, percentage who received information from.										Number of women who have heard about HIV/AIDS	
			Radio	Television	Newspaper/ Books/ Magazines	Slogan/ Pamphlets/ Posters/ Wall Hoardings	Doctor	Health worker	School teacher	Community Meeting	Relative/ Friends	Others		
Age group (years)														
15-19	71.3	144	11.5	36.3	10.9	17.7	21.5	39.3	7.0	5.0	42.3	2.4	103	
20-24	74.4	741	15.4	50.1	16.3	25.2	30.9	38.1	9.9	12.4	42.1	0.6	551	
25-29	74.1	1,034	17.4	54.6	23.8	30.5	29.2	42.8	4.0	12.9	37.1	1.5	766	
30-34	76.5	831	19.2	51.2	17.1	21.2	27.0	42.4	2.8	9.5	38.1	0.5	636	
35-39	70.7	713	22.7	53.3	15.9	22.8	26.7	43.5	2.9	14.3	36.5	0.5	504	
40-44	60.7	576	20.0	49.2	12.9	15.1	24.3	40.0	5.1	13.2	40.8	0.6	349	
Residence														
Rural	70.5	3,534	20.6	48.5	16.4	23.9	29.6	44.6	5.1	13.5	38.6	0.9	2,492	
Urban	82.8	505	5.6	69.1	26.0	23.4	17.0	22.6	3.5	3.4	39.6	0.8	417	
Education														
Non-literate	38.0	1,056	18.2	26.0	1.2	5.0	22.2	44.2	3.7	12.9	38.9	0.8	401	
0-9@ years	79.3	2,191	17.4	45.8	7.6	19.0	26.8	39.7	4.1	12.3	40.4	0.7	1,736	
10 and above	97.5	791	20.8	77.6	49.3	44.5	33.0	44.2	7.3	11.2	35.2	1.2	772	
Religion														
Hindu	69.5	2,646	19.8	52.7	17.4	22.5	28.5	41.0	5.0	12.9	37.2	0.5	1,838	
Muslim	53.7	58	(20.6)	(70.6)	(11.8)	(5.9)	(14.7)	(32.4)	(5.9)	(2.9)	(50.0)	(0.0)	31	
Christian	85.5	232	14.7	55.1	27.7	26.0	21.5	39.7	4.0	11.7	35.8	2.7	199	
Buddhist	76.1	1,081	16.2	47.6	16.8	26.6	28.5	43.1	4.7	10.8	42.8	1.2	823	
Caste/tribe[#]														
Scheduled caste	74.8	267	9.2	54.9	15.3	22.2	19.0	35.3	3.8	5.7	41.6	0.1	200	
Scheduled tribe	76.6	1,154	16.3	48.4	19.7	24.3	29.1	44.6	4.8	13.5	42.7	1.1	884	
Other backward class	74.0	1,681	18.7	49.7	17.3	26.2	28.0	39.1	4.7	13.3	38.9	1.0	1,244	
Other	62.0	897	24.7	60.1	16.7	18.7	28.8	44.1	5.7	9.1	30.7	0.4	556	
Standard of living index														
Low	50.0	1,374	17.1	19.2	5.2	14.0	31.7	46.3	3.8	14.4	38.3	1.1	687	
Medium	77.9	1,794	19.8	52.0	13.2	23.8	26.1	42.5	4.9	12.1	38.3	0.4	1,398	
High	94.8	870	17.2	77.5	36.2	32.0	27.3	35.8	5.9	10.1	39.9	1.4	825	
Total	72.1	4,039	18.4	51.5	17.8	23.8	27.8	41.5	4.9	12.1	38.8	0.9	2,910	

Note: Total includes 21 women in other religion who were not shown separately. @ Literate women with no years of schooling are also included.

Total figure may not add to N due to do not know and missing cases.() Based on less than 50 unweighted cases

Table 8.11 SOURCE OF KNOWLEDGE ABOUT HIV/AIDS AMONG MEN

Percentage of husbands of currently married women who have heard about RTI/STI and among men who have heard about RTI/STI, percentage who received information from specific sources by selected background characteristics, Sikkim, 2002-04.

Background Characteristic	Percentage who have heard about HIV/AIDS	Number of men	Among those who have heard about HIV/AIDS, percentage who received information from.										Number of men who have heard about HIV/AIDS
			Radio	Television	Newspaper/ Books/ Magazines	Slogan/ Pamphlets/ Posters/ Wall Hoardings	Doctor	Health worker	School teacher	Community Meeting	Relative/ Friends	Others	
Age group (years)													
< 25	83.4	230	19.9	50.3	19.5	31.6	32.3	37.2	12.4	11.1	53.5	2.7	192
25-34	89.6	1,178	25.6	54.5	28.8	38.0	26.3	30.7	5.9	11.5	48.6	3.1	1,055
35-44	81.1	1,087	26.2	53.9	26.4	27.6	20.1	31.0	4.0	14.9	50.2	2.9	882
45+	68.7	565	24.7	46.9	25.0	22.7	17.4	30.8	3.3	12.9	52.9	1.9	388
Residence													
Rural	80.7	2,678	28.4	49.7	25.0	30.4	24.6	33.2	5.1	12.9	49.7	2.8	2,160
Urban	93.3	382	6.2	71.5	36.8	37.9	15.0	19.7	6.8	12.7	52.9	2.8	356
Education													
Non-literate	43.1	378	25.5	25.9	2.5	4.4	24.7	37.7	1.8	9.9	46.9	2.4	163
0-9@ years	81.7	1,708	23.6	39.5	11.0	24.6	22.2	27.6	3.9	12.6	54.7	3.0	1,395
10 and above	98.4	974	27.6	76.7	53.6	46.2	24.5	35.7	8.0	13.8	44.1	2.7	959
Religion													
Hindu	82.2	1,970	26.2	53.5	27.6	31.6	24.9	30.7	5.6	12.3	49.4	3.0	1,620
Christian	84.1	188	19.9	57.4	35.7	28.1	6.7	28.2	7.0	18.4	56.2	1.4	158
Buddhist	81.7	846	24.8	49.3	23.0	33.1	24.3	34.8	4.2	13.4	50.3	2.9	692
Other	84.9	56	(35.3)	(64.7)	(23.5)	(13.7)	(11.8)	(19.6)	(5.9)	(5.9)	(52.9)	(2.0)	47
Caste/tribe[#]													
Scheduled caste	85.9	227	14.7	45.9	22.0	29.5	22.1	24.6	9.8	16.9	52.3	3.1	195
Scheduled tribe	81.7	902	24.5	49.1	24.5	31.0	20.3	36.2	5.7	15.6	54.3	3.0	738
Other backward class	83.1	1,249	23.8	48.8	26.0	32.6	21.8	28.7	5.3	12.8	51.0	2.7	1,038
Other	80.2	650	32.9	69.5	32.5	30.6	31.0	32.3	3.3	8.2	41.1	2.7	521
Standard of living index													
Low	66.7	1,010	23.2	29.3	11.7	25.7	27.3	33.3	3.0	11.1	51.8	3.2	674
Medium	87.1	1,365	30.5	55.4	23.8	29.3	24.4	30.2	5.5	13.4	49.4	2.8	1,189
High	95.4	686	17.8	72.2	47.3	41.4	16.9	31.4	7.3	13.8	50.0	2.4	654
Total	82.2	3,060	25.2	52.8	26.7	31.5	23.2	31.3	5.3	12.9	50.2	2.8	2,517

Note: @ Literate men with no year of schooling are also included. # Total figure may not add to N due to don't and missing cases. # Total figure may not add to N due to do not know and missing cases. () Based on less than 50 unweighted cases.

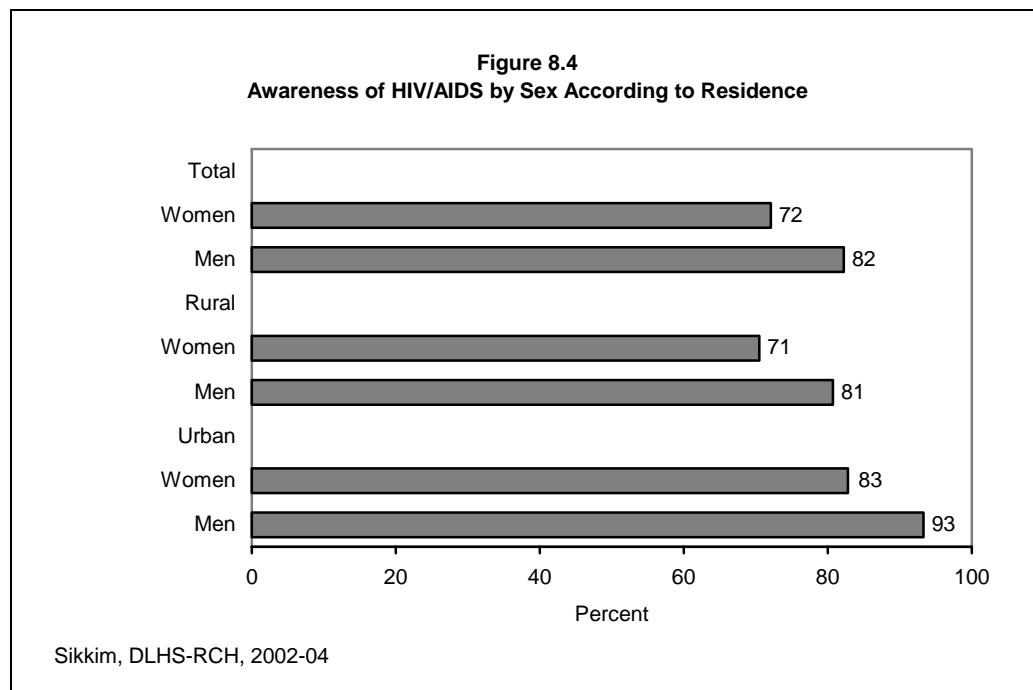


Table 8.11 shows the percentage of husbands of currently married women who had heard about HIV/AIDS. In Sikkim, the proportion of men who had heard about HIV/AIDS is much higher than that of women. About 82.2 percent of men had heard of HIV/AIDS as compared to 72.1 percent of women (Figure 8.4).

About 93.3 percent of urban men had heard about HIV/AIDS as compared to only 80.7 percent of rural men. Knowledge of HIV/AIDS varies by men's age, and it is higher for the age group 25-34 years. Awareness of HIV/AIDS is much lower among non-literate men, Buddhist men, men from other castes category and men who belong to households with a low standard of living. A similar trend is observed in the case of women. About 43.1 percent of non-literate men had heard of HIV/AIDS and it increased up to 81.7 percent for literate men and up to 98.4 percent of men who had completed 10 or more years of schooling. Awareness of HIV/AIDS is also positively related to standard of living.

Table 8.11 also shows the percentage of husbands of currently married women who were aware of HIV/AIDS by different sources. As reported by the men of Sikkim, the most prominent source of information of HIV/AIDS was television (52.8 percent) followed by newspapers, books or magazines (26.7 percent). Other important sources of information of HIV/AIDS are the radio (25.2 percent), slogans or pamphlets or posters or wall hoardings (31.5 percent) and relatives or friends (50.2 percent). About 23.2 percent of men reported that a doctor had informed them about HIV/AIDS and 31.3 percent men had received information of HIV/AIDS from a health worker.

About 12.9 percent reported that they were informed through community meetings and 5.3 percent received such information from a school teacher. Comparatively, a higher proportion of rural men received information about HIV/AIDS from the radio, health worker and doctor

than urban men. The information on awareness of HIV/AIDS through mass media such as radio, television and newspapers or books or magazines was received more by older men (aged 35 and above), urban men, men with at least 10 years of schooling and men from households with a high standard of living. On the other hand, relatives or friends were the main source of information for young men below age 25, literate men (0-9 years of schooling), Christian men, scheduled tribe men and men from households with a low standard of living.

8.5.2 Knowledge of Mode of Transmission about HIV/AIDS

Women who were aware of HIV/AIDS were asked about the mode of transmission and this is presented in Table 8.12. Among women who reported awareness of HIV/AIDS, 20.1 percent of them did not know about the mode of transmission.

Table 8.12 SOURCE OF KNOWLEDGE ABOUT MODE OF TRANSMISSION OF HIV/AIDS AMONG WOMEN								
Percentage currently married women aged 15-44 who have heard of HIV/AIDS, knowledge of mode of transmission by selected background characteristics, Sikkim, 2002-04								
Background characteristic	Percentage by knowledge of mode of transmission						Do not know	Number Of women who have heard of HIV/AIDS
	Homo sexual intercourse	Hetero sexual intercourse	Needles/ blade/ skin puncture	Mother to child	Transfusion of infected blood	Other		
Age								
15-19	14.8	56.1	13.5	4.4	20.6	3.0	25.3	103
20-24	18.7	71.9	27.6	8.9	27.6	1.4	19.8	551
25-29	12.9	74.1	32.3	9.9	32.8	2.3	17.2	766
30-34	12.3	71.9	32.4	8.1	33.2	1.5	20.8	636
35-39	11.6	73.1	28.3	11.1	27.5	1.5	19.0	504
40-44	10.1	64.3	24.2	7.5	27.1	1.2	25.5	349
Residence								
Rural	15.3	70.2	28.4	9.1	29.4	1.6	20.5	2,492
Urban	1.7	77.5	33.5	8.7	32.9	2.3	17.6	417
Education								
Non-literate	11.2	56.7	8.2	1.6	9.6	0.0	37.1	401
0-9@ years	13.3	68.2	20.3	6.0	23.0	1.5	22.9	1,736
10 years and above	14.8	85.5	59.8	19.9	55.8	3.1	4.9	772
Religion								
Hindu	14.9	69.3	26.6	7.4	27.4	1.4	21.5	1,838
Muslim	(20.6)	(70.6)	(26.5)	(11.8)	(20.6)	(2.9)	(20.6)	31
Christian	4.7	82.8	40.3	8.7	38.8	2.4	14.0	199
Buddhist	12.1	73.0	32.2	12.7	33.7	2.4	17.9	823
Caste/tribe[#]								
Scheduled caste	6.3	68.5	26.8	5.1	29.0	0.5	25.1	200
Scheduled tribe	8.1	74.7	32.0	11.7	34.8	2.0	18.6	884
Other backward class	13.9	73.2	29.1	8.3	29.3	1.6	19.4	1,244
Other	23.5	61.8	25.4	8.3	24.1	2.0	22.2	556
Standard of living index								
Low	16.9	59.7	13.1	3.9	13.4	0.8	32.8	687
Medium	13.9	68.9	25.8	7.2	28.0	1.3	20.3	1,398
High	9.7	84.8	48.1	16.6	46.7	3.2	9.1	825
Total	13.4	71.2	29.1	9.1	29.9	1.7	20.1	2,910

Note: Total includes 18 women in other religion who were not shown separately. () Based on less than 50 unweighted cases@ Literate women with no year of schooling are also included. # Total figure may not add to N due to do not know and missing cases.

The proportion of women not knowing about the mode of transmission of HIV/AIDS is higher among rural women, younger women and older women, non-literate women, Hindu women, women from scheduled castes and women with a low standard of living. About 20.5 percent of the rural women do not know about the mode of transmission of HIV/AIDS compared to 17.6 percent of urban women.

Among women who reported different ways of transmission of HIV/AIDS, a large proportion (71.2 percent) mentioned heterosexual intercourse as a mode of transmission. All the socio-economic groups reported that heterosexual intercourse was the main mode of transmission of HIV/AIDS. Other modes reported by women were transmission through needles or blades or skin punctures (29.1 percent), transfusion of infected blood (29.9 percent), mother to child, if pregnancy occurs during a stage of HIV (9.1 percent); about 13.4 percent of the women mentioned that homosexual intercourse could also be a mode of transmission. Only 1.7 percent women stated that there were other ways of transmission of HIV/AIDS.

Table 8.13 SOURCE OF KNOWLEDGE ABOUT MODE OF TRANSMISSION OF HIV/AIDS AMONG MEN

Percentage of husbands of currently married women who have heard of HIV/AIDS, knowledge of mode of transmission by selected background characteristics, Sikkim, 2002-04

Background characteristic	Percentage by knowledge of mode of transmission							Number of men who have heard of HIV/AIDS
	Homosexual intercourse	Heterosexual intercourse	Needles/ blade/ skin puncture	Mother to child	Transfusion of infected blood	Other	Do not know	
Age								
<25	17.0	74.3	33.0	7.7	25.4	2.3	12.5	192
25-34	19.3	80.2	27.9	7.5	29.8	1.1	9.6	1,055
35-44	11.9	78.7	30.1	7.3	32.5	2.1	12.8	882
45+	7.2	73.5	26.4	6.6	26.5	1.5	20.9	388
Residence								
Rural	16.6	77.4	28.9	7.6	28.4	1.4	12.7	2,160
Urban	3.4	83.1	28.4	5.5	38.9	3.1	12.9	356
Education								
Non-literate	14.3	58.5	13.9	4.7	14.7	3.6	22.8	163
0-9@ years	12.3	74.6	20.1	3.4	19.3	0.8	17.4	1,395
10 years and above	18.3	86.8	44.0	13.5	47.9	2.5	4.2	959
Religion								
Hindu	15.8	77.4	28.8	7.9	29.9	1.8	12.8	1,620
Christian	6.0	82.9	29.4	2.9	32.7	1.6	13.8	158
Buddhist	14.7	79.2	29.0	7.1	29.8	1.1	11.8	692
Other	(9.8)	(68.6)	(29.4)	(7.8)	(29.4)	(2.0)	(21.6)	47
Caste/tribe#								
Scheduled caste	6.1	77.7	26.0	5.5	28.4	1.6	14.8	195
Scheduled tribe	11.2	82.1	30.9	7.7	32.9	1.3	10.8	738
Other backward class	11.8	80.8	24.5	5.6	27.2	1.1	12.8	1,038
Other	29.0	67.6	35.2	10.6	31.6	3.0	14.0	521
Standard of living index								
Low	21.4	69.6	21.7	5.1	18.8	1.1	19.7	674
Medium	14.0	76.0	27.8	7.1	27.8	1.6	13.3	1,189
High	9.1	91.0	38.0	10.1	45.3	2.1	4.5	654
Total	14.7	78.2	28.8	7.3	29.9	1.6	12.7	2,517

Note:@ Literate men with no year of schooling are also included. # Total figure may not add to N due to do not know and missing cases.() Based on less than 50 unweighted cases

Table 8.13 presents the knowledge about mode of transmission of HIV/AIDS among men. About 12.7 percent of the men who had heard about HIV/AIDS mentioned that they do not know the mode of transmission. The percentage of men not knowing the mode of transmission is higher among older men, non-literate men, men from other religion, men from scheduled-castes and men from households with a low standard of living. Among those who reported ways of transmission of HIV/AIDS, 78.2 percent mentioned heterosexual intercourse as a mode of transmission. All the groups reported that heterosexual intercourse was the main mode of transmission of HIV/AIDS. Other modes reported by men are transmission through needle or blade or skin puncture (28.8 percent), transfusion of infected blood (29.9 percent), mother to child, if pregnancy occurs during a stage of HIV (7.3 percent), and about 14.7 percent of men mentioned that homosexual intercourse could also be a mode of transmission of HIV/AIDS. Only 1.6 percent men stated that there were other ways of transmission of HIV/AIDS.

8.5.3 How to avoid HIV/AIDS

All the respondents, male and female, were asked about how to prevent HIV/AIDS. The percentage of women who said that HIV/AIDS could be avoided by various ways has been presented in Table 8.14 by some selected background characteristics.

Among women who reported about awareness of HIV/AIDS, about 33.7 percent of them did not know how to avoid being infected by HIV/AIDS. This percentage is higher among urban women than among rural women. The percentage of women who did not know of any way to avoid infection decreases with increasing levels of education and household standard of living. About 53.1 percent of non-literate women reported that they did not know of any way to avoid infection as compared to 13.6 percent of women who had completed ten or more years of schooling. Similarly, 45.4 percent of women with low a standard of living stated that they did not know of any way to avoid infection as compared to 23.5 percent of women with a high standard of living. The percentage of women who did not know ways to avoid infection is also higher among Hindu women, scheduled-caste women, younger women (15-19 years) and older women (40-44 years).

Among women who mentioned ways to avoid HIV/AIDS, a higher proportion of women (57.3 percent) said that “sex with only one partner” is the main way to avoid it. Other ways mentioned by women to prevent HIV/AIDS were ‘sterilizing needles and syringes before injecting’ (20 percent), ‘checking blood prior to transfusion’ (20.2 percent), ‘using condoms correctly during each sexual intercourse’ (30.8 percent) and 4.1 percent of the women reported that pregnancy should be avoided if couples were infected with HIV/AIDS. All the specific ways reported by women to avoid becoming infected with HIV/AIDS are proportionally higher in rural areas, among Buddhist women, among women who belong to ‘Scheduled tribe and other castes’ category, among women with a high level of education and among women with a high standard of living.

Table 8.15 shows the percentage of men who reported that HIV/AIDS could be avoided by some selected background characteristics. Among men who are aware of HIV/AIDS, 17.6 percent of them did not know of any method to avoid infection compared to 33.7 percent women in the state.

Table 8.14 KNOWLEDGE ABOUT AVOIDANCE OF HIV/AIDS AMONG WOMEN

Among currently married women aged 15-44 who have heard about HIV/AIDS, the percentage of women reported HIV/AIDS can be avoided in specific ways by selected background characteristics, Sikkim, 2002-04

Background characteristic	Percentage reported HIV/AIDS can be avoided by:						Do not know To avoid HIV/AIDS	Number of women
	Sex With Only one partner	Using condoms correctly during each sexual intercourse	Checking blood prior to transfusion	Sterilizing needles and syringes for injection	Avoiding pregnancy when having HIV/AIDS	Other		
Age								
15-19	55.3	22.8	9.8	5.4	0.5	0.4	40.2	103
20-24	61.0	34.3	17.7	19.1	6.6	1.1	32.1	551
25-29	59.7	32.6	22.7	22.2	4.0	2.2	30.7	766
30-34	56.0	28.5	21.4	22.5	3.9	1.7	34.5	636
35-39	56.6	33.1	21.0	18.1	3.0	1.3	32.4	504
40-44	49.8	24.8	18.5	19.5	3.5	1.2	41.4	349
Residence								
Rural	58.6	31.7	19.9	19.5	4.1	1.5	33.1	2,492
Urban	49.4	25.3	22.0	23.5	3.8	1.9	37.6	417
Education								
Non-literate	40.2	17.4	5.1	6.2	0.7	0.5	53.1	401
0-9@ years	54.1	25.7	13.6	12.3	1.9	1.1	38.2	1,736
10 years and above	73.2	49.4	42.8	44.6	10.8	3.2	13.6	772
Religion								
Hindu	56.9	30.6	18.5	17.3	4.4	1.4	35.0	1,838
Muslim	(64.7)	(17.6)	(8.8)	(26.5)	(2.9)	(2.9)	(29.4)	31
Christian	56.7	30.0	31.8	30.6	2.5	0.5	31.6	199
Buddhist	58.2	32.3	21.8	23.6	4.1	2.1	31.3	823
Caste/tribe[#]								
Scheduled caste	50.0	22.1	16.6	15.1	3.4	2.7	41.7	200
Scheduled tribe	58.5	30.7	22.2	24.1	3.7	2.0	32.2	884
Other backward class	57.3	33.2	20.3	17.9	4.3	1.0	33.6	1,244
Other	57.3	28.5	18.5	20.1	4.6	1.6	33.5	556
Standard of living index								
Low	47.4	26.7	7.9	7.5	1.2	0.8	45.4	687
Medium	58.5	27.5	17.8	18.2	3.2	1.1	34.0	1,398
High	63.3	39.9	34.5	33.6	8.1	3.0	23.5	825
Total	57.3	30.8	20.2	20.0	4.1	1.5	33.7	2,910

Note: Total includes 18 women in other religion who were not shown separately. () Based on less than 50 unweighted cases@ Literate women with no year of schooling are also included. # Total figure may not add to N due to do not know and missing cases.

In Sikkim a higher proportion of men (55.4 percent) reported that ‘sex with only one partner’ is the way to avoid HIV/AIDS and this was the most commonly reported way to avoid HIV/AIDS in all the groups. Other ways mentioned by men to prevent HIV/AIDS are ‘using condoms correctly during each sexual intercourse’ (60.9 percent), ‘sterilizing needles and syringes before injecting’ (25.7 percent) and ‘checking blood prior to transfusion’ (29.8 percent). All the specific ways reported by men to avoid being infected with HIV/AIDS are proportionally higher in urban areas than in rural areas, among Buddhist men, among men who belong to ‘scheduled tribe and other caste’ category, among men with a high level of education and among men with a high standard of living.

Table 8.15 KNOWLEDGE ABOUT AVOIDANCE OF HIV/AIDS AMONG MEN

Among husbands of currently married women who have heard about HIV/AIDS, the percentage of men reported HIV/AIDS can be avoided in specific ways by selected background characteristics, Sikkim, 2002-04

Background characteristic	Percentage reported HIV/AIDS can be avoided by:							Number of men
	Sex with only one partner	Using condoms correctly during each sexual intercourse	Checking blood prior to transfusion	Sterilizing needles and syringes for injection	Avoiding pregnancy when having HIV/AIDS	Other	Do not know to avoid HIV/AIDS	
Age								
<25	49.3	55.6	28.4	21.9	5.9	1.9	19.1	192
25-34	58.0	65.9	30.4	24.4	4.6	3.2	14.2	1,055
35-44	57.3	60.2	30.0	29.9	5.5	1.4	17.3	882
45+	47.1	51.6	28.6	21.5	4.9	3.9	26.4	388
Residence								
Rural	56.9	62.0	29.3	25.3	5.5	2.3	17.0	2,160
Urban	46.6	54.5	33.1	28.1	2.7	4.2	21.1	356
Education								
Non-literate	39.2	39.6	10.7	11.3	3.3	1.7	35.0	163
0-9@ years	50.2	53.4	18.6	17.4	3.2	3.2	23.3	1,395
10 years and above	65.7	75.5	49.4	40.2	8.1	1.9	6.2	959
Religion								
Hindu	54.2	60.5	29.2	26.0	5.3	2.8	19.6	1,620
Christian	46.5	60.4	31.9	22.3	0.8	1.7	18.3	158
Buddhist	60.8	62.9	31.1	26.2	5.8	2.1	12.6	692
Other	(49.0)	(56.9)	(27.5)	(23.5)	(3.9)	(3.9)	(17.6)	47
Caste/tribe[#]								
Scheduled caste	46.4	44.9	25.3	22.9	1.7	0.7	26.0	195
Scheduled tribe	62.7	64.1	31.4	29.6	7.3	2.3	12.1	738
Other backward class	51.2	62.7	27.6	21.3	3.8	2.9	18.7	1,038
Other	56.5	59.4	33.8	29.3	5.1	3.0	19.5	521
Standard of living index								
Low	51.4	53.2	19.9	17.3	4.2	1.4	26.7	674
Medium	54.4	60.7	27.8	23.6	5.1	3.2	17.2	1,189
High	61.4	69.4	43.8	38.1	6.0	2.7	8.8	654
Total	55.4	60.9	29.8	25.7	5.1	2.6	17.6	2,517

Note:() Based on less than 50 unweighted cases @ Literate men with no year of schooling are also included. # Total figure may not add to N due to do not know and missing cases.

8.5.4 Misconception about HIV/AIDS

People generally have misconceptions about the ways of transmission of HIV/AIDS, such as 'shaking hands with a person having AIDS', hugging and kissing them, sharing their clothes or sharing eating utensils, stepping on urine/stool, through insect bites, for example, being bitten by mosquitoes, fleas and bedbugs. All these questions were asked to the respondents who had heard of HIV/AIDS.

Table 8.16 shows the percentage of women with misconceptions about spreading HIV/AIDS through specific ways by selected background characteristics. About 53 percent women in report that being bitten by mosquitoes, fleas or bedbugs is a way of getting HIV/AIDS

infection and this percentage is higher in urban areas (57.7 percent) than in rural areas (52.2 percent). Literate women, women from households with a medium standard of living, Christian women and women from other backward classes mentioned this method of transmission more often. Other misconceptions about the spreading of HIV/AIDS were 'sharing eating utensils' (15 percent), 'kissing' (21.7 percent), 'stepping on urine/stool' (14 percent), 'sharing clothes' (14.6 percent), 'hugging' (9.2 percent), and 'shaking hands' (7.9 percent). Most of these misconceptions are reported by a higher proportion of urban women, Muslim women, non-literate women and women with a low standard of living.

Table 8.16 MISCONCEPTION ABOUT TRANSMISSION OF HIV/AIDS AMONG WOMEN
Among currently married women aged 15-44 who have heard about HIV/AIDS, the percentage of women having misconception about the transmission of HIV/AIDS by selected background characteristics, Sikkim, 2002-04

Background characteristic	Percentage having misconception about the transmission of HIV/AIDS							Number of women
	Shaking hands	Hugging	Kissing	Sharing clothes	Sharing eating utensils	Stepping on Urine/ stool	Mosquito, flea, or bedbugs biting	
Residence								
Rural	7.8	9.2	21.3	14.4	15.0	13.6	52.2	2,492
Urban	8.1	9.2	24.6	15.5	15.2	16.5	57.7	417
Education								
Non-literate	15.6	14.2	24.7	21.2	22.6	20.0	51.9	401
0-9@ years	8.1	10.4	24.4	16.3	16.2	15.6	53.8	1,736
10 years and above	3.2	3.9	14.3	7.3	8.6	7.4	51.8	772
Religion								
Hindu	7.9	9.2	21.7	15.0	15.0	13.1	53.0	1,838
Muslim	(8.8)	(20.6)	(29.4)	(29.4)	(25.0)	(17.6)	(52.9)	31
Christian	8.7	8.2	25.3	15.4	13.0	15.0	58.1	199
Buddhist	7.5	9.2	21.1	12.8	15.2	16.3	51.5	823
Caste/tribe#								
Scheduled caste	4.7	8.6	23.2	16.3	14.5	14.8	55.1	200
Scheduled tribe	9.3	10.4	21.9	13.3	17.2	16.1	50.9	884
Other backward class	6.7	8.2	22.4	14.7	14.3	12.4	57.9	1,244
Other	9.2	9.7	19.7	15.1	13.2	13.6	43.9	556
Standard of living index								
Low	11.4	11.3	24.2	17.8	16.7	17.1	43.7	687
Medium	7.5	9.8	22.3	15.2	16.8	14.4	56.8	1,398
High	5.6	6.4	18.8	10.9	10.6	10.9	54.3	825
Total	7.9	9.2	21.7	14.6	15.0	14.0	53.0	2,910

Note: Total includes 18 women in other religion who were not shown separately. () Based on less than 50 unweighted cases.
@ Literate women with no year of schooling are also included. # Total figure may not add to N due to do not know and missing cases.

Table 8.17 presents the percentage of men with misconceptions about the spreading of HIV/AIDS through specific ways by selected background characteristics. Again, just like the women, men in most of the groups reported that HIV/AIDS is transmitted through the biting of mosquitoes, fleas or bedbugs. About 49.1 percent of the men felt so. The percentage who reported that HIV/AIDS could be transmitted through the biting of mosquitoes or fleas or bedbugs was slightly higher among rural men (49.2 percent) than among urban men (48.2 percent). Literate men who have completed nine years of schooling, men from households with a

medium standard of living, Buddhist men, and scheduled caste men are of the impression that HIV/AIDS spreads when one is bitten by mosquitoes, fleas or bedbugs. Other misconceptions about the ways of spreading of HIV/AIDS are 'kissing' (34.2 percent), 'sharing eating utensils' (27.8 percent), 'sharing clothes' (20.3 percent), 'stepping on urine/stool' (14.6 percent), 'hugging' (13.8 percent), and 'shaking hands' (10.8 percent). All the misconceptions reported by men are relatively higher than those reported by women. The percentage of most of these misconceptions is also higher among scheduled caste men, other religion men, non-literate men, men with a medium standard of living and among men from rural areas.

Table 8.17 MISCONCEPTION ABOUT TRANSMISSION OF HIV/AIDS AMONG MEN								
Among husbands currently married women who have heard about HIV/AIDS, the percentage of men having misconception about the transmission of HIV/AIDS by selected background characteristics, Sikkim, 2002-04								
Background characteristic	Percentage having misconception about the transmission of HIV/AIDS							Number of men
	Shaking hands	Hugging	Kissing	Sharing clothes	Sharing eating utensils	Stepping on Urine / stool	Mosquito, flea, or bedbugs biting	
Residence								
Rural	10.5	13.9	33.8	20.4	27.6	14.4	49.2	2,160
Urban	12.7	13.2	36.9	20.1	29.2	16.3	48.2	356
Education								
Non-literate	20.8	22.2	29.5	26.0	26.8	23.0	48.8	163
0-9@ years	12.8	17.0	39.1	24.7	34.6	19.1	56.7	1,395
10 years and above	6.2	7.6	27.9	13.0	18.1	6.8	38.0	959
Religion								
Hindu	10.7	13.7	35.1	21.2	28.8	15.2	48.7	1,620
Christian	11.2	12.4	33.5	15.8	33.6	13.3	43.9	158
Buddhist	10.1	14.2	31.6	18.6	23.5	13.1	50.7	692
Other	(19.6)	(11.8)	(35.3)	(23.5)	(25.5)	(19.6)	(45.1)	47
Caste/tribe[#]								
Scheduled caste	16.9	20.2	40.1	25.1	32.9	17.1	56.7	195
Scheduled tribe	10.0	13.7	34.0	19.8	25.2	12.2	50.0	738
Other backward class	11.5	15.2	39.6	23.1	33.0	16.0	53.5	1,038
Other	7.7	8.1	21.7	13.7	19.0	14.6	35.9	521
Standard of living index								
Low	12.1	16.2	31.8	21.9	25.5	17.6	46.5	674
Medium	11.1	13.9	34.3	20.3	29.9	15.0	52.7	1,189
High	8.8	11.1	36.5	18.9	26.5	11.0	45.1	654
Total	10.8	13.8	34.2	20.3	27.8	14.6	49.1	2,517

Note:@ Literate men with no year of schooling are also included. # Total figure may not add to N due to do not know and missing cases. () Based on less than 50 unweighted cases

8.5.5 Knowledge of Curability of HIV/AIDS

Table 8.18 shows the percentage distribution of currently married women and their husbands who have heard about HIV/AIDS by knowledge of curability of the same, according to some selected background characteristics. Around 20.2 percent women and 16.5 percent men have the notion that HIV/AIDS is curable, whereas 55.2 percent women and 63.3 percent men replied that the disease is not curable. About 24.6 percent women and 20.2 percent men do not have any idea regarding the curability of the disease. It can be safely asserted from the figures that both

men and women of urban areas, having high level of education, belonging to Christian religion and other castes and those from households of high standard of living are showing better performance as far as the knowledge of curability of HIV/AIDS is concerned.

Table 8.18 KNOWLEDGE OF CURABILITY ABOUT HIV/AIDS
Among currently married women and their husbands, who have heard about HIV/AIDS, Percent distribution of respondents by knowledge of curability about HIV/AIDS, according to some selected background characteristics, Sikkim, 2002-04

Background characteristic	Percent distribution of women			Number of women	Percent distribution of men			Number of men
	Yes	No	Do not know		Yes	No	Do not know	
Residence								
Rural	19.7	54.2	26.1	2,492	17.1	62.4	20.5	2,160
Urban	23.2	60.8	16.0	417	13.0	68.3	18.7	356
Education								
Non-literate	16.2	41.6	42.3	401	18.7	40.1	41.2	163
0-9@ years	21.0	51.2	27.8	1,736	17.8	56.5	25.7	1,395
10 years and above	20.4	71.2	8.4	772	14.2	77.1	8.7	959
Religion								
Hindu	19.9	53.4	26.7	1,838	16.5	60.7	22.8	1,620
Christian	27.1	58.6	14.3	199	16.1	69.6	14.3	158
Buddhist	19.9	58.2	22.0	823	16.2	68.0	15.7	692
Other	9.0	57.4	33.6	50	(23.5)	(54.9)	(21.6)	47
Caste/tribe[#]								
Scheduled caste	21.0	59.5	19.5	200	8.2	61.8	30.0	195
Scheduled tribe	20.7	58.4	20.9	884	13.0	71.6	15.5	738
Other backward class	21.4	51.7	26.8	1,244	17.1	59.6	23.3	1,038
Other	16.3	55.8	27.8	556	23.4	60.3	16.3	521
Standard of living index								
Low	15.6	43.3	41.0	687	17.4	51.4	31.2	674
Medium	20.2	55.0	24.9	1,398	18.0	62.6	19.4	1,189
High	24.1	65.3	10.6	825	12.7	76.7	10.5	654
Total	20.2	55.2	24.6	2,910	16.5	63.3	20.2	2,517

Note:() Based on less than 50 unweighted @ Literate persons with no year of schooling are also included. # Total figure may not add to N due to do not know and missing cases.

8.6 Awareness of RTI/STI and HIV/AIDS by Districts

Table 8.19 shows the district-wise percentage distribution of currently married women and their husbands who are aware of RTI/STI and HIV/AIDS.

According to DLHS, 34.5 percent and 72.1 percent of women were aware of RTI/STI and HIV/AIDS respectively and the corresponding figures for husbands of eligible women are 25.9 percent and 82.2 percent respectively. The awareness of RTI/STI is higher among women by 8.6 percentage points and awareness on HIV/AIDS among men is higher than that among women by 10.1 percentage points.

In all the districts, men are more aware of RTI/STI and HIV/AIDS than women except in East district where slightly more percentage of women are aware of RTI/STI than men. The highest level of awareness about RTI/STI among women was reported in East Sikkim (56.2 percent), followed by West Sikkim (25 percent) and the lowest in South Sikkim (8.1 percent).

Among men, the highest level of awareness of RTI/STI was reported in North Sikkim (29.4 percent), followed by South Sikkim (27.3 percent) and East Sikkim (26.2 percent) and the lowest in West Sikkim (25.4 percent).

The proportion of husbands of eligible currently married women aged 15-44 years who are aware of HIV/AIDS in the districts of Sikkim are also presented in Table 8.19. Among women, the awareness about HIV/AIDS ranges from the highest of 85.3 percent in East Sikkim to the lowest of 54.1 percent in South Sikkim. A high level of awareness of HIV/AIDS among men exceeding 70 percent was reported in all the districts except North Sikkim.

Table 8.19 AWARENESS OF RTI/STI AND HIV/AIDS BY DISTRICT				
Percentage of currently married women and their husbands aware of RTI/STI and HIV/AIDS by district, Sikkim, 2002-04				
District	Percentage of women		Percentage of men	
	Aware of RTI/STI	Aware of HIV/AIDS	Aware of RTI/STI	Aware of HIV/AIDS
East	56.2	85.3	26.2	93.9
North	14.1	54.7	29.4	65.1
South	8.1	54.1	27.3	74.5
West	25.0	70.3	25.4	70.4
Sikkim	34.5	72.1	25.9	82.2

APPENDIX-A

Sampling Error Estimation

The accuracy of programme indicators such as contraceptive prevalence rate, unmet need and institutional delivery, antenatal coverage etc. estimated from DLHS-RCH can be assessed in terms of stability of the estimated indicators as measured by the standard errors. Standard errors reflect only the appropriateness and suitability of sampling design adopted for RCH survey. However, the accuracy of estimated programme indicator are also affected to a great extent by non-sampling errors arising from lack of proper operationalisation and non-response cases, and is inherent in large scale surveys. The estimation producers of District Level Reproductive & Child Health survey takes into consideration design appropriateness and non-response rates. DLHS-RCH estimator of a programme indicators is design as

$$r = \frac{\sum_h \sum_j \sum_i w_{hji} y_{hji}}{\sum_h \sum_j \sum_i w_{hji} x_{hji}} = \frac{y}{x} \dots\dots\dots (1)$$

where the cell (h, j, i) stands for ith observational unit in jth primary sampling unit (PSU) in hth stratum, basically rural-urban areas of a district are taken as strata. W_{hji} is the sampling weight of (h, j, i)th cell inflated by response rates. The variables y and x denote the main and the auxiliary characteristics required for computation of proportion or ratios.

The equation for estimation of variance of programme indicator (r) is obtained after Taylor series linearisation as

$$\text{var} (r) = \frac{1}{x^2} [\text{var} (y) + r^2 \text{var} (x) - 2 r \text{cov} (y, x)] \dots\dots\dots(2)$$

$$\text{var} (y) = \sum_h \frac{n_h}{n_h - 1} [\sum_j \sum_i (w_{hji} y_{hji})^2 - \frac{(\sum_j \sum_i w_{hji} y_{hji})^2}{n_h}] \dots\dots\dots(3)$$

$$\text{cov} (y , x) = \sum_h \frac{n_h}{n_h - 1} [\sum_j \sum_i w_{hji}^2 y_{hji} x_{hji} - \frac{(\sum_j \sum_i w_{hji} y_{hji})(\sum_j \sum_i w_{hji} x_{hji})}{n_h}] \dots\dots\dots(4)$$

and n_h is the number of sampled PSUs representing rural or urban areas of a district/state.

List of Selected Programme Variables for Sampling Errors, RCH 2002-04

Variable	Estimate	Base Population
CPR (Any Method)	Proportion	Currently married women age 15-44 years
Unmet Need	Proportion	Currently married women age 15-44 years
Any ANC	Proportion	Last live/still births in the past three years
ANC3+	Proportion	Last live/still births in the past three years
Institutional Delivery	Proportion	Last live/still births in the past three years
Safe Delivery	Proportion	Last live/still births in the past three years
BCG	Proportion	Children age 12-23 months
Measles	Proportion	Children age 12-23 months
BO3+	Proportion	Currently married women age 15-44 years with births in past three years

Sampling errors, Sikkim, 2002-04								
Variables	Estimate (R)	Sampling error (SE)	Number of cases		Design Effect	Relative Error (%)	95% Conf. Interval	
			Unweighted	Weighted			R-1.96 SE	R+1.96 SE
Contraceptive Prevalence Rate (Currently Married Women age 15-44)								
Total	0.653	0.009	4,038	4,037	1.486	1.4	0.635	0.671
Rural	0.648	0.010	3,533	3,533	1.492	1.5	0.629	0.667
Urban	0.692	0.025	505	504	1.435	3.6	0.644	0.740
Unmet Need (Currently Married Women age 15-44)								
Total	0.182	0.007	4,038	4,037	1.411	4.0	0.168	0.196
Rural	0.183	0.008	3,533	3,533	1.410	4.2	0.168	0.198
Urban	0.175	0.020	505	504	1.423	11.5	0.135	0.215
Received Any Antenatal Check up (last live/still birth of past 3 years)								
Total	0.895	0.010	1,234	1,147	1.109	1.1	0.876	0.914
Rural	0.888	0.010	1,074	985	1.076	1.2	0.868	0.909
Urban	0.934	0.023	160	162	1.450	2.5	0.888	0.980
Received 3+ Antenatal Check up (last live/still birth of past 3 years)								
Total	0.679	0.016	1,234	1,145	1.334	2.3	0.648	0.711
Rural	0.657	0.017	1,074	984	1.319	2.7	0.623	0.692
Urban	0.813	0.038	160	161	1.556	4.7	0.738	0.888
Institutional Delivery (last live/still birth of past 3 years)								
Total	0.586	0.017	1,234	1,146	1.381	2.9	0.553	0.620
Rural	0.551	0.019	1,074	985	1.384	3.4	0.514	0.587
Urban	0.805	0.038	160	161	1.505	4.7	0.730	0.879
Safe Delivery (last live/still birth of past 3 years)								
Total	0.619	0.017	1,234	1,146	1.363	2.7	0.586	0.652
Rural	0.584	0.018	1,074	984	1.363	3.2	0.548	0.620
Urban	0.833	0.036	160	162	1.519	4.3	0.763	0.904
Received BCG Vaccination (last and last but one living children, age 12-23 months)								
Total	0.936	0.016	421	378	1.694	1.7	0.905	0.966
Rural	0.959	0.012	372	324	1.447	1.3	0.935	0.983
Urban	0.795	0.074	49	54	1.629	9.4	0.645	0.944
Received Measles (last and last but one living children, age 12-23 months)								
Total	0.832	0.022	421	378	1.400	2.6	0.790	0.874
Rural	0.827	0.023	372	324	1.395	2.8	0.781	0.872
Urban	0.865	0.059	49	54	1.440	6.8	0.746	0.984
Birth order 3+ (birth in last three years)								
Total	0.305	0.016	1,247	1,087	1.333	5.3	0.273	0.336
Rural	0.299	0.017	1,081	917	1.287	5.8	0.265	0.333
Urban	0.335	0.045	166	170	1.545	13.4	0.247	0.423

Sampling errors, Sikkim, 2002-04							
District	Estimate (R)	Sampling error (SE)	Number of cases		Relative Error (%)	95% Conf. Interval	
			Unweighted	Weighted		R-1.96 SE	R+1.96 SE
Contraceptive Prevalence Rate (Currently Married Women age 15-44)							
East Sikkim	0.690	0.015	1,001	1,001	2.2	0.661	0.719
North Sikkim	0.493	0.018	1,009	1,007	3.7	0.457	0.529
South Sikkim	0.604	0.018	1,026	1,026	3.0	0.569	0.639
West Sikkim	0.667	0.015	1,002	1,002	2.2	0.637	0.696

Sampling errors, Sikkim, 2002-04							
District	Estimate (R)	Sampling error (SE)	Number of cases		Relative Error (%)	95% Conf. Interval	
			Unweighted	Weighted		R-1.96 SE	R+1.96 SE
Unmet Need (Currently Married Women age 15-44)							
East Sikkim	0.175	0.012	1,001	1,001	6.9	0.151	0.199
North Sikkim	0.343	0.017	1,009	1,007	5.0	0.308	0.377
South Sikkim	0.167	0.012	1,026	1,026	7.2	0.142	0.191
West Sikkim	0.175	0.012	1,002	1,002	6.9	0.151	0.199

Sampling errors, Sikkim, 2002-04							
District	Estimate (R)	Sampling error (SE)	Number of cases		Relative Error (%)	95% Conf. Interval	
			Unweighted	Weighted		R-1.96 SE	R+1.96 SE
Received Any Antenatal Check up (last live/still birth of past 3 years)							
East Sikkim	0.944	0.013	300	300	1.4	0.917	0.970
North Sikkim	0.723	0.026	382	392	3.6	0.671	0.774
South Sikkim	0.908	0.020	228	201	2.2	0.868	0.948
West Sikkim	0.854	0.020	324	326	2.3	0.815	0.893

Sampling errors, Sikkim, 2002-04							
District	Estimate (R)	Sampling error (SE)	Number of cases		Relative Error (%)	95% Conf. Interval	
			Unweighted	Weighted		R-1.96 SE	R+1.96 SE
Received 3+ Antenatal Check up (last live/still birth of past 3 years)							
East Sikkim	0.795	0.024	300	299	3.0	0.748	0.841
North Sikkim	0.440	0.029	382	392	6.6	0.382	0.497
South Sikkim	0.707	0.036	228	200	5.1	0.635	0.778
West Sikkim	0.534	0.028	324	326	5.2	0.479	0.589

Sampling errors, Sikkim, 2002-04							
District	Estimate (R)	Sampling error (SE)	Number of cases		Relative Error (%)	95% Conf. Interval	
			Unweighted	Weighted		R-1.96 SE	R+1.96 SE
Institutional Delivery (last live/still birth of past 3 years)							
East Sikkim	0.696	0.027	300	300	3.9	0.643	0.748
North Sikkim	0.360	0.028	382	393	7.8	0.305	0.415
South Sikkim	0.715	0.033	228	202	4.6	0.650	0.780
West Sikkim	0.388	0.027	324	327	7.0	0.334	0.442

Sampling errors, Sikkim, 2002-04							
District	Estimate (R)	Sampling error (SE)	Number of cases		Relative Error (%)	95% Conf. Interval	
			Unweighted	Weighted		R-1.96 SE	R+1.96 SE
Safe Delivery (last live/still birth of past 3 years)							
East Sikkim	0.724	0.026	300	300	3.6	0.673	0.776
North Sikkim	0.405	0.029	382	392	7.2	0.349	0.462
South Sikkim	0.726	0.032	228	202	4.4	0.662	0.790
West Sikkim	0.438	0.028	324	326	6.4	0.383	0.493

Sampling errors, Sikkim, 2002-04							
District	Estimate (R)	Sampling error (SE)	Number of cases		Relative Error (%)	95% Conf. Interval	
			Unweighted	Weighted		R-1.96 SE	R+1.96 SE
Received BCG Vaccination (last and last but one living children, age 12-23 months)							
East	0.898	0.033	94	93	3.6	0.834	0.962
North	0.948	0.019	131	144	2.0	0.911	0.985
South	0.930	0.037	55	48	4.0	0.857	1.003
West	0.983	0.012	116	115	1.2	0.959	1.007

Sampling errors, Sikkim, 2002-04							
District	Estimate (R)	Sampling error (SE)	Number of cases		Relative Error (%)	95% Conf. Interval	
			Unweighted	Weighted		R-1.96 SE	R+1.96 SE
Received Measles (last and last but one living children, age 12-23 months)							
East	0.925	0.027	94	93	3.0	0.872	0.979
North	0.700	0.044	131	144	6.3	0.613	0.786
South	0.677	0.079	55	48	11.6	0.522	0.832
West	0.800	0.036	116	115	4.5	0.729	0.871

Sampling errors, Sikkim, 2002-04							
District	Estimate (R)	Sampling error (SE)	Number of cases		Relative Error (%)	95% Conf. Interval	
			Unweighted	Weighted		R-1.96 SE	R+1.96 SE
Birth order 3+ (birth in last three years)							
East Sikkim	0.293	0.027	287	286	9.2	0.239	0.347
North Sikkim	0.471	0.027	449	463	5.7	0.417	0.524
South Sikkim	0.262	0.038	174	148	14.5	0.188	0.337
West Sikkim	0.298	0.025	337	338	8.4	0.248	0.347

APPENDIX B

DLHS-RCH STAFF, SIKKIM

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Ms. Preeti Chauhan
Mrs. Santhi N.S.
Ms. Sanjeeta Gupta
Ms. Reshmi R.S.
Ms. Rinki Shah
Mr. Arnendu Kumar Jha
Mr. Atanu Ghosh
Mr. Manas Pradhan

Mr. Suhas Narkhede
Mr. Pramod Kumar Gupta
Mr. Bipul Hazarika
Dr. Manoj Alagarajan
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Dr. N Anbazhaham
Dr. Saithya Susaman
Mr. Manoj Kumar
Mr. Dibya L Mohanta
Mr. Mohan Tiwari
Mr. Battala Madhusudana
Mr. Bardanwala S.I.
Mr. Jiten Kumar Singh
Mr. Manoranjan Barik
Mr. Laxmi Prasad Sonwani
Mr. Nimakwala M. I.
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Mrs. Deepa J. Nair (Office Assistant)

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Ms. Pratima P. Zore (Data Entry Operator)

Ms. Preeti S. Kharat (Data Entry Operator)

Ms. Sayali Shivalkar (Data Entry Operator)

Mr. Chandra D. Singh (Office Boy)

Mr. Ravindra P. Gawade (Office Boy)

Mr. Sanjay P. Kadam (Office Boy)

APPENDIX-A

Sampling Error Estimation

The accuracy of programme indicators such as contraceptive prevalence rate, unmet need and institutional delivery, antenatal coverage etc. estimated from DLHS-RCH can be assessed in terms of stability of the estimated indicators as measured by the standard errors. Standard errors reflect only the appropriateness and suitability of sampling design adopted for RCH survey. However, the accuracy of estimated programme indicator are also affected to a great extent by non-sampling errors arising from lack of proper operationalisation and non-response cases, and is inherent in large scale surveys. The estimation producers of District Level Reproductive & Child Health survey takes into consideration design appropriateness and non-response rates. DLHS-RCH estimator of a programme indicators is design as

$$r = \frac{\sum_h \sum_j \sum_i w_{hji} y_{hji}}{\sum_h \sum_j \sum_i w_{hji} x_{hji}} = \frac{y}{x} \dots\dots\dots (1)$$

where the cell (h, j, i) stands for ith observational unit in jth primary sampling unit (PSU) in hth stratum, basically rural-urban areas of a district are taken as strata. W_{hji} is the sampling weight of (h, j, i)th cell inflated by response rates. The variables y and x denote the main and the auxiliary characteristics required for computation of proportion or ratios.

The equation for estimation of variance of programme indicator (r) is obtained after Taylor series linearisation as

$$\text{var} (r) = \frac{1}{x^2} [\text{var} (y) + r^2 \text{var} (x) - 2 r \text{cov} (y, x)] \dots\dots\dots(2)$$

$$\text{var} (y) = \sum_h \frac{n_h}{n_h - 1} [\sum_j \sum_i (w_{hji} y_{hji})^2 - \frac{(\sum_j \sum_i w_{hji} y_{hji})^2}{n_h}] \dots\dots\dots(3)$$

$$\text{cov} (y , x) = \sum_h \frac{n_h}{n_h - 1} [\sum_j \sum_i w_{hji}^2 y_{hji} x_{hji} - \frac{(\sum_j \sum_i w_{hji} y_{hji})(\sum_j \sum_i w_{hji} x_{hji})}{n_h}] \dots\dots\dots(4)$$

and n_h is the number of sampled PSUs representing rural or urban areas of a district/state.

List of Selected Programme Variables for Sampling Errors, RCH 2002-04

Variable	Estimate	Base Population
CPR (Any Method)	Proportion	Currently married women age 15-44 years
Unmet Need	Proportion	Currently married women age 15-44 years
Any ANC	Proportion	Last live/still births in the past three years
ANC3+	Proportion	Last live/still births in the past three years
Institutional Delivery	Proportion	Last live/still births in the past three years
Safe Delivery	Proportion	Last live/still births in the past three years
BCG	Proportion	Children age 12-23 months
Measles	Proportion	Children age 12-23 months
BO3+	Proportion	Currently married women age 15-44 years with births in past three years

Sampling errors, Sikkim, 2002-04								
Variables	Estimate (R)	Sampling error (SE)	Number of cases		Design Effect	Relative Error (%)	95% Conf. Interval	
			Unweighted	Weighted			R-1.96 SE	R+1.96 SE
Contraceptive Prevalence Rate (Currently Married Women age 15-44)								
Total	0.653	0.009	4,038	4,037	1.486	1.4	0.635	0.671
Rural	0.648	0.010	3,533	3,533	1.492	1.5	0.629	0.667
Urban	0.692	0.025	505	504	1.435	3.6	0.644	0.740
Unmet Need (Currently Married Women age 15-44)								
Total	0.182	0.007	4,038	4,037	1.411	4.0	0.168	0.196
Rural	0.183	0.008	3,533	3,533	1.410	4.2	0.168	0.198
Urban	0.175	0.020	505	504	1.423	11.5	0.135	0.215
Received Any Antenatal Check up (last live/still birth of past 3 years)								
Total	0.895	0.010	1,234	1,147	1.109	1.1	0.876	0.914
Rural	0.888	0.010	1,074	985	1.076	1.2	0.868	0.909
Urban	0.934	0.023	160	162	1.450	2.5	0.888	0.980
Received 3+ Antenatal Check up (last live/still birth of past 3 years)								
Total	0.679	0.016	1,234	1,145	1.334	2.3	0.648	0.711
Rural	0.657	0.017	1,074	984	1.319	2.7	0.623	0.692
Urban	0.813	0.038	160	161	1.556	4.7	0.738	0.888
Institutional Delivery (last live/still birth of past 3 years)								
Total	0.586	0.017	1,234	1,146	1.381	2.9	0.553	0.620
Rural	0.551	0.019	1,074	985	1.384	3.4	0.514	0.587
Urban	0.805	0.038	160	161	1.505	4.7	0.730	0.879
Safe Delivery (last live/still birth of past 3 years)								
Total	0.619	0.017	1,234	1,146	1.363	2.7	0.586	0.652
Rural	0.584	0.018	1,074	984	1.363	3.2	0.548	0.620
Urban	0.833	0.036	160	162	1.519	4.3	0.763	0.904
Received BCG Vaccination (last and last but one living children, age 12-23 months)								
Total	0.936	0.016	421	378	1.694	1.7	0.905	0.966
Rural	0.959	0.012	372	324	1.447	1.3	0.935	0.983
Urban	0.795	0.074	49	54	1.629	9.4	0.645	0.944
Received Measles (last and last but one living children, age 12-23 months)								
Total	0.832	0.022	421	378	1.400	2.6	0.790	0.874
Rural	0.827	0.023	372	324	1.395	2.8	0.781	0.872
Urban	0.865	0.059	49	54	1.440	6.8	0.746	0.984
Birth order 3+ (birth in last three years)								
Total	0.305	0.016	1,247	1,087	1.333	5.3	0.273	0.336
Rural	0.299	0.017	1,081	917	1.287	5.8	0.265	0.333
Urban	0.335	0.045	166	170	1.545	13.4	0.247	0.423

Sampling errors, Sikkim, 2002-04							
District	Estimate (R)	Sampling error (SE)	Number of cases		Relative Error (%)	95% Conf. Interval	
			Unweighted	Weighted		R-1.96 SE	R+1.96 SE
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East Sikkim	0.690	0.015	1,001	1,001	2.2	0.661	0.719
North Sikkim	0.493	0.018	1,009	1,007	3.7	0.457	0.529
South Sikkim	0.604	0.018	1,026	1,026	3.0	0.569	0.639
West Sikkim	0.667	0.015	1,002	1,002	2.2	0.637	0.696

Sampling errors, Sikkim, 2002-04							
District	Estimate (R)	Sampling error (SE)	Number of cases		Relative Error (%)	95% Conf. Interval	
			Unweighted	Weighted		R-1.96 SE	R+1.96 SE
Unmet Need (Currently Married Women age 15-44)							
East Sikkim	0.175	0.012	1,001	1,001	6.9	0.151	0.199
North Sikkim	0.343	0.017	1,009	1,007	5.0	0.308	0.377
South Sikkim	0.167	0.012	1,026	1,026	7.2	0.142	0.191
West Sikkim	0.175	0.012	1,002	1,002	6.9	0.151	0.199

Sampling errors, Sikkim, 2002-04							
District	Estimate (R)	Sampling error (SE)	Number of cases		Relative Error (%)	95% Conf. Interval	
			Unweighted	Weighted		R-1.96 SE	R+1.96 SE
Received Any Antenatal Check up (last live/still birth of past 3 years)							
East Sikkim	0.944	0.013	300	300	1.4	0.917	0.970
North Sikkim	0.723	0.026	382	392	3.6	0.671	0.774
South Sikkim	0.908	0.020	228	201	2.2	0.868	0.948
West Sikkim	0.854	0.020	324	326	2.3	0.815	0.893

Sampling errors, Sikkim, 2002-04							
District	Estimate (R)	Sampling error (SE)	Number of cases		Relative Error (%)	95% Conf. Interval	
			Unweighted	Weighted		R-1.96 SE	R+1.96 SE
Received 3+ Antenatal Check up (last live/still birth of past 3 years)							
East Sikkim	0.795	0.024	300	299	3.0	0.748	0.841
North Sikkim	0.440	0.029	382	392	6.6	0.382	0.497
South Sikkim	0.707	0.036	228	200	5.1	0.635	0.778
West Sikkim	0.534	0.028	324	326	5.2	0.479	0.589

Sampling errors, Sikkim, 2002-04							
District	Estimate (R)	Sampling error (SE)	Number of cases		Relative Error (%)	95% Conf. Interval	
			Unweighted	Weighted		R-1.96 SE	R+1.96 SE
Institutional Delivery (last live/still birth of past 3 years)							
East Sikkim	0.696	0.027	300	300	3.9	0.643	0.748
North Sikkim	0.360	0.028	382	393	7.8	0.305	0.415
South Sikkim	0.715	0.033	228	202	4.6	0.650	0.780
West Sikkim	0.388	0.027	324	327	7.0	0.334	0.442

Sampling errors, Sikkim, 2002-04							
District	Estimate (R)	Sampling error (SE)	Number of cases		Relative Error (%)	95% Conf. Interval	
			Unweighted	Weighted		R-1.96 SE	R+1.96 SE
Safe Delivery (last live/still birth of past 3 years)							
East Sikkim	0.724	0.026	300	300	3.6	0.673	0.776
North Sikkim	0.405	0.029	382	392	7.2	0.349	0.462
South Sikkim	0.726	0.032	228	202	4.4	0.662	0.790
West Sikkim	0.438	0.028	324	326	6.4	0.383	0.493

Sampling errors, Sikkim, 2002-04							
District	Estimate (R)	Sampling error (SE)	Number of cases		Relative Error (%)	95% Conf. Interval	
			Unweighted	Weighted		R-1.96 SE	R+1.96 SE
Received BCG Vaccination (last and last but one living children, age 12-23 months)							
East	0.898	0.033	94	93	3.6	0.834	0.962
North	0.948	0.019	131	144	2.0	0.911	0.985
South	0.930	0.037	55	48	4.0	0.857	1.003
West	0.983	0.012	116	115	1.2	0.959	1.007

Sampling errors, Sikkim, 2002-04							
District	Estimate (R)	Sampling error (SE)	Number of cases		Relative Error (%)	95% Conf. Interval	
			Unweighted	Weighted		R-1.96 SE	R+1.96 SE
Received Measles (last and last but one living children, age 12-23 months)							
East	0.925	0.027	94	93	3.0	0.872	0.979
North	0.700	0.044	131	144	6.3	0.613	0.786
South	0.677	0.079	55	48	11.6	0.522	0.832
West	0.800	0.036	116	115	4.5	0.729	0.871

Sampling errors, Sikkim, 2002-04							
District	Estimate (R)	Sampling error (SE)	Number of cases		Relative Error (%)	95% Conf. Interval	
			Unweighted	Weighted		R-1.96 SE	R+1.96 SE
Birth order 3+ (birth in last three years)							
East Sikkim	0.293	0.027	287	286	9.2	0.239	0.347
North Sikkim	0.471	0.027	449	463	5.7	0.417	0.524
South Sikkim	0.262	0.038	174	148	14.5	0.188	0.337
West Sikkim	0.298	0.025	337	338	8.4	0.248	0.347

APPENDIX B

DLHS-RCH STAFF, SIKKIM

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APPENDIX -C

QUESTIONNAIRES

**HOUSEHOLD
WOMEN
HUSBAND
VILLAGE**

NOTES

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**QUESTIONNAIRES
HOUSEHOLD
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To be attached in the final Report

NOTES