DLHS -2

KARNATAKA

Reproductive and Child Health

District Level Household Survey -2002-04

Population Research Centre
Institute for Social and Economic Change
Bangalore

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

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Ministry of Health & Family Welfare
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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 As a first step, family planning target has been withdrawn and an effort is being made to provide a package of reproductive services at different levels of health care centres.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 Karnataka and covered all the districts. The findings of selected indicators of reproductive and child health services from the state of Karnataka are presented in the report.

It is believe 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 involve in the survey, several organizations and individuals deserve special mention.

The first and the foremost to whom we wish to express our thanks is the Union Minister of Health and Family Welfare (MoHFW) for giving us an opportunity to work as a regional agency for a project of national importance. We would like to take this opportunity to acknowledge Shri P.K. Hota, Secretary, Ministry of Health and Family Welfare (MoHFW), Government of India. Our special thanks are due to Shri S.K. Sinha, Additional Director General, Department of Family Welfare, GoI. We further acknowledge the guidance of Sri Partho Chattopadhya, Chief Director and Shri K. D. Maiti, Director, Department of Health and Family Welfare, GoI at various stages of the project. Our special thanks are due to Dr. T.K. Roy, former Director and Senior Professor, IIPS, Mumbai for his timely advice and valuable guidance. Thanks are also due to Dr. G. Ramarao, former Director, IIPS. We also express our thanks to Dr. P.N. Mari Bhatt, Director and Senior Professor, IIPS, Mumbai. We also feel privileged to thank Shri D. K. Joshi and Sri S. K. Das, former Chief Directors at the Ministry of Health and Family Welfare, GoI. We also acknowledge the contributions of Dr. F. Ram, Dr. B. Paswan, Dr. L. Ladu Singh, coordinators of the project at IIPS, Mumbai. Our special thanks are also due to Shri S.K. Nath, Addl. D.G. NSSO, Kolkata for providing necessary supports in selection of urban samples.

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Thanks are also due to the UNICEF for funding the health component of the survey. We are especially thankful to Dr. C Chandrasekar and Dr. Jayachandran, for their keen interest and kindly supply of necessary inputs for the successful completion of the health component of the survey. Our thanks are also to Dr. Prema Ramachandran, adviser, Planning Commission for her keen interest in the subject and Mr. M Nagavara Prasad and Mr. Madhusudhan Research Officers IIPS who assisted us in the training of field staff and supervision of fieldwork operations.

In the Phase I, survey in the 8 districts of Karnataka *viz.*, Belgaum, Bidar, Gulbarga, Koppal, Raichur, Shimoga, Tumkur and Uttara Kannada was carried out in collaboration with the PRC of the Institute of Economic Research, Dharwad. And, survey in the 6 districts *viz.*, Bangalore, Bangalore Rural, Hassan, Kodagu, Kolar and Mandya was carried out in collaboration with the Institute for Development Research and Policy (IDRP), Bangalore. We are thankful to the Directors of PRC, Dharwad and IDRP, Bangalore and staff for their cooperation in various stages of the survey.

All the faculty and technical staff of PRC at ISEC were involved in various stages of the survey under the overall coordination and guidance of Dr K N M Raju, former Professor and Head of the PRC at ISEC. Specifically, Drs. R Mutharayappa, C S Veeramatha and K S Umamani shared the major burden of training field investigators. Drs. R Mutharayappa, C S Veeramatha, K S Umamani, T N Bhat, M Lingaraju, Mr. C Yogananda and Mr. P Prabhuswamy shared the responsibility of monitoring the fieldwork including house-listing operations, and, in the preparation of district as well as state reports. Dr. K S Umamani shared the responsibility of monitoring the work of health investigators. Not the least, Dr. K S James, present Professor and Head of the PRC at ISEC guided the preparation of this report.

We would like to express our sincere thanks to Professor Gopal K Kadekodi and Prof. M Govinda Rao, present and former Directors of the Institute for their advice and constant support in carrying out DLHS-RCH project. We acknowledge the cooperation received from Shri. Rameshappa and Shri H N Ranganathan, former Registrars, Mr. V Ramappa, Accounts Officer, and other administrative staff of Institute, especially the Registrars Office, Accounts, Estate and Transport sections.

We are also thankful to the National Institute of Nutrition, Hyderbad for providing training for our health investigators. Lastly, we thank the respondents who extended all cooperation in conducting the survey.

Population Research Centre
Institute for Social and Economic Change

June, 2006

KEY INDICATORS, KARNATAKA

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

Sample size	
Households surveyed	1,42,922
Currently married women age 15-44	22,655
Husband's of eligible women	13,904
Characteristics of households	
Percent rural	66.5
Percent Hindu	85.0
Percent Muslim	11.9
Percent other religion (Christian)	2.2
Percent scheduled caste	18.0
Percent scheduled tribe	7.7
Percent with electricity	87.0
Percent with flush toilet	17.0
Percent with no toilet facility	60.5
Percent living in *Kachcha* houses	12.8
Percent living in *Pucca* houses	21.5
Percent with low standard of living	44.6
Percent with high standard of living	22.2
Percent with iodized salt (15+ppm)	22.9
Characteristics of currently married women age 15-44 years	
Percent below age 30	52.4
Percent with age at first cohabitation below age 18.	55.6
Percent illiterate	45.7
Percent having 10 or more years of schooling	22.6
Percent with illiterate husband	32.7
Percent with husband 10+ years of schooling	34.1
Marriage	
Mean age at marriage for boys	25.1
Mean age marriage for girls	19.1
Percent of boys married below age 21	13.8
Percent of girls married below age 18	31.4
Fertility	
Mean children ever born women age 40-44 years	3.6
Percent of births of order 3 and above[1]	29.6
Current use of family planning method	
Any method	59.3
Any modern method	57.7
Pill	0.9
IUD	2.8
Condom	1.4
Female sterilization	52.4
Male sterilization	0.2
Any traditional method	1.6
Rhythm/safe period	1.2
Withdrawal	0.1
Unmet need for family planning	
Percent with unmet need for spacing	6.6
Percent with unmet need for limiting	8.5
Percent with total unmet need	15.1
Maternal care[2]	
Percent of women received antenatal check-ups	91.5
Antenatal check-up at home	4.1
Antenatal check-up in first trimester	67.7
Three or more visit for ANC	80.1
Two or more tetanus toxoid injections	79.5
Adequate Iron folic acid tablets/syrup[3]	33.3
Full antenatal check-up[4]	29.9
Delivery characteristics[2]	
Delivery at home	41.9
Delivery at government health institutions	29.0
Delivery at private health institutions	28.9
Delivery attendant by skilled persons[5]	66.6
Child health	
Percent of children whose mother squeezed out milk from her breast[6]	45.3
Percent of children[7] with diarrhoea[8] who received ORS	25.8
Percent of women whose child[7] with pneumonia[8] sought treatment	73.5
Percent of children who received vaccinations[9]	
BCG	92.4
DPT (3 injections)	83.3
Polio (3 drops)	82.4
Measles	77.2
All vaccinations[10]	71.3
No vaccination at all.	4.7
Percentage of women who had	
Pregnancy complication[2]	17.6
Delivery complication[2]	22.1
Post delivery complication[2]	17.1
Symptoms of RTI/STI	19.2
Problems of vaginal discharge	7.3
Menstruation related problem	15.5
Awareness of RTI/STI and HIV/AIDS	
Percent of women who have heard of RTI/STI	21.2
Percent of women who have heard of HIV/AIDS	68.7
Utilization of government health services	
Antenatal care	36.9
Treatment for pregnancy complication	35.2
Treatment for post-delivery complication	42.3
Treatment for vaginal discharge	46.1
Treatment for children with diarrhoea	27.5
Treatment for children with pneumonia	25.0
Quality of family planning services	
Percent non-users ever advised to adopt the family planning method	18.5
Percent users told about side effects of any modern method	50.0
Percent users who received follow-up services	46.0
Characteristics of husband of eligible women	
Percent of husband knowing NSV	12.7
Percent of men who have heard of RTI/STI	30.2
Percent of men who have heard of HIV/AIDS	74.8
Percentage who had any symptoms of RTI/STI	3.2
Sought treatment for RTI/STI	35.9

[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 12-35 months) born during three years preceding the survey. [10] BCG, three injections of DPT, three drops of polio and measles.

SALIENT FINDINGS

Government of India had proposed to undertake district level household surveys through non-governmental agencies for the assessment of district level Reproductive and Child Health indicators on annual basis. The District Level Household Survey (DLHS) was the result of this initiative from the government. The Population Research Centre (PRC) of Institute for Social and Economic Change, Bangalore was entrusted with the work of carrying out the survey in Karnataka state. The survey for Phase-1 of the DLHS covering 14 districts of Karnataka was conducted from June 2002 to October 2002. The survey for Phase-2 covering the remaining 13 districts of the state was carried out from May 2004 to September 2004. The main focus of the survey has been on: i) Coverage of Ante Natal Care (ANC) and immunization services, ii) Extent of safe deliveries, iii) Contraceptive prevalence 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 below.

From both the phases together the data were collected for 28,167 households in Karnataka. A total of 22,656 eligible women (usual residents or visitors who had stayed in the sample household the night before the interview) who were currently married and aged 15-44 years (whose marriage was consummated) and 13,903 husbands of the eligible women were interviewed from these 28167 households.

Of the total households interviewed in the state, one-third or 33 percent were from the urban areas. A predominant 85 percent of the sample households belonged to Hindus, 12 percent to Muslims and a meagre 3 percent to other religions. A little more than one-fourth or 26 percent of the households belonged to either scheduled castes or scheduled tribes. About 13 percent of the households lived in *Kachcha*, and about 66 percent lived in Semi-*pacca* and 22 percent lived in *Pucca* houses. A little less than half of the households (45 percent) belonged to low economic status i.e., low standard of living index category.

Nearly two-thirds or 65 percent of population aged seven and above was literate in the state as a whole. The proportion of literates among females was 58 percent, while it was 75 percent for males. The proportion of illiterates was much higher among the older cohort people than the younger ones. A little less than half or 46 percent of the eligible women in the state were illiterates, and a little less than one-fourth or 23 percent of the women had completed 10 or more years of schooling. Comparatively, literacy levels of the husbands of eligible women in Karnataka were much better than their spouses. Regarding the distribution of illiterate women, a much lower percentage of younger women below age 30 years were illiterates as compared to older women in age 30 years and above. However, the percentage of illiterate husbands across age groups was somewhat similar except for husbands in age group 29-34 years which was relatively lower.

The mean age at marriage among boys and girls in the state was 25.1 years and 19.1 years respectively as reported for the marriages that took place in the households during the three yeas prior to the survey. The data indicate that 8 percent of the boys and 17 percent of the girls in the state got married before attaining the minimum legal age at marriage of 21 and 18 years, respectively. Excepting Bagalkot, Bellary, Bijapur, Gulbarga, Koppal and Raichur districts in all

other districts less than one-fifth of the boys got married below the legal minimum age at marriage prescribed for them i.e., 21 years. In all the districts other than Bangalore, Chikmaglur, Dakshina Kannada, Davanagere, Hassan, Kodagu, Shimoga, Udipi and Uttara Kannada proportions varying from 25 percent to 59 percent of the girls got married below the legal minimum age at marriage for them i.e., 18 years.

A little less than one-fourth or 23 percent of the households were using cooking salt that was iodized at the recommended level of 15 parts per million or higher level of iodine content Significantly, half of the households in the state used salts that was not iodized at all. Davanagere district had the lowest proportion of households (11 percent) using non-iodized salt and the highest proportion of households (79 percent) using non-iodized salt reported in Gulbarga district. While one-fourth i.e., 25 percent or higher percentage of the households in Bangalore, Belgaum, Chamarajnagar, Chikmagalur, Dakshina Kannada, Davanagere, Kodagu, Mandya, Mysore, Udupi and Uttatra Kannada districts consumed salt that was adequately iodized salt, less than 10 percent of the households used it in the districts of Bagalkot, Dharwad, Gadag, Haveri, Koppal and Raichur.

The women on the verge of completion of their reproductive span i.e., in age 40-44 years, on average had given birth to 3.6 children. The completed fertility in the state varied from a low of 2.7 mean of number children ever born per women in Kodagu district to a high of 5.7 children in Raichur district. A little more than one-third or 37 percent of the births in the three years period preceding the survey were of first order. The proportion of higher order births was somewhat high in a majority of the districts. And, the proportion of 3 and higher order births varied from a low of 12 percent in Bangalore and Hassan districts to a high of 51 percent in Gulbarga and Koppal districts.

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 92 percent of the women received at least one ante-natal care during pregnancy. About four percent of the women during their pregnancy were visited by health worker at their residence for providing ANC. Forty-three percent of the women visited private health facilities and 37 percent received ANC from government health facilities. The percent of women who got some kind of ANC during pregnancy range between 70 percent in Raichur to 100 percent in Dakshina Kannada. In 18 districts out of 27, 90 percent or more women got some antenatal care.

Though 92 percent of the women in Karnataka received ANC, only 71, 78 and 80 percent women had check-up of weight, blood pressure and abdomen respectively. Eighty-six percent women received Iron and Folic Acid (IFA) tablets and 86 percent got at least one 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 30 percent of women.

Minimum three ANC and timing of first check up is crucial for maternal and child care. In Karnataka nearly 40 percent of women got ANC in the first trimester and nearly 80 percent had minimum three antenatal check-ups. The extent of ANC in first trimester varies from a minimum of 39 percent in Raichur to a maximum of 89 percent in Uttara Kannada. In Raichur,

only 51 percent of women had minimum three ANC whereas in Udupi 99 percent women had got minimum three ANC.

Nearly 58 percent of the total deliveries in Karnataka were conducted in the health institutions; 8 percentages point up from RCH Round I. The majority of the institutional deliveries were conducted in government and private institutions (government and private 29 percent each of total deliveries). Twenty-one 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, 67 percent of the deliveries, slightly up from RCH Round I (60 percent), in the state were assisted by skilled personnel. The extent of institutional deliveries varies from the highest of 92 percent in Bangalore to the lowest of 21 percent each in Koppal and Raichur. 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 Karnataka, 18, 22 and 17 percent of the women experienced pregnancy, delivery and post delivery complications respectively. About 71 percent of the women sought treatment for the pregnancy and 69 percent for the post-delivery complications. The pregnancy complication varies from the lowest of 7 percent in Udupi to the highest of 43 percent in Chikmagalur. 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 low, the incidence of delivery and post-delivery complications is also low.

In most of the districts and the state as a whole, the practice of breast-feeding is almost universal. However, the practice of initiation of breastfeeding within two hours of birth of the child is not common. In Karnataka, 40 percent women started breastfeeding the child within two hours of birth and 42 percent started after one day of birth. There is great deal of variation in the pattern of breastfeeding across the districts. In Mysore district only fifteen percent of the women breastfed the child within two hours of birth. In Udupi and Davanagere district, the percentage is highest (78 and 69 percent respectively).

In Karnataka 92, 83, 82 and 77 percent of the children received the BCG vaccine, three doses of DPT, Polio and measles vaccine respectively. There is 15 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 71 percent of the children, whereas 5 percent of the children did not receive a single vaccination under routine programme. About 47 percent of the children received supplementation of at least one dose of vitamin A and only 7 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 Bagalkot (41 percent) and highest in Uttara Kannada (96 percent). In 6 districts (Bagalkot, Koppal, Raichur, Gulbarga, Bijapur and Belgaum) the coverage of full immunization is below 55 percent.

In Karnataka, 50 percent of the women were aware of diarrhoea management and 26 percent were aware of Oral Rehydration Salt (ORS). During the two-week period prior to survey, children of 13 percent of the women suffered from diarrhoea. And 33 percent women treated diarrhoea among children by giving ORS. In comparison to awareness about diarrhoea management, the awareness about danger sings of pneumonia is quite low. Only 17 percent of the women reported awareness about danger sings of pneumonia. Twenty-four percent of the women reported that their children suffered from cough, cold and difficulty in breathing in two-week period prior to survey and 74 percent sought treatment.

The knowledge of family planning methods is universal in all districts of Karnataka, with 99 percent women reporting knowledge of one method or the other. However, the knowledge of any spacing method is marginally low (73 percent). The knowledge of any modern methods is also universal in all the districts, though the knowledge of all modern methods is only 25 percent. The proportion knowing all modern methods (males and females' sterilization, IUD, oral pills and condom) varies from about 2 percent in Gulbarga to 62 percent in Udupi.

In DLHS, knowledge about No-scalpel vasectomy has been asked to husbands of eligible women. About 13 percent of the husbands were aware of no-scalpel vasectomy in the state. The proportion of husbands knowing No-scalpel vasectomy varies from 0.8 percent in Haveri to 37 percent in Mysore.

The contraceptive prevalence rate (any methods) in the state is 59 percent, comprising of prevalence of about 58 percent of modern methods and 2 percent of traditional methods. Fifty-three percent of the couples adopted sterilization. The percent user of the two male methods sterilization and condom is less than 2 percent. There has been negative association between contraceptive use and female education, and availability of health facility. Positive association between economic development and contraception. The highest contraceptive prevalence is in Mandya (74 percent) followed by Shimoga (Hassan and Chikmagalur (71 percent each) and lowest is in Raichur and Gulbarga (42 percent each).

In Karnataka, a total of 15 percent of women are found to have unmet need for family planning, with 8.5 percent for limiting and 6.6 percent for spacing. The total unmet need varies from 6 percent in Davanagere to 25 percent in Gulbarga followed by Dakshina Kannada and Bidar (20 percent each).

Only 18 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. Seventy eight percent of women who were visited by ANM felt that ANM had given them sufficient time to discuss health-related matters.

In nearly 50 percent of the districts, 10 to 20 percent of the women reported the visit of ANM/LHV to their residence. In the 4 districts (Bangalore, Chamarajnagar, Chitradurga and Dharwad) lesss than 10 percent of the women reported visits of ANM/LHV and in the remaining districts (Chickmagalur, Hassan, Kolar, Koppal, Mandya, Tumkur, Udupi and Uttara Kannada) more than 20 percent of the women reported visit of ANM/LHV.

It has been observed that in three months period prior to survey, 37 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 37 percent of the women who did not visit the government health facility reported government health facility "Poor quality of services" as reason.

The district level variation in the utilization of the government health facilities ranges from 17 percent in Dakshina Kannada and Udupi to 57 percent in Hassan. Sixty two percentage of women visited private health facilities. Which ranges from 40-44 percent in Chickmagalur, Hassan, Mandya and Mysore. 70 percent and more in Bagalkot, Bangalore, Bidar, Dakshina kannada, Gulbarga, and Udupi.

In Karnataka 21 and 69 percent of women are aware of RTI/STI and HIV/AIDS respectively. The corresponding level of awareness among husbands of eligible women is 30 and 75 percent. The percent of women who are aware of RTI/STI and HIV/AIDS is lowest in Raichur 5 and 38 percent respectively to highest in Kodagu 52 and 89 percent. Similarly awareness level of husbands of eligible women of RTI/STI and HIV/AIDS are lowest in Raichur (10 percent) to highest in Uttara Kannada (57 percent). Out of 27, in 13 districts the awareness of HIV/AIDS is below state figure for husbands of eligible women.

About 19 percent of women and 3 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 Chamarajnagar (3 percent) for women and in Bellary, Chamarajnagar, Chitradurga, Mysore and Udupi (0 percent each) for husbands to highest in Chitradurga (36 percent) for women and in Haveri (29 percent) for husbands. More than 7 percent of women reported vaginal discharge with low in Udupi (1 percent) to highest in Koppal (16 Percent). Forty-six percent of women sought treatment for vaginal discharge problem and 36 percent of husbands sought treatment with at least one symptoms of RTI/STI. It may be noted that in 8 out of 27 districts between 70-100 percent of husbands compared to women 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 launched by Government of India (GoI) in 1996-97 is expected to achieve multiple objectives by providing quality services. It ushers a positive paradigm i.e., a shift from the earlier method-oriented and target-based activities to providing client-centred and demand-driven quality services. Efforts are also made to reorient provider's attitude at grass-root levels and strengthen the outreach services.

The new approach requires decentralized planning, monitoring and evaluation of the services. District being the nucleus of decentralised planning and implementation of the RCH programme, Government of India is interested in generating district level data other than those based on service statistics on the utilization of services provided by the government health facilities. It is also important to assess people's perceptions on the quality of services. Keeping this in view, District Level Household Survey (DLHS) was undertaken in the country under the RCH programme.

The Round I of the RCH survey (known as the RHS-RCH) was conducted during the years 1998–99 in 504 districts in two phases. The Round II, specifically known as the DLHS-RCH was conducted during the years 2002-04 in 593 districts as per 2001 Census, also in two phases. Each phase covered half the districts of all the states/union territories. The Round II used a slightly modified questionnaire for collection of information on RCH and incorporated some new dimensions into it. In particular, aspects such as testing cooking salt to assess the consumption of salt fortified with iodine, collection of blood sample from children, adolescents and pregnant women to assess the level of anaemia, and measurement of weight among children to assess the nutritional status were included in the Round II.

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

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

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

1.2 Survey Design

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

The National Sample Survey Organization (NSSO) provided the Urban Frame Size (UFS) blocks in the district for selection of urban sample. The UFS blocks were made available separately for each district. The maps of the selected blocks were obtained from the NSSO field offices of the states/union-territories.

In two districts of every state, the PSUs that were surveyed in Round I (RHS-RCH) were selected for the survey in Round II (DLHS-RCH). This was done in order to measure the changes more accurately. One district with highest proportion of safe deliveries and another with the lowest proportion of safe deliveries among those surveyed during the Round I of the survey were selected for this purpose. In other districts, new sample of PSUs were selected.

1.3 House Listing and Sample Selection

The house listing operation was carried out in the selected PSUs (or PSU segments) prior to the data collection, which provided the necessary frame for selecting households. The house listing operation involved preparation of location map, layout sketch map of all the structures in the selected PSUs and recording the details of the households in the structures. Under the overall guidance and monitoring by the coordinators of the regional agencies conducting the survey independent house listing teams carried out this exercise. Each team consisted of one lister, one mapper and a supervisor.

A complete listing of households was carried out in villages having 300 households. For villages having more than 300 households but blow 600 households, two segments with somewhat equal number of households were formed and one segment was selected at random from this for listing the households. In the case of villages having more than 600 households, segments consisting of about 150 households each were formed and two segments were selected from this for household listing using the systematic random sampling method.

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

above. The urban PSUs didn't require segmentation since the UFS blocks were of almost equal size and contained less than 300 households.

Households were not replaced if the selected households were absent during data collection. However, if a PSU was inaccessible, it was replaced by a PSU with similar characteristics. The PSU to be replaced was selected by the IIPS and provided to the regional agency for survey.

1.4 Questionnaire

The DLHS-RCH collected information on various indicators of RCH which are important for policymakers and programme managers in formulating and implementing the set goals of RCH programmes. The IIPS in consultation with Ministry of Health and Family Welfare (MoHFW) and World Bank made necessary modifications in the two Questionnaires i.e., Household and Women's Questionnaires and added three more Questionnaires i.e., Husband's, Village and Health Questionnaires in the DLHS-RCH. These Questionnaires were discussed and finalized in the training programme cum workshop organized at IIPS during the first week of November 2001.

These modified questionnaires were canvassed in the Round II of the survey (DLHS–RCH) taking into consideration the views of all the regional agencies. The house listing teams, the interviewers and the supervisors for the main survey were given rigorous training based on the manuals developed for the purpose by the IIPS.

All the questionnaires were bilingual i.e., both in regional and English language.

The questionnaires briefly included the following information:

Household Questionnaire: The household questionnaire listed all the usual residents in the sample household including visitors who stayed in the household the night before the interview. For all the listed members in the household, the survey collected basic information such as age, sex, and marital status, relationship to the head of household, education and 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 the head of household and ownership of durable goods in the household. In addition, a test was conducted to assess whether the household used cooking salt fortified with iodine. Besides, details of marriages and deaths occurred to usual residents within reference period were collected. Efforts were also made to get information about maternal deaths occurred in the household.

Women's Questionnaire: Women's questionnaire was designed to collect information from currently married women age 15 – 44 years who were usual residents of the sample household or visitors who stayed in the sample household the night before the interview. It contained the following specific sections:

Section I: Background Characteristics: Information on age, educational status and birth and death history of biological children including still birth, induced and spontaneous abortions of respondents was collected in this section.

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

Section III: Immunization and childcare: Information about feeding practices, the length of breastfeeding, immunization coverage and recent occurrence of diarrhoea, and pneumonia among young children (below age 3 years) was collected in this section.

Section IV: Contraception: This section collected information on knowledge and use of specific family planning methods. Specifically, the questions included reasons for non-use and intentions of using family method in future, desire for additional child, sex preference of the next child etc.

Section V: Assessment of quality of Government health services and client satisfaction. This section focussed on the assessment of quality of family planning and health services provided by the Government health facilities. Information on respondents' views on the ratings of Government health facilities and about staff, and reasons for not visiting government health facilities were also collected in this section.

Section VI: Awareness about RTI/STI and HIV/AIDS: This section collected information from women on RTI/STI and HIV/AIDs. The questions canvassed knowledge, source of knowledge, awareness of mode of transmission, curability, symptoms and treatment seeking behaviour of RTI/STI. Similarly, questions about knowledge, source of knowledge, awareness of mode of transmission and prevention of HIV/AIDs etc were canvassed.

Husband Questionnaire: The husband questionnaire collected information from the husbands of eligible women about their age, educational status, knowledge and source of knowledge of RTI/STI and HIV/AIDS, reported symptoms of RTI/STI and male participation. Apart from this, information on desire for children, reasons for not using FP method, intention to use FP methods future and knowledge about no-scalpel vasectomy (NSV) were also collected.

Health Questionnaire: The health questionnaire collected information on the weight of children age 0–71 months and the blood samples of pregnant women, adolescents girls age 10–19 years and children age 0–71 months to assess their haemoglobin levels. This information is useful for assessing the nutrition levels prevailing in the population and prevalence of anaemia among women, adolescent girls and children.

Village Questionnaire: The village questionnaire collected information on the availability and accessibility of various facilities in the village, especially, on the accessibility of educational and health facilities.

1.5 Fieldwork and Sample Coverage

As mentioned earlier, the fieldwork for the Round II of DLHS-RCH was done in two phases. During the Phase I, 14 districts were covered from June 2002 to October 2002 and the remaining 13 districts were covered during the Phase II from May 2004 to September 2004.

A total of 28,167 households were covered in Round II of the survey. From the 28,167 households, 22,656 currently married women (aged 15-44 years) and 13,903 husbands of eligible women were interviewed.

1.6 Data processing

All the five types of completed questionnaires after the fieldwork in Karnataka state were brought to the headquarters of the regional agency i.e., PRC, Bangalore and the data were processed using microcomputers. The data processing consisted of office editing of the completed questionnaires, data entry, data cleaning and tabulation. Data cleaning procedure included validation, range and consistency checks. The IIPS developed the software package for both data entry and tabulation. The district as well as state level reports for Karnataka were prepared by the PRC, Bangalore while the country report was prepared by the IIPS.

1.7 Sample Weights

Sample weights for households, women, husbands and children have been used in generating state level demographic indicators. These weights for a particular district are based on three sections i.e., probabilities of f_1^i, f_2^i and f_3^i pertaining to i th PSU of the district. The probabilities are defined as follows:

f_1^i = Probability of selection of ith 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 households in the ith PSU of a district and $H = \sum Hi$ i.e., total number of households in a district.

f_2^i = Probability of selecting segment (s) from segmented PSU (in case the ith selected PSU is segmented)

= (Number of segments selected after segmentation of a PSU) / (Number of segments created in a PSU)

The value of f_2^i is equal to 1 for un-segmented PSU.

f_3^i = Probability of selecting a household from the total listed households in 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 the i^{th} PSU of a district.

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

The probability of selecting a household from a district is worked out as;

$$f^i = \left(f_1^i * f_2^i * f_3^i\right)$$

The non-normalized household weight for the i^{th} PSU of a district is:

$$w^i = \frac{1}{f^i}.$$

Te normalized weight used in the generation of district indicators is:

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

where n_i is the number of households interviewed in the i^{th} PSU. Similarly, the weight for women and husbands are computed after multiplication of expression of f^i by considering the corresponding response rates. State weights for households, women and husbands are further derived from the district weights i.e., n_i^d for the i^{th} psu in d^{th} district using external control so that 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 number of households in the sample and census of the state, then state level household weights are:

$$n_i^s = n_i^d * \frac{\left(n_i^d / n_s\right)}{\left(N_i^d / N_{sc}\right)}$$, where n_i^d household sample in i^{th} district, n_s is the total sample in the state, N_i^d is the census population in i^{th} district and N_{sc} is the census population in the state. These household weights are controlled for rural and urban areas separately.

The state level women and husband weights are obtained for the estimation of state level indicators by considering the sample and proportion of currently married women age 15-44 years and married males age above 15 years in the districts and by rural-urban residence.

1.8 Sample Implementation

Table 1.1 shows the period of fieldwork, number of households interviewed and household response rates in Karnataka. A total of 28,167 households were in the interviewed of which about two-thirds were rural. The overall household response rate in the state i.e., the number of households interviewed per 100 households was 99 percent. The household response rate in every district was above 97 percent.

Table 1.1 NUMBER OF HOUSEHOLDS INTERVIEWED

Month and year of fieldwork and number of households interviewed by district, Karnataka, 2002-04

State/District	Month and year of field work		Number of households interviewed			Response rate
	From	To	Total	Rural	Urban	
State	-	-	28,167	18,733	9,434	99.3
State-phase I	06/2002	10/2002	-	-	-	-
State-phase II	05/2004	09/2004	-	-	-	-
Bangalore	09/2002	10/2002	932	140	792	97.9
Bangalore Rural	09/2002	09/2002	1,050	744	306	99.8
Belgaum	06/2002	07/2002	1,036	725	311	99.2
Bidar	07/2002	08/2002	1,058	741	317	99.2
Chikmagalur	06/2002	06/2002	999	695	304	97.7
Gulbarga	08/2002	09/2002	1,045	793	252	99.6
Hassan	07/2002	08/2002	1,038	727	311	99.2
Kodagu	06/2002	07/2002	1,012	715	297	98.9
Kolar	08/2002	08/2002	1,068	752	316	99.8
Koppal	07/2002	08/2002	1,069	752	317	99.4
Mandya	07/2002	07/2002	1,065	748	317	99.7
Raichur	08/2002	09/2002	1,066	757	309	99.6
Tumkur	06/2002	07/2002	1,034	723	311	99.4
Uttara Kannada	06/2002	06/2002	1,000	700	300	97.5
Bagalkot	05/2004	05/2004	981	689	292	99.1
Bellary	06/2004	06/2004	1,074	698	376	99.5
Bijapur	05/2004	05/2004	922	642	280	99.0
Chamarajanagar	07/2004	09/2004	1,067	742	325	99.8
Chitradurga	07/2004	07/2004	1,093	771	322	99.5
Dakshina Kannada	09/2004	09/2004	1,061	670	391	98.5
Davanagere	06/2004	08/2004	1,044	734	310	99.1
Dharwad	06/2004	08/2004	1,078	491	587	99.7
Gadag	06/2004	06/2004	1,045	675	370	99.1
Haveri	06/2004	08/2004	1,075	751	324	100.0
Mysore	07/2004	09/2004	1,085	691	394	99.6
Shimoga	08/2004	09/2004	1,093	714	379	100.0
Udupi	09/2004	09/2004	1,077	753	324	99.4

Table based on unweighted cases.

From the interviewed households, 22,656 currently married women and 10,958 husbands of eligible women who were usual residents or stayed in the household night before the household interview were interviewed (Table 1.2). The number of interviews completed per 100 identified eligible women and husbands from the households interviewed were 86 and 58 percents in the state as a whole, respectively. In terms of variation in the women response rates by districts, it was highest in Dakshina Kannada with 95 percent and lowest in Bijapur with 74 percent. For husbands, the response rate was highest in Kolar district at 76 percent and lowest in Chitradurga district at 42 percent.

Table 1.2 NUMBER OF WOMEN AND HUSBANDS INTERVIEWED

Number of women and husbands interviewed by district, Karnataka, 2002-04

State/District	Number of women interviewed			Response rate	Number of husbands interviewed			Response rate
	Total	Rural	Urban		Total	Rural	Urban	
State	22,656	15,327	7,329	85.6	13,903	9,548	4,355	58.0
Bangalore	632	104	528	79.0	429	66	363	56.0
Bangalore Rural	761	523	238	84.2	632	439	193	74.6
Belgaum	892	641	251	84.0	595	412	183	63.9
Bidar	917	633	284	85.1	679	466	213	73.3
Chikmagalur	718	514	204	80.0	409	309	100	49.6
Gulbarga	848	645	203	84.8	663	500	163	75.2
Hassan	783	553	230	83.8	606	426	180	72.5
Kodagu	736	511	225	88.9	558	410	148	71.8
Kolar	876	615	261	86.9	711	515	196	76.3
Koppal	965	688	277	88.4	656	460	196	68.2
Mandya	844	588	256	81.2	681	483	198	70.8
Raichur	872	633	239	89.7	634	462	172	71.7
Tumkur	758	511	247	79.5	493	348	145	57.9
Uttara Kannada	790	574	216	86.0	511	380	131	62.5
Bagalkot	897	644	253	75.7	466	347	119	44.4
Bellary	985	663	322	85.5	456	316	140	44.5
Bijapur	745	508	237	73.8	393	282	111	44.8
Chamarajanagar	826	569	257	94.3	429	303	126	52.7
Chitradurga	908	641	267	85.4	419	299	120	42.1
Dakshina Kannada	787	493	294	95.3	355	231	124	45.9
Davanagere	1,012	721	291	86.6	445	324	121	42.4
Dharwad	877	420	457	86.7	475	237	238	51.4
Gadag	888	585	303	86.5	479	326	153	53.1
Haveri	849	593	256	85.8	460	320	140	50.3
Mysore	958	673	285	93.4	447	308	139	47.8
Shimoga	879	598	281	94.2	472	323	149	54.1
Udupi	653	486	167	90.2	350	256	94	54.8

* Based on unweighted cases.

1.9 Basic Demographic Profile of the State

Before presenting the survey results, it is important to provide the basic demographic features of Karnataka state and its districts (as per 2001 census). The state of Karnataka located in the southern part of India with 52 millions population in 2001 was the 9th and 8th largest state in terms of population size and geographical areas in the country, respectively. The state is bounded by Maharashtra and Goa states in the north and northwest; by the Arabian Sea in the west, Kerala and Tamilnadu states in the South and the state of Andhra Pradesh in the east. The state extends to about 750 km from north to south and about 400 km from east to west, and covers an area of about 1,91,791 sq.km.

Karnataka is characterized by eastern and western *ghats* which are the sources of many east and west flowing rivers. The important rivers that originate from these mountains are Krishna, Kaveri and their tributaries. The average annual rainfall for the state is about 1,139 mm, with nearly 70% occurring in monsoon between June and September. Karnataka has 27 districts grouped into four geographic regions as Northern *Maidan*, Central *Maidan*, Southern *Maidan*

and Coastal and *Malnad* districts. The state consisted of 175 sub-districts (blocks or *talukas*) and 29,406 villages in 2001. The urban areas of the state comprised of 270 towns. Bangalore with a population of over 4 millions is the capital of the state which is one of the fastest growing cities not only India, but, also in the world in recent times.

The population of Karnataka was 52.7 million as per the census in 2001, out of which 26.9 millions were males and 25.9 millions were females. The rural and urban breakup of the population shows that 66 percent of the population was enumerated in rural areas and 34 percent in urban areas. Keeping pace with the national average, Karnataka recorded a sharp decline in the decadal growth rate of its population from 21.1 percent in 1981-91 to 17.3 percent during 1991-2001. By districts, Bangalore with a population growth rate of 34.8 percent and Udupi with population growth rate of 6.9 during 1991-2001 had the highest and lowest decadal population growth rates for the state

The compostion of schedule castes and scheduled tribes in the population of the state were 16.2 percent and 6.6 percent in 2001, respectively. It may be noted that the state showed a subtle decrease in the composition of scheduled castes, but, scheduled tribes on other hand, recorded a significant increase in their population. In 2001, while Kolar district had the highest proportion of scheduled castes population (27 per cent), Raichur recorded the highest proportion of scheduled tribes population (18.1 per cent) for the state. And, Udupi had the lowest proportions of both scheduled castes (6 percent) and scheduled tribes population (1 percent). With a population density of 275 per sq. km., Karnataka ranked 20th among the states and union territories in India and this was much lower (i.e., 15 percent) than the population density of 325 persons per square km for the country as a whole. Expectedly, Bangalore district had the highest population density (2,979 persons per sq. km.). Kodagau and Uttara Kannada districts had the lowest population densities (133 and 133 persons per sq. km) in the state.

The sex ratio i.e., number of females per 1000 males in Karnataka improved from 960 in 1991 to 964 in 2001. Dakshina Kannada recorded the highest sex ratio (1023) and, not surprisingly, Bangalore district had the lowest sex ratio (909) in the state.

The literacy rate in the state improved from 56 percent in 1991 to 67 percent in 2001 and it was higher than the national average of 64.8 percent. The literacy rate in urban areas (81.1 percent) was significantly higher than in rural areas (59.7 percent) of the state. Bangalore had the highest literacy rate of around 84 percent among the districts of the state. And, Raichur district had the lowest literacy rate of about 50 percent. The male literacy rate for the state was 76 percent and the female literacy rate was about 58 percent. Both the rates have increased in 2001 from 1991.

Table 1.3 BASIC DEMOGRAPHIC INDICATORS

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	1027015	27.8	22.7	933	75.8	54.2	65.4
State	5273.4	34.0	17.3	964	76.3	57.5	67.0
Bagalkot	165.2	29.0	18.8	977	71.3	44.1	57.8
Bangalore	652.3	88.1	34.8	906	88.4	79.0	83.9
Bangalore Rural	187.7	21.7	12.2	953	74.4	55.1	65.0
Belgaum	420.7	24.1	17.4	959	75.9	52.5	64.4
Bellary	202.5	34.9	22.3	969	69.6	46.2	58.0
Bidar	150.1	22.9	19.6	948	73.3	50.0	62.0
Bijapur	180.8	21.9	17.6	948	68.1	46.2	57.5
Chamarajanagar	96.4	15.4	9.2	968	59.3	43.0	51.3
Chikmagalur	113.9	19.5	12.0	984	80.7	64.5	72.6
Chitradurga	151	18.2	15.1	955	74.7	54.6	64.9
Dakshina Kannada	189.6	38.4	14.5	1023	89.7	77.4	83.5
Davanagere	178.9	30.4	14.8	951	76.4	58.5	67.7
Dharwad	160.3	55.0	16.6	948	81.0	62.2	71.9
Gadag	97.2	35.2	13.1	968	79.6	52.6	66.3
Gulbarga	312.5	27.1	21.0	964	62.5	38.4	50.6
Hassan	172.1	17.7	9.7	1005	78.3	59.3	68.8
Haveri	143.8	20.8	13.3	942	77.9	57.6	68.1
Kodagu	54.5	13.8	11.6	996	83.8	72.5	78.2
Kolar	252.3	24.8	13.8	970	73.1	52.8	63.1
Koppal	119.3	16.6	24.6	982	69.2	40.8	55.0
Mandya	176.2	16.0	7.1	985	70.7	51.6	61.2
Mysore	262.5	36.9	15.0	965	71.3	55.8	63.7
Raichur	164.8	25.4	21.9	980	62.0	36.8	49.5
Shimoga	163.9	34.8	12.9	977	82.3	67.2	74.9
Tumkur	257.9	19.6	11.9	966	76.9	57.2	67.2
Udupi	110.9	18.6	6.9	1127	86.6	74.0	79.9
Uttara Kannada	135.3	28.7	10.9	970	84.5	68.5	76.6

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

CHAPTER II

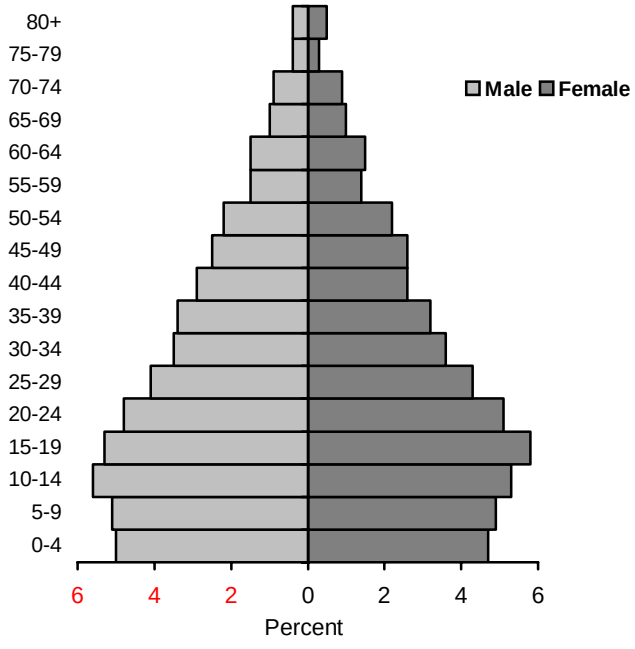
BACKGROUND CHARACTERISTICS OF HOUSEHOLDS

This chapter provides a socio-economic and demographic profile of the interviewed households in the survey. Also, the data on facilities and services such as Health, Education and Communication available in the sampled village are also presented. The *de facto* enumeration of persons is adopted in order to include every individual staying in the sampled PSU the night before the survey whether it is a village or an urban area. 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 household population classified by residence is presented in Table 2.1. The percent distribution is based on *de facto* population of 1.42,925 persons of whom 67 percent lived in the rural areas of the state. The state of Karnataka portrays young and growing population with about 31 percent below the age of 15 years (Figure 2.1). The composition of children below 15 years in the state is slightly higher in rural areas (around 32 percent) in comparison to those in urban areas (28 percent). The overall sex ratio was 101 males per 100 females and it is similar in rural and urban areas.

Figure 2.1
Age-sex pyramid



Karnataka, DLHS-RCH, 2002-04

Table 2.1 HOUSEHOLD POPULATION BY AGE AND SEX

Percent distribution of the household population by age and by residence and sex, Karnataka, 2002-04

	Total			Rural			Urban		
Age	Total	Male	Female	Total	Male	Female	Total	Male	Female
Below 1	1.9	1.9	1.8	1.9	2.0	1.9	1.7	1.8	1.7
1 to 4	7.8	8.0	7.7	8.1	8.2	8.0	7.4	7.8	7.0
5 to 9	10.0	10.2	9.8	10.3	10.6	10.0	9.3	9.3	9.3
10-14	10.9	11.2	10.6	11.3	11.8	10.9	10.0	10.0	10.1
15-19	11.1	10.7	11.6	11.2	10.7	11.7	11.1	10.7	11.5
20-24	9.9	9.5	10.2	9.6	9.3	9.8	10.5	10.1	10.9
25-29	8.4	8.2	8.6	8.0	7.9	8.2	9.3	8.9	9.6
30-34	7.0	6.9	7.1	6.6	6.4	6.8	7.9	8.0	7.9
35-39	6.6	6.8	6.5	6.5	6.7	6.4	6.9	7.0	6.8
40-44	5.5	5.9	5.2	5.3	5.6	5.1	5.9	6.3	5.4
45-49	5.1	5.1	5.1	5.1	5.0	5.2	5.1	5.1	5.1
50-54	4.4	4.4	4.4	4.4	4.4	4.5	4.4	4.5	4.4
55-59	2.9	3.0	2.7	2.8	2.9	2.7	3.0	3.1	2.9
60-64	3.1	3.0	3.1	3.3	3.2	3.4	2.6	2.8	2.5
65-69	2.0	1.9	2.0	2.1	2.1	2.1	1.8	1.7	1.8
70-74	1.7	1.7	1.8	1.9	1.9	1.8	1.5	1.4	1.7
75-79	0.7	0.8	0.7	0.7	0.7	0.7	0.7	0.8	0.6
80+	0.9	0.8	0.9	0.9	0.9	0.9	0.8	0.6	0.9
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of persons	1,42,922	71,703	71,220	96,394	48,363	48,031	46,528	23,339	23,189
Sex ratio[1]	101	NA	NA	101	NA	NA	101	NA	NA

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 applicable

[1] Male per 100 females

2.2 Household Characteristics

The percent distribution of households by selected characteristics of the head of the household and the number of usual household members i.e., based on *de jure* population for the state are given in Table 2.2. More than 85 percent of the household heads were males irrespective of the place of residence while only 14 of the household heads were females. A little more than 70 percent of the household heads belonged to 30-59 years age group. The median age of household heads was around 47 years for the state as a whole, which were 47 and 46 years in rural and urban areas, respectively. About 7 percent among the household heads in the state were younger than 30 years and 22 percent were 60 years or older. A majority of the household heads belonged Hindu (85 percent), 12 percent to Muslim and 3 percent to other religions. Hindus constituted a higher proportion of rural population (91 percent) than urban population (74 percent). While only about 8 percent of the households in rural areas belonged Muslim, 21 percent of the households belonged to Muslim in urban areas.

Table 2.2 HOUSEHOLD CHARACTERISTICS

Percent distribution of the household head by selected characteristics of the household head and household size, according to residence, Karnataka, 2002-04

Characteristic	Total	Residence	
		Rural	Urban
Sex of the household head			
Male	86.2	85.8	87.1
Female	13.8	14.2	12.9
Age of the household head			
< 30	6.9	6.9	6.8
30-44	37.0	35.8	39.5
45-59	34.0	33.9	34.2
60+	22.1	23.5	19.5
Median age of the household head	46.8	47.3	46.1
Religion of the household head			
Hindu	85.0	90.8	73.5
Muslim	11.9	7.6	20.5
Christian	2.2	1.1	4.4
Sikh	0.0	0.0	0.1
Buddhist	0.0	0.0	0.0
Jain	0.8	0.4	1.5
Zoroastrian	0.0	0.0	0.0
No Religion	0.0	0.0	0.0
Other	0.0	0.1	0.0
Missing	0.0	0.0	0.0
Caste/tribe of the household head			
Scheduled caste	18.0	20.3	13.5
Scheduled tribe	7.7	9.2	4.7
Other backward class	48.4	51.1	43.2
Other #	25.2	19.0	37.5
Don't know	0.7	0.4	1.2
Missing	0.0	0.0	0.0
Number of usual members			
1	2.9	3.1	2.3
2	7.6	7.2	8.3
3	12.4	11.2	14.8
4	22.1	21.2	23.8
5	19.7	19.8	19.6
6	13.7	14.3	12.5
7	7.8	8.4	6.7
8	4.7	4.9	4.1
9+	9.1	9.7	7.9
Mean household size	5.0	5.1	4.8
Total percent	100.0	100.0	100.0
Number of households	28,167	18,733	9,434

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)

Eighteen percent of the households in Karnataka belonged to scheduled castes, about 8 percent to scheduled tribes and 48 percent to other backward classes while 25 percent of the

households belonged to other castes. Over one-fourth of the households belonged to scheduled castes or tribes in rural areas, which was a little less than one-fifth of the households in urban areas. The overall average household size of the state was 5 persons. The average household size in rural and urban areas were 5.1 and 4.8, respectively.

2.3 Educational Level

The educational background of household members is presented in Table 2.3 based on *de jure* household population. The levels of literacy and years of schooling according to age, sex and residence are given in the Table. The data indicate that about 34 percent of the population aged seven and above was illiterate. The proportion of illiterates was 42 percent for females as compared to 25 percent for males. The proportion of illiterates was much higher among the older cohorts than among the younger ones. This trend was true irrespective of males and females, the level of literacy being higher in the younger age groups than in the older age groups including the youngest age group of 7-9 years (Figure 2.2).

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, Karnataka, 2002-04

	Year of schooling								
Age	Illiterate	Literate but no schooling	1-5	6-8	9-10	11 or more	Missing	Total Percent	Number of persons
					TOTAL				
					Male				
7-9	9.3	0.5	85.7	0.6	0.0	0.0	4.0	100.0	4,315
10-14	9.6	0.1	40.1	45.4	4.4	0.0	0.5	100.0	8,243
15-19	13.3	0.2	8.5	19.9	37.6	20.7	0.0	100.0	7,968
20-29	18.5	0.2	9.5	14.4	26.1	31.3	0.0	100.0	13,375
30-39	29.9	0.3	12.3	13.1	19.8	24.6	0.0	100.0	10,285
40-49	35.7	0.2	15.6	13.4	17.8	17.3	0.0	100.0	8,132
50+	44.4	0.4	17.9	13.1	12.5	11.7	0.0	100.0	11,492
Total	24.8	0.2	21.2	17.6	18.4	17.4	0.3	100.0	63810
					Female				
7-9	11.0	0.1	83.2	0.5	0.0	0.0	5.2	100.0	4,209
10-14	13.3	0.1	36.6	44.3	5.5	0.0	0.3	100.0	7,880
15-19	21.1	0.2	8.7	19.6	32.9	17.5	0.0	100.0	8,310
20-29	36.3	0.2	9.6	14.3	20.6	19.0	0.0	100.0	13,693
30-39	53.1	0.3	10.9	12.3	12.3	11.0	0.0	100.0	9,923
40-49	59.8	0.3	11.8	10.9	11.0	6.1	0.0	100.0	7,490
50+	76.7	0.4	9.6	6.6	4.2	2.5	0.0	100.0	11,194
Total	42.4	0.2	18.3	15.8	13.6	9.4	0.4	100.0	62,698
					Total				
7-9	10.1	0.3	84.5	0.5	0.0	0.0	4.6	100.0	8,524
10-14	11.4	0.1	38.4	44.9	4.9	0.0	0.4	100.0	16,124
15-19	17.3	0.2	8.6	19.7	35.2	19.1	0.0	100.0	16,278
20-29	27.5	0.2	9.5	14.4	23.3	25.1	0.0	100.0	27,068
30-39	41.3	0.3	11.6	12.7	16.1	17.9	0.0	100.0	20,207
40-49	47.3	0.2	13.8	12.2	14.6	12.0	0.0	100.0	15,622
50+	60.3	0.4	13.8	9.9	8.4	7.2	0.0	100.0	22,686
Total	33.5	0.2	19.8	16.7	16.0	13.4	0.4	100.0	1,26,508

Note: The table is based on *de jure* population

Contd.

Figure 2.2
Percentage Literate by Age and Sex

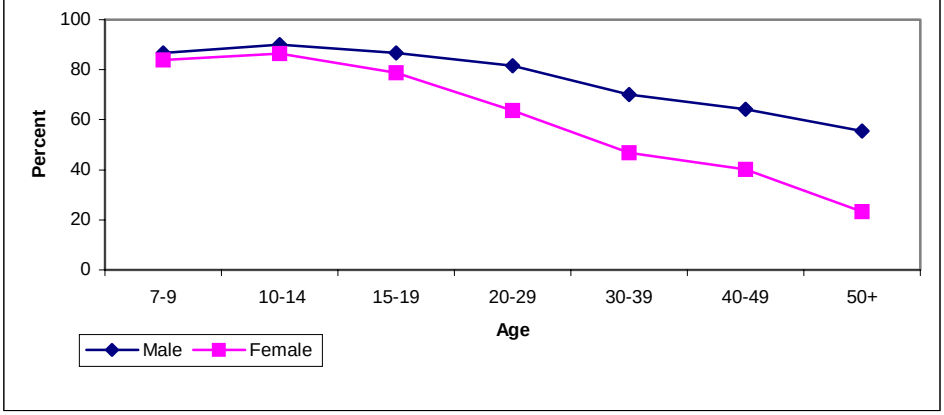


Table 2.3 EDUCATIONAL LEVEL OF THE HOUSEHOLD POPULATION

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

Age	Years of schooling: Illiterate	Literate but no schooling	1-5	6-8	9-10	11 or more	Missing	Total Percent	Number of persons
					RURAL Male				
7-9	10.6	0.5	84.5	0.4	0.0	0.0	4.0	100.0	3,057
10-14	11.0	0.1	40.3	44.6	3.5	0.0	0.5	100.0	5,852
15-19	15.5	0.1	9.7	21.4	35.8	17.5	0.0	100.0	5,443
20-29	22.7	0.1	11.1	15.2	24.8	26.1	0.0	100.0	8,850
30-39	38.9	0.2	14.6	12.9	17.0	16.4	0.0	100.0	6,647
40-49	45.3	0.2	18.0	13.8	14.3	8.4	0.0	100.0	5,349
50+	53.3	0.5	20.4	13.0	8.2	4.7	0.0	100.0	7,905
Total	30.2	0.2	23.2	18.0	16.0	12.0	0.4	100.0	43,104
					Female				
7-9	13.2	0.1	80.5	0.3	0.0	0.0	5.9	100.0	2,923
10-14	17.0	0.1	37.9	40.5	4.3	0.0	0.1	100.0	5,500
15-19	27.3	0.2	10.2	20.9	30.2	11.2	0.0	100.0	5,657
20-29	47.1	0.2	10.9	14.7	17.1	10.1	0.0	100.0	8,897
30-39	66.5	0.4	11.8	10.0	8.0	3.3	0.0	100.0	6,478
40-49	72.0	0.2	11.9	9.1	5.2	1.5	0.0	100.0	5,008
50+	86.4	0.4	7.8	3.9	1.1	0.4	0.0	100.0	7,779
Total	51.4	0.3	18.8	14.5	10.3	4.4	0.4	100.0	42,242
					Total				
7-9	11.9	0.3	82.5	0.4	0.0	0.0	4.9	100.0	5,979
10-14	13.9	0.1	39.1	42.6	3.9	0.0	0.3	100.0	11,353
15-19	21.5	0.2	9.9	21.1	32.9	14.3	0.0	100.0	11,101
20-29	34.9	0.2	11.0	14.9	20.9	18.1	0.0	100.0	17,746
30-39	52.5	0.3	13.2	11.5	12.6	9.9	0.0	100.0	13,126
40-49	58.2	0.2	15.1	11.5	9.9	5.1	0.0	100.0	10,357
50+	69.7	0.4	14.2	8.5	4.7	2.6	0.0	100.0	15,684
Total	40.7	0.3	21.0	16.3	13.2	8.2	0.4	100.0	85,346

Contd.

Around 86 percent of males and 83 percent of females in the age group 7-9 years had 1-5 years of schooling. Over all, 21 percent of males had schooling of 1-5 years. Females were also not far behind in comparison to their male counterparts with corresponding figure of 18 percent among them. Comparatively, a lower proportion of females were having 9-10 years (10 percent), and 11 or more years of schooling (8 percent) than males with corresponding figures of 13 percent and 15 percent for them, respectively. A meagre less than 1 percent of the surveyed population as well as less than 1 percent of both males and females were 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, Karnataka, 2002-04

	Years of schooling								
Age	Illiterate	Literate but no schooling	1-5	6-8	9-10	11 or more	Missing	Total Percent	Number of persons
					URBAN				
					Male				
7-9	6.0	0.4	88.6	0.8	0.0	0.0	4.1	100.0	1,258
10-14	6.0	0.1	39.6	47.4	6.5	0.0	0.4	100.0	2,391
15-19	8.5	0.2	5.9	16.5	41.4	27.5	0.0	100.0	2,525
20-29	10.3	0.2	6.5	13.0	28.8	41.2	0.0	100.0	4,525
30-39	13.6	0.4	8.1	13.4	24.8	39.8	0.0	100.0	3,637
40-49	17.3	0.1	11.0	12.5	24.6	34.5	0.0	100.0	2,783
50+	24.8	0.2	12.4	13.4	21.9	27.3	0.0	100.0	3,587
Total	13.4	0.2	17.1	16.7	23.5	28.7	0.3	100.0	20,706
					Female				
7-9	5.8	0.2	89.5	0.9	0.0	0.0	3.6	100.0	1,286
10-14	4.6	0.1	33.5	53.1	8.1	0.0	0.6	100.0	2,380
15-19	7.8	0.2	5.6	16.9	38.6	31.0	0.0	100.0	2,653
20-29	16.3	0.1	7.2	13.7	27.2	35.6	0.0	100.0	4,796
30-39	28.0	0.2	9.3	16.7	20.5	25.4	0.0	100.0	3,445
40-49	35.2	0.5	11.5	14.5	22.7	15.5	0.0	100.0	2,481
50+	54.7	0.3	13.5	12.8	11.4	7.4	0.0	100.0	3,415
Total	23.8	0.2	17.1	18.4	20.4	19.7	0.3	100.0	20,456
					Total				
7-9	5.9	0.3	89.0	0.9	0.0	0.0	3.9	100.0	2,544
10-14	5.3	0.1	36.6	50.3	7.3	0.0	0.5	100.0	4,771
15-19	8.2	0.2	5.7	16.7	39.9	29.3	0.0	100.0	5,177
20-29	13.4	0.1	6.9	13.4	27.9	38.3	0.0	100.0	9,321
30-39	20.6	0.3	8.7	15.0	22.7	32.8	0.0	100.0	7,082
40-49	25.7	0.3	11.3	13.5	23.7	25.5	0.0	100.0	5,264
50+	39.4	0.2	12.9	13.1	16.8	17.6	0.0	100.0	7,002
Total	18.6	0.2	17.1	17.5	22.0	24.3	0.3	100.0	41,162

An examination of literacy levels by place of residence reveals differences in the urban-rural divide in the educational attainment. In urban areas, while only about 19 percent of the population was illiterate in comparison to 41 percent in the rural areas. The proportion of illiterate females living in rural areas of Karnataka was as high as 51 percent against 30 percent illiterates among rural males. The proportions of illiterates in urban areas were 24 percent and 14 percent for females and males, respectively. A contrasting feature of rural-urban difference in educational levels is that in rural areas while the proportion of those who had 1-5 years schooling (21 percent) was higher than 11 or more years schooling (8 percent), in urban areas a higher proportion had 11 or more years schooling (24 percent) than 1-5 years schooling (17 percent).

2.4 Marital Status of the Household Population

The DLHS, collected information on the marital status of all household members who were aged 10 years and above. Table 2.4 provides the percentage marital status distribution of *de facto* population by age and sex. Thirty percent of females in the age group 15-19 years, followed by 71 percent in the age group 20-24 years and, 87 percent in the age groups 25-29 years and 30-44 years were currently married. The proportion of never married as a whole was about 35 percent in the state, and it was higher for males (42 percent) than for females (27 percent). The proportion of never married among males declined with increasing age and was negligible in the age group 45-59 years and above. A similar pattern is observed in the case of females, as only a negligible proportion of them were never married in the age group 30-34 years and above. The proportion of divorced, separated and widowed were meagre 9 percent and mostly observed in the older ages. Around 70 percent of women aged 60 years and above were widowed, divorced or separated. Overall, the proportion of currently married (for those aged 10 years and above) was 55 percent among males against 57 percent for females.

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, Karnataka, 2002-04

	Marital status					
Age	Never married	Currently married	Married, g*aunna* not performed	Widowed/ divorced/ Separated	Total Percent	Number of persons
			Male			
10-14	97.4	2.3	0.3	0.0	100.0	8,016
15-19	97.4	1.9	0.6	0.1	100.0	7,644
20-24	79.2	19.4	1.0	0.3	100.0	6,838
25-29	39.9	58.5	0.7	0.9	100.0	5,904
30-44	5.1	93.2	0.2	1.4	100.0	14,021
45-59	0.8	95.6	0.1	3.5	100.0	8,916
60+	0.5	84.8	0.1	14.5	100.0	5,930
Total	41.7	55.4	0.4	2.6	100.0	57,269
			Female			
10-14	96.5	2.1	1.1	0.2	100.0	7,584
15-19	68.6	30.0	0.8	0.7	100.0	8,276
20-24	26.4	70.8	0.6	2.3	100.0	7,252
25-29	8.1	86.9	0.2	4.8	100.0	6,146
30-44	1.7	86.9	0.2	11.3	100.0	13,406
45-59	0.9	71.5	0.3	27.4	100.0	8,772
60+	1.2	28.6	0.5	69.7	100.0	6,038
Total	27.4	57.0	0.5	15.1	100.0	57,474
			Total			
10-14	97.0	2.2	0.7	0.1	100.0	15,600
15-19	82.4	16.5	0.7	0.4	100.0	15,920
20-24	52.0	45.8	0.8	1.4	100.0	14,090
25-29	23.7	73.0	0.4	2.9	100.0	12,050
30-44	3.4	90.1	0.2	6.3	100.0	27,426
45-59	0.9	83.6	0.2	15.4	100.0	17,688
60+	0.9	56.5	0.3	42.4	100.0	11,968
Total	34.5	56.2	0.4	8.8	100.0	1,14,743

Note: Table is based on *de facto* population

2.5 Marriage

Marriage in the household is an important event that reflects the socio-cultural practices of a community. This section outlines the marriages that took place in the sample households during the three years period prior to the survey. The mean age at marriage by sex, and percentage of marriages below legal age at marriage of 21 years for boys and 18 years for girls by residence and districts are given in Table 2.5. The mean age at marriage for boys and girls in urban areas of Karnataka were 26 years and 20.6 years, respectively. The corresponding figures in rural areas were 24.7 years and 18.5 years.

Table 2.5 MARRIAGE
Mean age at marriage and percentage of marriages below legal at marriage by sex and by districts, Karnataka, 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	25.1	19.1	13.8	31.4
State – Rural	24.7	18.5	15.9	37.1
State – Urban	26.0	20.6	8.4	17.3
District				
Bagalkot	23.4	17.4	27.7	48.3
Bangalore	25.8	20.5	5.3	12.4
Bangalore Rural	24.8	18.7	9.0	28.4
Belgaum	24.3	18.0	18.7	46.0
Bellary	24.1	18.8	23.9	35.2
Bidar	24.5	18.0	12.3	44.9
Bijapur	24.5	18.0	21.3	50.1
Chamarajanagar	26.4	18.8	8.0	34.3
Chikmagalur	26.7	21.9	2.7	6.8
Chitradurga	26.1	19.3	11.5	26.6
Dakshina Kannada	27.9	21.5	1.0	5.5
Davanagere	25.6	19.9	10.1	18.1
Dharwad	26.3	19.4	5.5	32.4
Gadag	25.0	18.4	13.1	44.8
Gulbarga	24.0	17.7	21.6	48.9
Hassan	25.3	19.9	12.7	18.5
Haveri	25.9	19.1	6.7	30.2
Kodagu	26.4	21.0	8.3	2.2
Kolar	24.6	19.4	16.7	26.3
Koppal	23.7	17.4	25.3	51.4
Mandya	25.4	19.0	6.9	29.9
Mysore	26.0	19.3	5.3	25.2
Raichur	22.5	17.2	35.6	59.4
Shimoga	25.8	20.5	4.2	8.9
Tumkur	25.6	19.3	7.8	25.7
Udupi	28.5	23.3	3.2	1.1
Uttara Kannada	27.5	22.2	3.0	7.8

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.

On the whole, both boys and girls in Karnataka seemed to fulfil the minimum legal marriage age prescribed for them, the average age at marriage being 25.1 years for boys and 19.1 years for girls. However, about 14 percent of boys and 31 percent among girls got married below the corresponding legal age at marriage specified for them. This proportion was much higher in rural areas than in urban areas of the state. Regarding district level variations, the highest mean age at marriage was 28.5 years for boys and 23.3 years for girls in Udupi district. The lowest mean age at marriage for boys and girls was 22.5 years and 17.2 years respectively in Raichur district.

It is also observed that the proportion of girls who got married below the prescribed minim legal age at marriage was highest (59 percent) in Raichur district and lowest (1 percent) in Udupi district. More than 40 percent of the girls got married before the minimum legal age at marriage in 8 districts of the 27 districts in the state (see Map-1). Among boys, the proportion of marriages below the minimum legal age at marriage was highest (36 percent) in Raichur district and lowest (1 percent) in Dakshina Kannada district.

2.6 Morbidity Rates

The DLHS-RCH collected information on the morbidity status of *de jure* members of the household with respect to blindness, tuberculosis and malaria. The data on prevalence rates of blindness, tuberculosis and malaria for the state are given in Table 2.6.

Partial, Complete and Night Blindness

The overall prevalence of partial blindness in the state was 3,896 cases per 100,000 population and was higher in rural areas (4048 cases per 100,000) than in urban areas (3,575 cases per 100,000). It was comparatively higher among females than males. The prevalence of complete blindness was 359 cases per 100,000 population with 396 cases and 282 cases per 100,000 population in rural and urban areas, respectively. The difference in the prevalence of complete blindness between males and females was only meagre. The prevalence of night blindness due to vitamin-A deficiency was 189 per 100,000 population, and was much higher in rural areas (250 cases) than in urban areas (61 cases).

Tuberculosis

The prevalence of tuberculosis was 200 cases per 100,000 population in the state, with rural areas having a higher prevalence of 224 cases as compared to 148 cases per 100,000 population in urban areas. And, the prevalence was higher among males (221 cases) than for females (175 cases).

Malaria

The respondents were asked to state whether any member of their household suffered from malaria (characterized by recurrent fever with shivering) during the two weeks prior to the survey. Overall, 298 persons were reported to have suffered from malaria for every 100,000 population in Karnataka. The residents in rural areas had much higher prevalence of malaria (334

cases) than the urban residents (210 cases). And, a higher percentage of males than females had suffered from malaria.

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Table 2.6 MORBIDITY RATES

Prevalence of blindness, tuberculosis, and malaria, according to place of residence, Karnataka, 2002-04.

Morbidity	Total	Residence	
		Rural	Urban
Prevalence rate of blindness			
Male			
Partial	3518	3606	3331
Complete	336	360	285
Night blindness	167	219	54
Female			
Partial	4284	4502	3826
Complete	383	433	279
Night blindness	210	280	64
Persons			
Partial	3896	4048	3575
Complete	359	396	282
Night blindness	189	250	61
Prevalence rate of tuberculosis			
Male	221	229	205
Female	178	218	90
Person	200	224	148
Prevalence rate of malaria[1]			
Male	347	376	286
Female	247	291	158
Person	298	334	210

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

2.7 Morbidity Rates by Districts

Table 2.7 gives morbidity rates by districts of Karnataka for prevalence of blindness, tuberculosis and malaria. The prevalence of partial blindness varied considerably among the districts, the lowest being 350 cases per 100,000 population in Raichur and the highest was 9,881 cases per 100,000 population in Bidar. Apart from Raichur, prevalence of partial blindness below 1,000 cases per 100,000 population was reported in Bangalore. The prevalence of complete blindness varied from none in Bangalore district to 1,4151 cases per 100,000 population in Davanagere district.

The data did reveal substantial inter-district variations in the prevalence rates of tuberculosis and malaria. The prevalence of tuberculosis was highest (537 per 100,000 population) in Uttara Kannada district and lowest in Udupi (44 per 100,000). For malaria, the

prevalence was highest in Hassan (1,347 cases per 100,000 population) and lowest in Dakshina Kannada (49 cases per 100,000 population).

Table 2.7 MORBIDITY RATES BY DISTRICTS

Prevalence of blindness, tuberculosis, and malaria, by districts, Karnataka, 2002-04

District	Prevalence[1] of morbidity			
	Partial blindness	Complete blindness	Tuberculosis	Malaria[2]
Bagalkot	5,067	350	230	187
Bangalore	463	0	113	197
Bangalore Rural	1,338	56	272	239
Belgaum	3,142	636	310	347
Bellary	5,160	327	158	185
Bidar	9,881	320	57	173
Bijapur	5,379	549	143	193
Chamarajanagar	4,053	169	178	155
Chikmagalur	2,305	262	438	473
Chitradurga	6,080	129	188	150
Dakshina Kannada	5,506	256	98	49
Davanagere	2,502	1,415	197	436
Dharwad	5,051	63	88	76
Gadag	6,340	644	94	78
Gulbarga	4,114	390	141	375
Hassan	5,002	59	518	1,347
Haveri	9,762	392	156	178
Kodagu	3,399	223	289	246
Kolar	3,331	247	250	277
Koppal	3,254	223	235	449
Mandya	3,682	990	294	608
Mysore	6,636	269	91	51
Raichur	350	16	276	470
Shimoga	5,238	863	115	72
Tumkur	1,152	206	144	371
Udupi	3,996	954	44	191
Uttara Kannada	2,842	260	537	780
Karnataka	3,896	359	200	298

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

2.8 Housing Characteristics

This section describes the availability of basic housing amenities in the state. Table 2.8 presents the percent distribution of households by selected housing characteristics. A very high eighty seven percent of the households in Karnataka had electricity connection. Expectedly, the proportion of households with electric connection was significantly higher in urban areas (95 percent) as compared to rural areas (83 percent).

As regards source of drinking water, while 68 percent (a little more than two-third) of the households were getting tap water, 20 percent (one-fifth) and 10 percent of the households respectively were getting hand pumped/bore-well and well water. Furthermore, 87 percent of the households in urban areas were receiving tap water for drinking as against 58 percent of the households in rural areas having such facility.

With respect sanitation facilities, while 17 percent of the households each were using flush toilets and based toilets or latrines, 4 percent were using shared toilets, 60 percent of the households did not have any toilet facility at all. The data substantiate the wide rural-urban difference in toilet facilities; 81 percent of the households in rural areas had no toilet facility against only 20 percent in urban areas.

The data on type of fuel used in the households for cooking suggest that a majority i.e., 66 of the households depended on firewood in Karnataka. Around 26 percent and 7 percent of the households were using liquid (petroleum) gas or electricity and kerosene, respectively. In urban areas, the use of liquid (petroleum) gas or electricity for cooking was obviously higher (60 percent), and, in rural areas, the use of firewood was higher (87 percent).

There was considerable variation in the quality of housing. Therefore, on the basis of materials used for floor, walls and roof for house construction the households were categorised into *kachcha*, semi-*pucca* and *pucca*. About two-thirds, a little more than one-fifth (21 percent) and a little more than one-tenth of the households in the state were living in semi *pucca, pucca* and *kachcha* houses, respectively. In urban areas, about 47 percent of the households were living in *pucca* houses as compared to 13 percent of the households in rural areas.

The possession of consumer goods is an indication of socio-economic status of a household. The data indicate that 46, 45, 40 and 31 percent of the households in the state owned television, fan radio or transistor and bicycle, respectively. Somewhat considerably, the other durables possessed by the households were telephone (19 percent), motorcycle or scooter (18 percent) and sewing machine (13 percent). Only 3 and 1 percent of households owned a car or jeep and a tractor, respectively. Excepting for tractor, ownership of most of the consumer durable items was much higher among urban households than among rural households.

A composite measure *viz.,* standard of living index (SLI) was derived for classifying the households by considering the household amenities such as source of drinking water, type of house, source of lighting, fuel used for cooking, toilet facility available and ownership of durable goods. The standard of living index was calculated by adding the scores mentioned below.

Table 2.8 HOUSING CHARACTERISTICS

Percent distribution of the household by housing characteristics and percentage of households owing selected durable goods, according to residence, Karnataka, 2002-04

Housing characteristic	Total	Residence	
		Rural	Urban
Electricity			
Yes	87.0	83.1	94.7
No	13.0	16.9	5.3
Source of drinking water			
Tap inside	23.4	10.7	48.6
Tap shared public	44.4	47.3	38.6
Hand pump/ bore well	20.1	26.6	7.1
Well covered	3.0	3.3	2.4
Well uncovered	6.9	9.0	2.8
River	0.6	0.9	0.1
Pond	0.8	1.2	0.2
Spring	0.4	0.6	0.0
Other	0.4	0.6	0.1
Sanitation facility			
Own flush toilet	17.0	6.7	37.4
Own pit toilet / latrine	17.3	10.7	30.4
Shared toilet of any type	4.0	1.1	9.5
Public / community toilet	1.3	0.6	2.7
No toilet facility	60.5	80.8	20.0
Main type of fuel used for cooking			
Liquid petroleum gas/ electricity	25.7	8.6	59.8
Kerosene	7.4	3.8	14.7
Wood	66.4	87.1	25.3
Other	0.5	0.6	0.2
Type of house			
Kachcha	12.8	15.9	6.7
Semi - *pucca*	65.7	75.3	46.6
Pucca	21.5	8.9	46.7
Household assets			
Fan	45.0	27.7	79.4
Radio/transistor	40.3	32.5	55.8
Sewing machine	13.1	7.7	23.9
Television	46.2	31.1	76.1
Telephone	19.3	10.0	37.9
Bicycle	30.8	29.4	33.7
Motor cycle/ scooter	17.5	9.3	33.7
Car / Jeep	3.2	1.1	7.3
Tractor	1.4	1.7	0.8
Standard of living index			
Low	44.6	60.8	12.5
Medium	33.1	31.2	37.0
High	22.2	8.0	50.5
Number of households	28,167	18,733	9,434

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 might vary from the lowest of 0 to maximum of 40. On the basis of total score households were defined into three categories as;

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

As per the standard of living index measured above, nearly 45 percent of the households belonged to the low standard of living category, 33 percent to the medium standard of living and 22 percent to the high standard of living in Karnataka as a whole.

The proportion of households with medium (and high standard of living were much higher in urban areas (37 and 51 percents) than in rural areas (31 and 8 percents). And, the proportion of households with a low standard of living was significantly higher in rural areas (60 percent) than in urban areas (13 percent) of the state.

2.9 Housing Characteristics by Districts

The development of basic amenities with respect to housing and possession of consumer durables was not uniform in the 27 districts of Karnataka. Table 2.9 presents inter-district comparison of housing characteristics in the state. The proportion of households with electricity connection was above 80 percent in all the districts except four districts *viz.*, Kodagu (69 percent), Raichur (77 percent) Gulbarga (78 percent) and Koppal (79 percent). The households with electricity connection were highest in Bangalore district at 97 percent. Ninety or more percentage of households were getting piped or hand pumped water for drinking in all the districts except Belgaum (86 percent) and, coastal and the districts of malnad region *viz.*, Uttara Kannada (45 percent), Udupi (62 percent), Dakshina Kannada (73 percent), Shimoga (78 percent) and Chikamagalur (86 percent).

Most of the districts in Karnataka were poorly developed with respect to toilet facilities, because, in 22 out of 27 districts in the state toilet facilities were available to less than 50 percent of the households and, it was lowest in Bagalkot (13 percent) and Riachur districts (18 percent).

In Bangalore district the percentage of households using liquid petroleum gas or electricity for cooking was 68 percent and in rest of the districts, it was significantly lower ranging between 11 to 46 percent. The proportion of households living in *pucca* houses was certainly low in Karnataka except in Bangalore district which had 58 percent *pucca* houses. In 19 out of 27 districts in the state, one-fifth or less proportion of the households lived in *pucca* houses. And, in Haveri (8 percent), Chamarajanagar (9 percent) and Hassan (9 percent) districts the proportion of *pucca* houses was below 10 percent.

Table 2.9 HOUSING CHARACTERISTICS BY DISTRICT

Selected housing characteristics by district, Karnataka, 2002-04

Districts	Percentage of households: With electricity	With drinking water[1]	With toilet facility	Using Liquid petroleum gas/ electricity	Living in *pucca* house
Bagalkot	87.1	95.3	12.8	15.0	14.9
Bangalore	96.7	99.1	92.0	67.9	57.6
Bangalore Rural	90.8	99.2	37.2	17.6	19.5
Belgaum	88.3	86.0	30.1	25.0	12.9
Bellary	87.4	96.4	27.5	21.1	18.2
Bidar	85.7	93.4	25.9	13.7	13.8
Bijapur	81.7	89.8	23.2	23.7	19.1
Chamarajanagar	83.1	95.4	26.7	17.5	9.0
Chikmagalur	83.1	86.4	53.5	28.1	21.2
Chitradurga	87.3	97.3	28.0	16.5	12.0
Dakshina Kannada	89.9	73.0	74.9	45.9	28.3
Davanagere	91.4	99.7	41.5	28.3	28.4
Dharwad	91.2	94.2	42.2	28.2	16.6
Gadag	88.8	90.6	20.4	13.3	13.0
Gulbarga	78.1	90.2	24.2	13.1	13.6
Hassan	84.6	94.6	35.4	19.3	9.4
Haveri	86.4	99.0	32.7	12.0	7.9
Kodagu	68.7	67.2	71.5	30.5	15.5
Kolar	91.0	97.2	34.7	18.2	41.4
Koppal	78.6	91.9	21.8	14.7	19.0
Mandya	90.8	97.8	37.0	16.4	13.3
Mysore	88.4	98.4	41.4	30.3	20.7
Raichur	76.8	85.3	18.2	11.3	13.9
Shimoga	86.7	77.7	44.3	29.5	11.7
Tumkur	86.3	98.2	32.1	15.8	20.2
Udupi	87.5	61.7	70.9	45.4	25.1
Uttara Kannada	87.8	45.3	44.5	27.3	11.5
Karnataka	87.0	90.9	39.5	25.7	21.5

[1] 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 recommended iodine content of edible salt is 30 parts per million (PPM) at the manufacturing level.

In the DLHS-RCH, 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) were classified by degree of ionization of salt and background characteristics of the households. The data show that only while 23 percent of the households used salt that contained a minimum

recommended 15 ppm or higher level of iodine content, 25 percent of the households used salt which was inadequately iodised and 50 percent of the households salt that was not iodized at all.

In rural areas, 62 percent of the households used non-iodized salt which was 26 percent in urban areas. Whereas, the proportion of households using inadequately iodized salt in rural and urban areas was somewhat similar at 24 percent and 28 percent, respectively. The proportion of households using iodised and, non-iodized or inadequately iodized salt was closely associated with the educational levels of the household heads. Notably, nearly half (48 percent) of the households headed by persons with more than 10 years of schooling reported using adequately iodized salt. The proportion of households using adequately iodized salt was comparatively lower at 22 percent among Hindu households as against 25, 42 and 63 percents among Muslim, Christian and Jain households, respectively. Consumption of adequately iodised salt among other castes households was 33 percent, followed by 23 percent among other backward classes households and 13 percent among scheduled castes and scheduled tribes households.

Table 2.10 IODIZATION OF SALT

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

Background characteristic	Not Iodised	7ppm	15+ppm	Other[1]	Total percent	Number of households
Place of Residence						
Rural	62.3	23.5	12.0	2.2	100.0	18,733
Urban	25.5	28.4	44.5	1.5	100.0	9,434
Education of the household heads						
Non-literate	63.8	24.0	10.0	2.2	100.0	12,181
0-9@ years	49.9	27.3	21.2	1.6	100.0	8,966
10 and above	26.0	24.4	47.6	2.0	100.0	7,016
Religion of household head						
Hindu	51.3	24.9	21.8	2.0	100.0	23,953
Muslim	46.6	26.8	24.8	1.8	100.0	3,355
Christian	27.8	28.9	42.1	1.2	100.0	612
Jain	21.9	14.2	62.5	1.5	100.0	216
Other	(44.8)	(34.5)	(20.7)	(0.0)	(100.0)	31
Caste/tribe of the household head#						
Scheduled caste	60.0	24.2	13.1	2.6	100.0	5,068
Scheduled tribe	57.2	27.9	13.3	1.6	100.0	2,173
Other backward class	51.0	24.4	22.8	1.8	100.0	13,647
Other	38.5	26.3	33.3	1.9	100.0	7,084
Standard of living index						
Low	67.8	22.6	7.0	2.6	100.0	12,576
Medium	49.0	28.4	21.1	1.6	100.0	9,328
High	15.7	25.5	57.6	1.2	100.0	6,262
Total	50.0	25.2	22.9	2.0	100.0	28,167

Ppm: Parts per million,
Note: Table includes 2 household heads with missing information on education and 1 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

Differentials in the consumption of adequately iodized salt were more conspicuous when the data were analysed by standard of living index. The data suggest that households with low standard of living were more likely to use non-iodized or inadequately iodized salt in comparison to households with medium or high standard of living index. Apparently, 68 percent of the households with low standard of living index were using non-iodized salt as against 49 percent and 16 percent among households with medium and high standard of living index, respectively. While a majority of 58 of the households with high standard of living index used adequately iodized salt, whereas, in comparison only 7 percent of the households with a low standard of living index consumed salt that was adequately iodized.

2.11 Iodization of Salt by Districts

Table 2.11 shows variations in the districts by levels of iodized salt used in the households. The proportion of households (11 percent) using non-iodized salt was lowest in Davanagere district and the proportion of households using non-iodized salt was highest (79 percent) in Gulbarga district.

Table 2.11 IDOIZATION OF SALT BY DISTRICT

Percent distribution of household heads by degree of idoization of salt by districts, Karnataka, 2002-04

District	Not idoized	7ppm	15+ppm	Other[1]
Bagalkot				
Bangalore	58.9	30.3	8.4	2.5
Bangalore Rural	13.5	26.0	59.8	0.7
	62.9	19.8	14.8	2.5
Belgaum				
Bellary	55.5	13.4	27.9	3.3
Bidar	60.8	22.4	15.7	1.0
	65.0	13.0	18.9	3.1
Bijapur				
Chamarajanagar	53.7	28.8	13.6	3.9
Chikmagalur	37.8	27.8	31.7	2.7
	38.7	32.2	25.0	4.1
Chitradurga				
Dakshina Kannada	66.7	19.4	13.0	0.9
Davanagere	27.8	37.3	33.8	1.0
	11.3	59.7	28.6	0.5
Dharwad				
Gadag	62.0	36.3	0.5	1.3
Gulbarga	75.1	16.4	5.8	2.7
	79.3	7.8	10.5	2.4
Hassan				
Haveri	48.6	27.4	21.9	2.1
Kodagu	84.9	5.3	5.1	4.7
	23.6	30.8	43.9	1.7
Kolar				
Koppal	52.5	33.2	12.8	1.5
Mandya	77.2	12.5	9.3	1.0
	47.7	24.5	26.5	1.3
Mysore				
Raichur	30.7	35.3	33.7	0.3
Shimoga	80.0	10.9	8.1	0.9
	33.7	50.5	14.3	1.5
Tumkur				
Udupi	66.4	15.6	13.9	4.1
Uttara Kannada	20.0	43.7	35.1	1.1
	32.8	36.0	28.6	2.6
Karnataka				
	50.0	25.2	22.9	2.0

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

The percentage of households using inadequately iodized salt was highest (60 percent) in Davanagere and was lowest in Haveri district (5 percent). While around 23 percent of the households in the state as a whole used adequately iodized salt, the highest proportion of households using it was reported in Bangalore district (60 percent). The consumption of adequately iodized salt by households in the state was lowest in Dharwad, Haveri and Gadag districts (see Map-2) which was less than 1 percent, 5 percent and 6 percent, respectively.

2.12 Availability of Facility and Services to the Rural Population

The DLHS-RCH collected information from knowledgeable persons such as the '*Sarpanch*' or '*Pradhan*'(village head), village officials and other persons including 'teacher' about health and educational facilities and other services available in the surveyed village. One important aspect was on the distance from the village to various types of education facilities, including primary school, middle school, secondary school, higher secondary school, college, *Gurujee* scheme and '*Madarsa*', if not available within the village. Furthermore, information was also collected on distance from various types of health facilities 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), if not available within the village.

Table 2.12 gives data on the distance of surveyed villages from various education facilities. The unit of analysis, of course, is usual residents of rural population. The data show that almost universally (around 100 percent) people (the *de jure* population) in rural areas of the state were living in villages that had primary schools, a majority of 81 percent were living in villages that had a middle school, around half or 49 percent were living in villages that had a secondary school. Higher secondary school was available for 27 percent of the population within the village. While *Gurujee* scheme and *Madarassas* facilities were available within the village only for 4 percent and 6 percent of the rural people respectively, 9 percent of the population was having access college facility within the village. As regards distances to educational facilities, it can be seen that around 14 percent, 26 percent, 33 percent, 42 percent and 38 percent of the rural population had access to middle, secondary, higher secondary school, *Gurujee* scheme and *Madarassas* facility within 5 kilometres distance from the village. *Gurujee* scheme and *Madarassas* facilities had access to and 30 percent have a *'Madarassa'* within this distance. For around 48 percent of the population college facility was more than 10 kilometres away from the village.

Table 2.12 DISTANCE FROM THE NEAREST EDUCATION FACILITY

Percent distribution of rural household population by distance from the nearest education facility, Karnataka, 2002-04

Education facility	Within village	Distance from the village: < 5 km	5-9 km	10+ km	Don't know/ missing	Total percent
Primary School	99.7	0.2	0.1	0.1	0.0	100.0
Middle School	80.6	13.7	3.9	1.7	0.0	100.0
Secondary School	49.0	26.3	17.2	7.5	0.0	100.0
Higher Secondary School	26.8	33.3	22.5	17.1	0.3	100.0
College	9.4	16.4	26.1	47.6	0.5	100.0
Gurujee Scheme	4.3	42.1	8.2	30.4	15.0	100.0
Madarsa	6.3	38.1	9.3	39.0	7.3	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, Karnataka, 2002-04

Health facility	Within village	Distance from the village: < 5 km	5-9 km	10+ km	Don't know/ missing	Total percent
		Rural household population				
Sub-centre	42.3	30.4	18.5	8.6	0.2	100.0
Primary health centre	19.0	26.8	31.4	22.4	0.4	100.0
Either sub-centre or PHC	44.5	31.4	17.2	6.7	0.2	100.0
Community health centre/ Referral hospital	4.4	16.0	20.7	58.2	0.6	100.0
Government dispensary	7.2	13.6	23.5	55.5	0.2	100.0
Government hospital	7.1	12.1	22.5	56.6	1.7	100.0
Private clinic	24.2	16.6	22.3	36.8	0.2	100.0
Private hospital	3.7	11.7	21.9	62.1	0.7	100.0
ISM health facility	5.5	14.6	15.9	61.5	2.5	100.0

Note: Table based on rural de jure population

Table 2.13 gives the data on the availability of health facilities within the surveyed villages and provides information on the distance between the village and the nearest available health facility. About 42 percent of the rural population lived in villages that were having Sub-centre facility. Only 19 percent of the rural households lived in villages which had a primary health centre, though the proportion of population having facilities of either Sub-centre or primary health centre within the village was 45 percent. The proportion of rural population having other health facilities such as CHCs/RHs, Government dispensary, Government hospitals private clinics and System of Medicine within the village was 4, 7, 7, 24, 4 and 6 percents, respectively.

Table 2.14 AVAILABILITY OF SERVICES

Percentage of rural residents living in villages that have selected services, West Karnataka, 2002-04

Services	Percentage of rural residents
Anganwadi *centre*	96.2
Anganwadi worker	86.5
Private doctor	36.6
Visiting doctor	25.3
Homeopathic doctor	8.0
Village health guide	19.3
Trained birth attendant	50.4
Traditional healer	10.4
Dai	68.7

Note: Table based on rural *de jure* population

The proportion of population living in villages located within a distance of 5 kilometres from health facilities was 30 percent for sub-centres, 27 percent for primary health centres, 16 percent for CHCs/RHs, 14 percent for a Government dispensary, 12 percent for Government hospitals, 17 percent for private clinic, 12 percent for private hospitals and 15 percent for ISM health facilities. Distance of health facilities beyond 10 kilometres from the surveyed villages was 57 percent of the population in the case of Government hospitals and 62 percent of the population for private hospitals.

Table 2.14 shows the proportions of population of the state various health services available within the village. Almost universal or 96 percent of population lived in villages that had an *anganwadi* (a nursery school for children age 3-6 years), and at the same time, 87 percent of the population lived in villages having *anganwadi* workers (*Anganwadi* workers provide integrated child development services) are available.

A little more than one-third or 37 percent of the population lived in villages that had a private doctor, 25 percent lived in villages that had a visiting doctor, 8 percent lived in villages that had a homeopathy doctor, 19 percent lived in villages that had a health guide, 50 percent lived in villages that had trained birth attendant and 10 percent lived in villages that had traditional healer. A little more than less than two-thirds or 69 percent of the population lived in villages that hade a *Dai* (*Dai* provides the services for the delivery).

2.13 Availability of Education Facility and Health Services by Districts

Table 2.15 provides the data on the availability of education and health facilities within the surveyed villages by districts in Karnataka. The rural population of the state lived almost universally in rural areas villages having a primary or middle school available within the village. The primary school facility was universally available within the village for the rural population of all the districts except for some of the Coastal and Malnad region districts *viz.,* the districts of Chikmaglur, Kodagu, Shimoga and Udupi. While sub-centre was available within village for 42 percent of the rural population in Karnataka as a whole, the facility was available within the village for 84 percent of the population in Udupi district, the highest proportion in the state. This proportion was nil and 14 percent of the population respectively in Banglore and Mysore districts which were lowest for districts in the state.

Chikmagalur and Bangalore were the two districts that did not have a PHC available within the village and in all the other districts PHC was available within the village at least for a few villages. In Dharwad district 87 percent of the population in the rural areas had access to at least any one of the government health facilities including sub-centre, primary health centre, community health centre or referral hospital, government hospital and government dispensary within the village, which was highest proportion among districts in the state.

Around 89 percent of the rural population were visited either by a private or any visiting doctor in the surveyed villages of Bagalkot district, which was highest proportion in the state. None of the households in the surveyed villages of Bangalore district and 6 percent in Chamarajnagar district were visited by either a private or by any visiting doctor, the lowest proportions for the state. While the proportion of population in rural areas attended by trained birth assistants was highest in districts of Haveri and Koppal (94 percent each), none and only 7 percent of the population availed themselves such a facility in the districts of Dharwad and Chamarajnagar, which were lowest proportions for the state. Visit by *anganwadi* workers to the households in rural areas was universal (100 percent) in the districts of Bagalokot, Bellary, Dakshina Kannada, Davanagere, Dharwad and Gadag and the lowest proportion of visits was reported in Hassan district (2 percent).

Table 2.15 AVAILABILITY OF FACILITY AND SERVICES BY DISTRICT

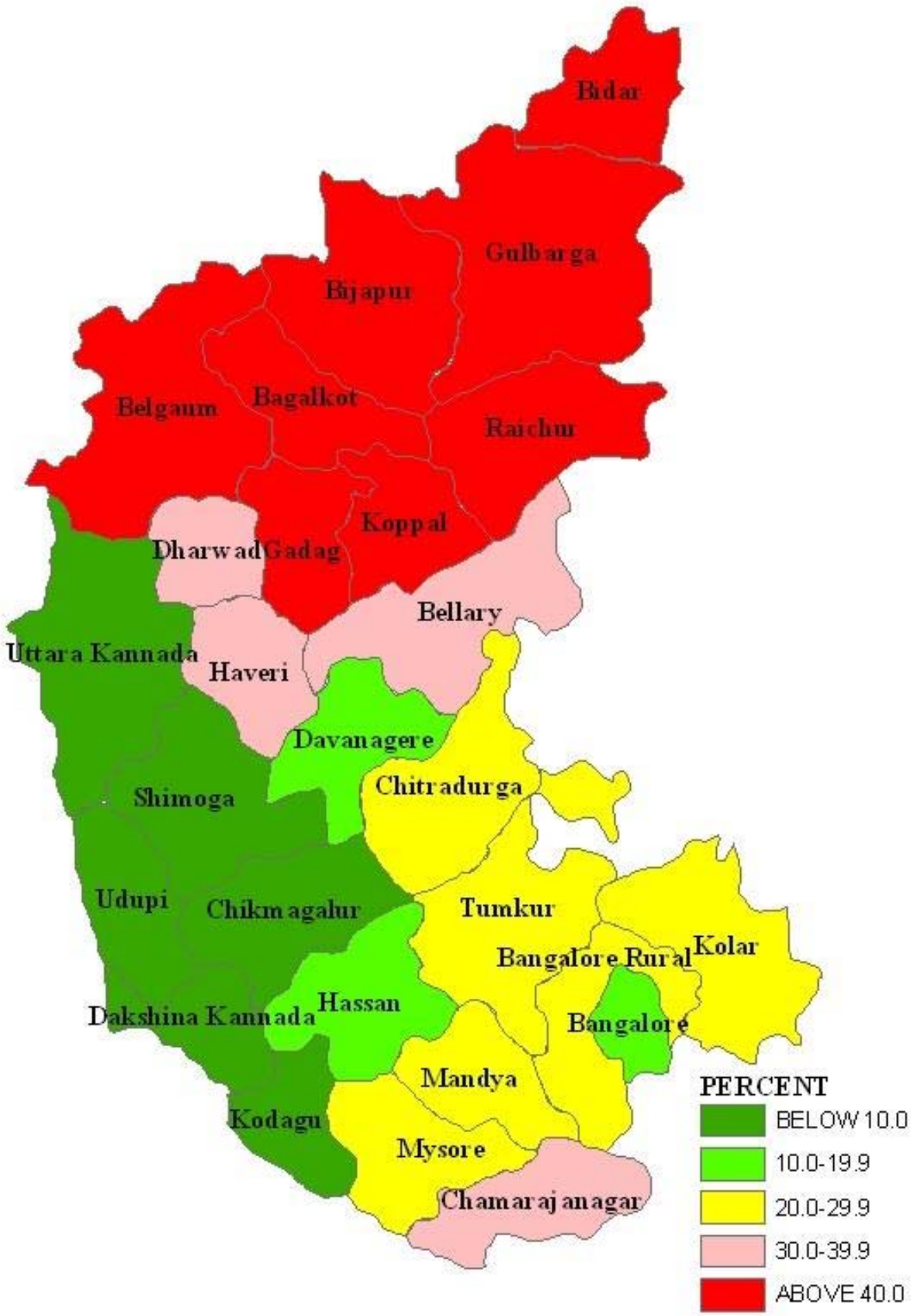
Selected facility and services of rural household population within village by districts, Karnataka, 2002-04

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
Bagalkot	100.0	55.4	25.5	59.8	89.4	39.1	100.0
Bangalore	100.0	0.0	0.0	0.0	0.0	76.2	76.2
Bangalore Rural	100.0	46.8	1.9	46.8	14.7	38.9	89.3
Belgaum	100.0	54.7	32.7	54.7	79.0	62.9	98.2
Bellary	100.0	50.7	26.8	57.8	83.5	66.6	100.0
Bidar	100.0	55.9	18.7	55.9	75.6	50.9	75.8
Bijapur	100.0	43.4	25.7	62.9	87.7	38.0	93.1
Chamarajanagar	100.0	62.7	28.2	68.7	27.8	6.9	94.4
Chikmagalur	96.2	30.7	0.0	30.7	22.7	70.8	90.5
Chitradurga	100.0	43.4	20.7	43.4	49.3	47.5	97.6
Dakshina Kannada	100.0	63.7	20.8	73.2	72.6	51.5	100.0
Davanagere	100.0	67.6	34.4	67.6	40.6	74.3	100.0
Dharwad	100.0	78.1	14.4	87.3	93.0	0.0	100.0
Gadag	100.0	44.8	29.5	64.8	69.7	49.7	100.0
Gulbarga	100.0	27.3	10.8	28.5	66.0	36.3	87.6
Hassan	100.0	22.4	11.2	26.6	6.0	37.2	2.1
Haveri	100.0	40.3	18.2	40.3	20.6	94.0	96.5
Kodagu	88.4	35.7	25.3	35.7	24.0	16.0	58.5
Kolar	100.0	21.6	10.5	21.6	23.2	22.0	88.2
Koppal	100.0	21.5	8.8	29.5	53.8	93.5	80.0
Mandya	100.0	31.8	24.7	35.7	32.2	43.9	28.2
Mysore	100.0	14.4	11.8	22.8	21.8	24.3	91.0
Raichur	100.0	47.3	14.4	53.9	78.0	72.7	95.9
Shimoga	97.8	41.3	20.3	41.3	12.9	63.5	92.2
Tumkur	100.0	38.1	19.7	40.5	25.7	66.8	87.9
Udupi	97.3	83.7	31.0	83.7	51.3	60.9	95.5
Uttara Kannada	100.0	34.9	12.1	38.1	24.5	27.3	87.0
Karnataka	99.7	42.3	19.0	46.2	49.7	50.4	86.5

[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

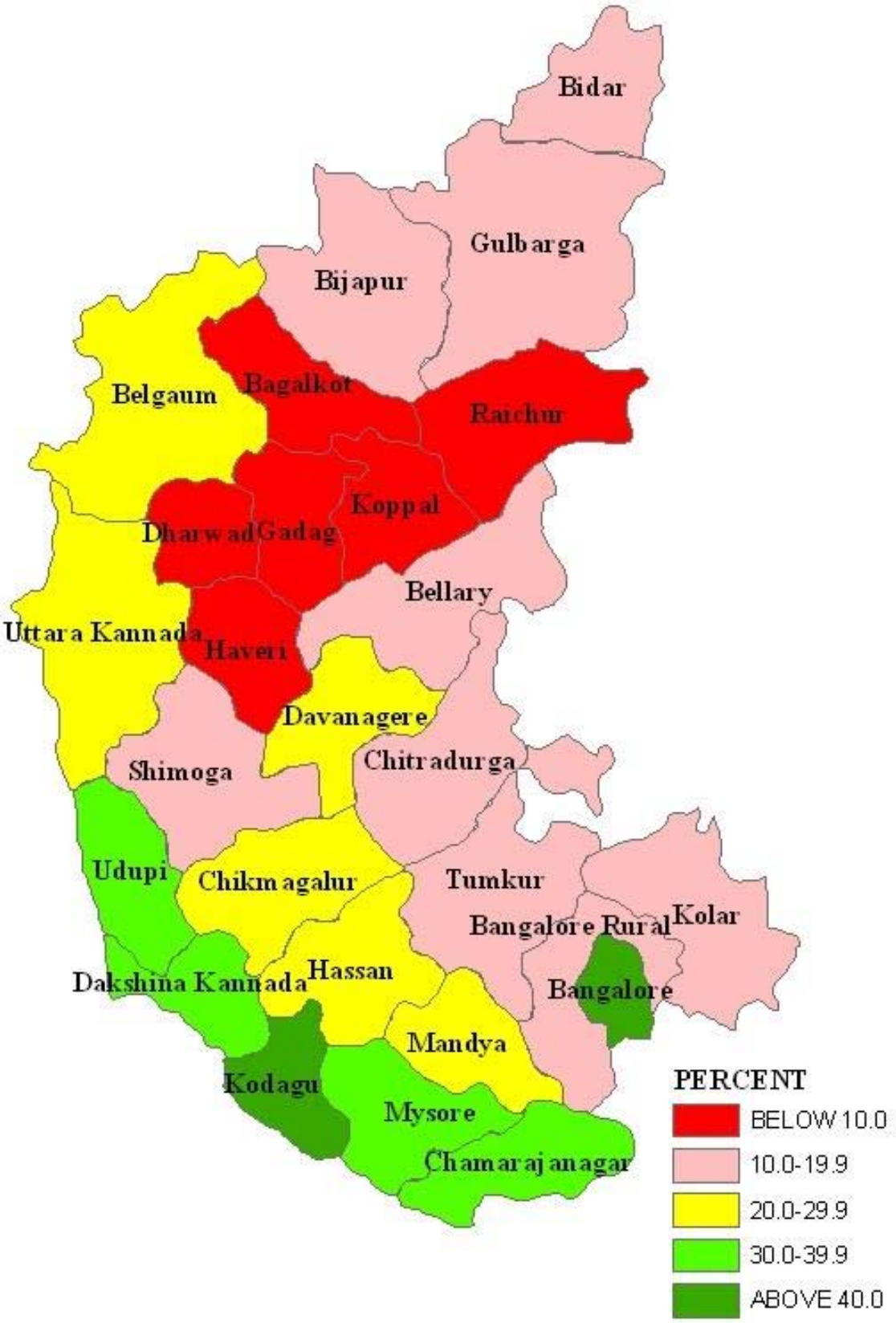
MAP-1

Percent girl marrying below legal age at marriage(18 years), 2002-04



MAP-2

Percentage of households using salt that contains 15 ppm level of Iodine, 2002-04



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 in the selected households. Information on household background characteristics was collected using a separate household questionnaire that covered religion and caste of the head of household, type of house, source of drinking water and possession of consumer durables. Fertility preferences 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, completed years of schooling, pregnancy episodes, children ever born and children surviving, along with their households' social and economic characteristics.

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 22,655 eligible women represented the state of Karnataka in DLHS-RCH and a little more than two-thirds of these women were drawn from rural areas. About 62 percent of the currently married women were in the age group of 20-34 years and somewhat a similar age distribution is observed for both urban and rural areas. Age at consummation of marriage, particularly, in rural areas is found to be low with as much as 64 percent of the women cohabited before 18 years of age, while it was 38 percent in urban areas. Looking at the distribution of marital duration, it may be noted that 37 percent of the women across the state were married for more than 15 years.

Of the total 22,655 sample eligible women in Karnataka, Hindus, Muslims and Christians constituted about 85 percent, 13 percent and 2 percent, respectively. A much higher proportion of Hindu women were found in urban areas (91 percent) than in rural areas (72 percent). The presence of women belonging to other religious groups was insignificant in proportional and absolute terms. Around 18 percent of the women belonged to scheduled castes, about 8 percent to scheduled tribes and 49 percent to other backward classes. About one-fourth of the sample women (24 percent) belonged to general castes other than scheduled caste and tribe or other backward class. In rural areas, a higher proportion of women belonged to scheduled castes, scheduled tribes and other backward classes than in urban areas, whereas, a higher proportion

women from other castes were found in urban areas than in rural areas. The data indicate a clear rural-urban differential in the educational attainment of women. In Karnataka state as a whole, while 46 percent of the women were illiterates, 49 percent and 22 percent of the women were illiterates in rural and in urban areas, respectively.

Table 3.1 BACKGROUND CHARACTERISTICS OF ELIGIBLE WOMEN

Percent distribution of currently married women aged 15-44 by selected background characteristics, according to residence, Karnataka, 2002-04

Background characteristic	Total	Residence	
		Rural	Urban
Age group			
15-19	10.0	12.0	5.8
20-24	20.7	21.5	19.0
25-29	21.7	20.8	23.5
30-34	19.2	18.2	21.3
35-39	16.0	15.5	17.1
40-44	12.4	12.0	13.4
Age at consummation of marriage			
Below 18 years	55.6	63.9	38.2
18 years & above	44.4	36.1	61.8
Marital duration			
0-4	22.1	21.9	22.7
5-9	21.4	20.8	22.8
10-14	19.1	18.5	20.4
15+	37.3	38.9	34.1
Religion			
Hindu	84.7	90.9	71.8
Muslim	12.7	7.8	23.0
Christian	1.7	0.9	3.5
Sikh	0.0	0.0	0.0
Jain	0.8	0.4	1.6
Zoroastrian	0.0	0.0	0.0
No religion	0.0	0.0	0.0
Other	0.0	0.0	0.0
Missing	0.0	0.0	0.0
Caste/tribe			
Scheduled caste	17.8	20.0	13.2
Scheduled tribe	7.9	9.4	4.7
Other backward class	49.4	51.4	45.4
Other #	24.1	18.7	35.4
Don't know	0.7	0.4	1.3
Missing	0.0	0.0	0.0
Education (Years of schooling)			
Non-literate	45.7	57.1	21.8
0-9@ years	31.7	30.2	34.7
10 years & above	22.6	12.6	43.5
Missing	0.0	0.0	0.0
Husband's education (Years of schooling)			
Non-literate	32.7	40.8	15.6
0-9@ years	31.9	33.8	28.0
10 years & above	34.1	23.9	55.4
Don't know	0.9	1.0	0.6
Missing	0.5	0.5	0.4
Standard of living index			
Low	41.0	55.7	10.2
Medium	35.2	34.4	37.0
High	23.8	9.9	52.8
Number of women	22,655	15,327	7,329

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

Of those who attended school, a little less than one-third or about 32 percent of the women across the state had completed 0-9 years of schooling. A little more than one-tenth or around only 13 percent of the women in rural areas had completed 10 or more years of schooling in comparison to 44 percent for the women in urban areas. Men were more literate than their spouses. In Karnataka, one-third of 33 percent of the husbands of eligible women were illiterates and the corresponding figures were 41 percent in rural areas and 16 percent in urban areas. The DLHS-RCH collected data on the materials used for floor, walls and roofs of the housing structure along with possession of a list of consumer durables in the household and these were used to construct a composite index of household standard of living. On the basis of this composite index the households were thus classified as low, medium and high standard of living categories. On the whole 41 percent of the women in the state belonged to low standard of living households and this proportion was 56 percent in rural areas and 10 percent in urban areas. Of course, a majority of the women across the state belonged to households categorised as medium and high standard of living (59 percent). In urban areas 53 percent of the women belonged to high standard of living households and the corresponding figure was just 10 percent for rural areas.

3.2 Educational Level of Women

Table 3.2 provides the details of educational level of the eligible women in terms of completed years of schooling by selected background characteristics such as place of residence, religion, and caste and husbands' education. With respect to illiterate women, it may be observed that comparatively a lower proportion of younger women below 30 years of age were illiterates than older women of age 30 years and above. Of course, this age divide was true among women who had higher levels of schooling. A distinct pattern of educational attainment of women is that maximum of them had 1-5 years and 6-8 years or 9-10 years schooling of schooling and not many had attended schooling for 11 years or more. Among women in the age group of 15-19 years who attended school, while 12 percent, 20 percent and 19 percent had 1-5 years, 6-8 years and 9-10 years of schooling respectively, only 4 percent of them had attended 11 or more years of schooling. Among the older women in the age group 40-44 years, the schooling was somewhat similar with 14 percent, 12 percent, 14 percent and 8 percent of them having attended school for 1-5, 6-8, 9-10 and 11 or more years of schooling, respectively.

The data suggest significant rural-urban differences in the level of education of women in Karnataka. In rural areas majority of 57 percent of eligible women in were illiterate and, 12 percent of the women had 1-5 years of schooling, 13 percent each had 6-8 and 9-10 years of schooling and 5 percent had 11 or more years of schooling. The corresponding figures in urban areas were 22 percent, 9 percent, 18 percent, 28 percent and 24 percent respectively for illiterates 1-5 years, 6-8 years, 9-10 years 11 or more years of schooling. illiterates. A much higher proportion of Hindu women (48 percent) were illiterates in comparison to women among Muslim (40 percent), Christian (18 percent) and Jain (11 percent) religions. Among those who attended school, most of the women had 1-5, 6-8 years and 9-10 of schooling irrespective of their religion. The proportion of Hindu women with 1-5 years of schooling was 10 percent, which was 24 percent for Muslims, 7 percent for Christians and 11 percent for Jains. Among Christains 29

percent and 26 percent of the women among Jains had 11 or more years of schooling, while it was 11 percent for Hindus and 8 percent for Muslim women.

The uneven levels of educational attainment among women by caste can be seen from the proportion of illiterate women among scheduled castes (63 percent), scheduled tribes (67 percent), other backward classes (44 percent) in comparison with other castes (30 percent). The schooled women were mainly concentrated in 1-5 to 9-10 years of schooling levels irrespective of caste group they belonged to. The husband's education is an important characteristic, which has strong association with the education of eligible women. As much as 80 percent of the women whose husbands were illiterates were also illiterates as well. Only 9 percent of the women whose husbands had 11 or more or years of schooling were illiterate. The show that forty percent of the women as well as their husbands were schooled 11 or more years.

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, Karnataka, 2002-04

Background characteristic	Non-literate	Literate but no schooling	Years of schooling: 1-5 years	6-8 years	9-10 years	11 or more years	Missing	Total percent	Number of women
Age group									
15-19	43.9	0.0	12.4	19.9	19.4	4.4	0.0	100.0	2,261
20-24	38.3	0.0	10.6	17.1	24.0	10.0	0.0	100.0	4,690
25-29	41.7	0.0	9.6	13.7	19.4	15.5	0.0	100.0	4,905
30-34	49.9	0.0	10.1	12.9	14.6	12.5	0.0	100.0	4,347
35-39	52.0	0.0	11.6	12.6	12.9	10.9	0.0	100.0	3,633
40-44	51.7	0.1	13.6	12.3	14.1	8.2	0.0	100.0	2,819
Place of residence									
Rural	57.1	0.0	12.1	13.1	13.0	4.6	0.0	100.0	15,327
Urban	21.8	0.0	8.6	17.5	27.7	24.4	0.0	100.0	7,329
Religion									
Hindu	47.5	0.0	10.5	13.6	17.5	10.9	0.0	100.0	19,189
Muslim	39.5	0.0	15.0	20.3	17.1	8.1	0.0	100.0.	2,879
Christian	18.6	0.1	7.2	16.3	28.5	29.3	0.0	100.0	390
Jain	10.6	0.0	11.2	20.1	31.8	26.3	0.0	100.0	181
Caste/tribe #									
Scheduled caste	63.2	0.0	8.4	10.3	13.0	5.0	0.0	100.0	4,038
Scheduled tribe	67.1	0.0	9.6	9.6	9.5	4.2	0.0	100.0	1,788
Other backward class	43.8	0.0	11.5	15.1	18.6	11.0	0.0	100.0	11,203
Other	29.6	0.0	12.3	18.1	22.2	17.7	0.0	100.0	5,459
Husband's education									
Non-literate	80.4	0.0	7.9	6.8	4.2	0.7	0.0	100.0	7,400
1-5 years	51.9	0.0	22.4	15.9	8.5	1.4	0.0	100.0	2,849
6-8 years	40.3	0.0	15.3	23.7	16.5	4.1	0.0	100.0	3,067
9-10 years	24.2	0.0	12.2	22.3	31.6	9.8	0.0	100.0	4,432
11 or more years	8.7	0.0	4.8	12.8	33.7	40.0	0.0	100.0	4,578
Total	45.7	0.0	11.0	14.5	17.7	11.0	0.0	100.0	22,655

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

Total includes 311 women with missing information / do not know cases on husband's education who were not shown separately.

Total includes 15 women in other religion and 19 with literate husbands but no schooling who were not shown separately.

3.3 Background Characteristics of Husbands of Eligible Women

The husbands of eligible women were also interviewed in DLHS-RCH. The response rate among husbands was relatively lower as compared to response rate among eligible women. Selected background characteristics of husbands are given in Table 3.3. The husbands in Karnataka were mainly concentrated in the age group 25-44 years. Fewer husbands were in age below 25 years of younger. And, a little less than one-fifth or 24 percent of the husbands were 45 years or older. A majority of 85 percent of the husbands belonged to Hindu, 12 percent to Muslim, 2 percent to Christian and 1 percent to Jain religion. The presence of other religious groups was insignificant or rather nil. A little less than one-fifth or 18 percent of husbands in the state belonged to scheduled castes and the proportion was a comparatively higher in rural areas (20 percent) than in urban areas (13 percent). Nearly one-fifth or 24 percent of the husbands were from general castes other than scheduled caste, scheduled tribe and other backward classes. However, in urban areas the husbands from other castes constituted 36 percent, while it was 19 percent in rural areas. As regards educational characteristics, a little more than one-third or 34 percent of the husbands had completed 0-9 years of schooling and the proportion of illiterates among them varied from 18 percent in urban areas to 42 percent in rural areas, while their overall state proportion was 35 percent.

Table 3.3 BACKGROUND CHARACTERISTICS OF MEN

Percent distribution of husbands of eligible women by selected background characteristics, according to residence, Karnataka, 2002-04

Background characteristic	Total	Residence	
		Rural	Urban
Age group			
< 25	4.4	5.2	2.9
25-34	32.2	32.1	32.5
35-44	39.0	38.4	40.3
45 +	24.4	24.4	24.4
Religion			
Hindu	85.2	91.1	72.2
Muslim	12.0	7.3	22.2
Christian	1.8	1.0	3.5
Sikh	0.0	0.0	0.0
Jain	1.0	0.5	2.0
Zoroastrian	0.0	0.0	0.0
Other	0.0	0.0	0.0
Caste/tribe			
Scheduled caste	17.7	19.9	12.9
Scheduled tribe	7.9	9.4	4.6
Other backward class	49.4	51.4	45.0
Other #	24.3	18.8	36.3
Don't know	0.6	0.4	1.2
Education (Years of schooling)			
Non-literate	34.5	42.2	17.5
0-9@ years	34.4	36.1	30.7
10 years & above	31.2	21.7	51.9
Missing	0.0	0.0	0.0
Standard of living index			
Low	41.6	56.0	10.1
Medium	35.3	34.2	37.6
High	23.1	9.8	52.3
Number of living children			
0	12.3	12.3	12.2
1	16.2	14.1	20.6
2	31.6	30.6	33.8
3	22.5	24.4	18.2
4+	17.4	18.5	15.1
Number of Men	13,904	9,548	4,355

Not belonging to a scheduled caste, scheduled tribe and an 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 were 42 percent, 35 percent and 23 percent, respectively. A majority i.e., 56 percent of the husbands belonged to low standard of living households in rural areas as compared to only 10 percent in urban areas. This was reverse in the case of husbands belonging to high standard of living households i.e., 52 percent in urban and 10 percent in rural areas. In terms composition of standard of living of households of the husbands, those living in medium and high standard of living households predominated in urban areas (90 percent) and low and medium standard of living households were predominant in rural areas (90 percent) of the state. Overall, around 32 percent of the husbands reported that they had two living children. Relatively, a higher proportion of husbands (56 percent) in urban areas said that they had one or two living children, while a higher proportion (55 percent) in rural areas stated that they had two or three

living children. A little more than 40 percent of the husbands of eligible women in rural areas had 3 or more three living children, which was 33 percent i.e., one-third for husbands in urban areas.

3.4 Educational Level of Husbands of Eligible Women

Educational levels in terms of years of schooling classified by age, place of residence, religion and caste or tribe of husbands of eligible women are shown in Table 3.4. The proportion of illiterate husbands across age groups was somewhat similar, though it was marginally lower among husbands in age group 25-34 years (29 percent) as compared to other age agroups i.e., below 25 years (36 percent), 35-44 years (37 percent) and 45 years or above (38 percent). Irrespective of their age at the time of survey most of the husbands had 1-10 years of schooling, specifically, 53 percent of those below 25 years, 47 percent in age 25-34 years, 46 percent in age 35-44 years and 47 percent in 45 years or above. As expected a few (11 percent) of the younger age husbands below 25 years had 11 or more years of schooling compared to those in age 25-34 years (24 percent) or above. As in the case of eligible women, relatively a higher proportion of the husbands among Hindus were illiterate (35 percent) as compared to husbands among Muslims (34 percent), Christians (14 percent) and Jains (6 percent). The proportions of husbands among Hindus Muslim, Christian and Jain religions who had 11 or more years of schooling constituted 19 percent, 14 percent, 29 percent and 47 percent, respectively. This suggested that most of the husbands among Hindus, Muslims and Christians had completed 1-10 years of schooling. Educational attainment of husbands of eligible women did vary according to the caste or tribe they belonged to. The proportion of illiterate husbands was much higher among scheduled tribes (55 percent) and scheduled castes (49 percent) than among other backward classes (32 percent) and other general castes (22 percent). The data show that, among scheduled caste and scheduled tribe husbands 26 percent and 20 percent of them had 9 or more years of schooling. The data thus suggest that the education attainment husbands of other backward classes were somewhat similar with that of husbands from other general castes than scheduled tribe and scheduled castes. Among the husbands belonging to other backward classes, 29 percent had 1-8 years and 39 percent had 9 or more years of schooling in comparison with 29 percent and 50 percent for husbands belonging to other general castes.

Table 3.4 LEVEL OF EDUCATION OF MEN

Percent distribution of husbands of eligible women by years of schooling, according to selected background characteristics, Karnataka, 2002-04

Background characteristic	Non-literate	Literate but no schooling	Years of schooling: 1-5 years	6-8 years	9-10 years	11 or more years	Missing	Total percent	Number of men
Age group									
< 25	35.6	0.4	12.7	17.5	23.1	10.5	0.0	100.0	618
25-34	29.2	0.1	11.9	14.6	20.5	23.8	0.0	100.0	4,477
35-44	36.6	0.2	14.2	13.5	18.0	17.5	0.0	100.0	5,418
45 +	37.9	0.2	16.5	11.9	18.5	15.0	0.0	100.0	3,390
Place of residence									
Rural	42.2	0.2	16.1	13.6	15.8	12.2	0.0	100.0	9,548
Urban	17.5	0.2	9.4	13.8	26.4	32.7	0.0	100.0	4,355
Religion									
Hindu	35.3	0.2	13.9	12.9	18.9	18.8	0.0	100.0	11,846
Muslim	33.9	0.1	15.6	17.4	19.4	13.5	0.0	100.0	1,667
Christian	14.1	0.0	10.9	22.0	24.3	28.8	0.0	100.0	247
Jain	6.1	0.0	7.9	10.2	28.8	47.1	0.0	100.0	137
Caste/tribe #									
Scheduled caste	48.9	0.2	13.4	11.1	14.1	12.4	0.0	100.0	2,462
Scheduled tribe	54.8	0.2	14.6	10.1	11.9	8.5	0.0	100.0	1,100
Other backward class	32.3	0.2	14.1	14.6	20.8	18.0	0.0	100.0	6,873
Other	21.8	0.1	14.0	14.7	21.9	27.6	0.0	100.0	3,380
Total	34.5	0.2	14.0	13.6	19.1	18.6	0.0	100.0	13,904

Total number may not add upto N due to don't know and missing cases.
Total includes 6 husbands in other religion who were not shown separately.

3.5 Children Ever Born and Surviving

The women were asked about the children ever born alive and the number of children surviving. Table 3.5 shows the mean number of children ever born and the mean number of surviving children by women's selected background characteristics and sex of children. A cursory look at the mean number of children ever born by age of women reveals that the older women on an average had experienced more number of live births than younger women. Furthermore, the women on an average had given birth to slightly more number of male children than female children, and this pattern was similar with respect to surviving children. Completed fertility, that is, mean number of children ever born to women in the age group 40-44 years was 3.6 in Karnataka and it comprised of on an average 1.9 male children and 1.8 female children. Out of the 3.6 mean children ever born to women in the 40-44 years age group, on an average 3.2 children survived in the state. By the sex of children, out of 1.9 mean number of males ever born, on average 1.6 male children survived. Correspondingly, the mean number of female children surviving was 1.5 out of 1.8.

Obviously, women with longer marital duration had more number of children ever born. On an average, women who were married for 15 or more years had 3.5 children ever born and 3.1 of children on an average were surviving. The rural-urban divide in terms of mean number of children ever born was apparent with a mean of 2.5 children were ever born in rural areas and as

compared to on average 2.2 children in urban areas. By religion, the mean children ever born to women among Hindus, Muslims, Christians and others were 2.3, 2.8, 2.1 and 2, respectively. Correspondingly, the mean number of surviving children for the religious groups respectively was 2.1, 2.6, 2 and 1.9. It suggests that the mean number of surviving children among Hindu and Muslim women was a little more than 2 comprising on average one surviving male and one surviving female child. The average number of children ever born also varied by caste or tribe of the eligible women. While among women belonging to scheduled castes and tribes the mean number children ever born was 2.6 and 2.7, it was 2.3 children among other backward classes and other general castes women.

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 age 15-44 years, Karnataka, 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	0.7	0.4	0.3	0.6	0.3	0.3	2,261
20-24	1.6	0.8	0.8	1.5	0.8	0.7	4,690
25-29	2.3	1.2	1.1	2.1	1.1	1.0	4,905
30-34	2.9	1.5	1.4	2.6	1.3	1.3	4,347
35-39	3.2	1.6	1.5	2.8	1.5	1.4	3,633
40-44	3.6	1.9	1.8	3.2	1.6	1.5	2,819
Marital Duration							
0-4	0.8	0.4	0.4	0.7	0.4	0.3	5,014
5-9	2.0	1.0	1.0	1.9	1.0	0.9	4,857
10-14	2.6	1.4	1.3	2.4	1.3	1.2	4,327
15+	3.5	1.8	1.7	3.1	1.6	1.5	8,457
Residence							
Rural	2.5	1.3	1.2	2.2	1.2	1.1	15,327
Urban	2.2	1.1	1.1	2.1	1.1	1.0	7,329
Religion							
Hindu	2.3	1.2	1.1	2.1	1.1	1.0	19,189
Muslim	2.8	1.5	1.3	2.6	1.4	1.2	2,879
Christian	2.1	1.1	1.0	2.0	1.1	1.0	390
Other	2.0	1.1	0.9	1.8	1.0	0.8	181
Caste/tribe #							
Scheduled caste	2.6	1.4	1.3	2.3	1.2	1.1	4,038
Scheduled tribe	2.7	1.3	1.3	2.3	1.2	1.2	1,788
Other backward class	2.3	1.2	1.1	2.1	1.1	1.0	11,203
Other	2.3	1.2	1.1	2.1	1.1	1.0	5,459
Education							
Non-literate	2.9	1.5	1.4	2.6	1.4	1.2	10,352
0-9@ years	2.2	1.1	1.1	2.0	1.0	1.0	7,179
10 years & above	1.6	0.9	0.8	1.6	0.8	0.8	5,119
Standard of living index							
Low	2.7	1.4	1.3	2.3	1.2	1.1	9,289
Medium	2.3	1.2	1.1	2.2	1.1	1.0	7,980
High	2.0	1.1	1.0	1.9	1.0	1.0	5,386
All women	2.4	1.2	1.2	2.2	1.1	1.1	22,655

Total number may not add upto N due to don't know and missing cases. Table includes 11 women with missing information on education. @ Literate women with no year of schooling are included

The mean number of children ever born was comparatively higher for illiterate women (2.9) than women who had completed 0-9 years (2.2) and 10 or more years of schooling (1.6). The mean number of surviving children corresponding to these educational levels of women respectively was 2.6, 2.0 and 1.6. Furthermore, the mean number of children ever born among women belonging to the three standard of living categories i.e., to low, medium and high standard of living households were 2.7, 2.3 and 2, respectively. The DLHS-RCH showed inverse association between the mean number of children ever born and educational attainment of women, and also between economic levels of the households in Karnataka.

3.6 Completed Fertility by District

The completed fertility as measured by mean number children ever born to women in age 40-44 years by districts in Karnataka together with mean number of surviving children are shown in Table 3.6. On an average, women on the verge of completing reproductive period had given birth to 3.6 children in their reproductive life in the state, of which, on an average 3.2 children were surviving. Completed fertility in the state varied from a low of 2.7 mean number of children ever born in Kodagu district to the highest of 5.7 children in Raichur district. With the exception of Chikmagalur, Dakshina Kannada and Kodagu districts the mean children ever born in all other districts of Karnataka was more than 3 children. The completed fertility was relatively higher in the districts of Bagalkot, Bellary, Bidar, Bijapur, Gadag, Gulbarga, Koppal and Raichur with 4, 4.6, 4.9, 4.2, 4.5, 5.1, 4.7 and 5.7 mean number of children ever born, respectively. It is also true that in most of the districts the mean number of male children ever born to women in 40-44 years age group was higher than the mean number of female children born. The districts of Bidar (4.5), Gulbarga (4.1) and Raichur (4.4) recorded the highest mean number of surviving children for the state. Looking at the absolute difference between mean number of children ever born and mean number of surviving children, it appears that infant and child mortalities were somewhat high and varied across the districts in Karnataka.

Table 3.6 COMPLETED FERTILITY BY DISTRICT

Mean children ever born (CEB) and children surviving (CS) to currently married women aged 40-44 by district, Karnataka, 2002-04

District	Mean children ever born			Mean children surviving		
	Total	Male	Female	Total	Male	Female
Bagalkot	4.0	2.2	1.8	3.5	1.9	1.6
Bangalore Rural	3.7	1.9	1.8	3.2	1.6	1.5
Bangalore Urban	3.1	1.4	1.7	2.8	1.2	1.6
Belgaum	3.6	1.9	1.6	3.3	1.8	1.5
Bellary	4.6	2.4	2.2	3.7	2.0	1.8
Bidar	4.9	2.6	2.4	4.5	2.3	2.2
Bijapur	4.2	2.3	1.9	3.7	2.0	1.6
Chamarajnagar	3.4	1.6	1.8	3.0	1.4	1.6
Chikamagalur	2.8	1.4	1.4	2.5	1.3	1.3
Chitradurg	3.4	1.7	1.7	2.9	1.4	1.5
Dakshina Kannada	3.0	1.6	1.4	2.8	1.5	1.3
Davanegere	3.9	2.1	1.9	3.3	1.7	1.6
Dharwad	3.7	2.2	1.4	3.4	2.0	1.3
Gadag	4.5	2.1	2.4	3.8	1.8	2.0
Gulbarga	5.1	2.6	2.5	4.1	2.1	2.1
Hassan	3.5	1.7	1.8	3.1	1.5	1.6
Haveri	3.9	1.9	2.0	3.5	1.7	1.8
Kodagu	2.7	1.4	1.3	2.5	1.3	1.2
Kolar	3.7	2.1	1.6	3.3	1.8	1.5
Koppal	4.7	2.5	2.2	3.8	2.1	1.8
Mandya	3.7	2.0	1.7	3.2	1.7	1.6
Mysore	3.2	1.6	1.6	2.9	1.4	1.5
Raichur	5.7	2.9	2.8	4.4	2.3	2.1
Shimoga	3.3	1.7	1.6	3.0	1.6	1.4
Tumkur	3.1	1.7	1.4	2.7	1.5	1.2
Udupi	3.2	1.7	1.5	3.1	1.6	1.5
Uttara Kannada	3.1	1.8	1.3	2.9	1.6	1.2
Karnataka	3.6	1.9	1.8	3.2	1.6	1.5

3.7 Birth Order

The birth order distribution by selected background characteristics of women are provided in Table 3.7 and Figure 3.1. This can be used 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, Karnataka, 2002-04

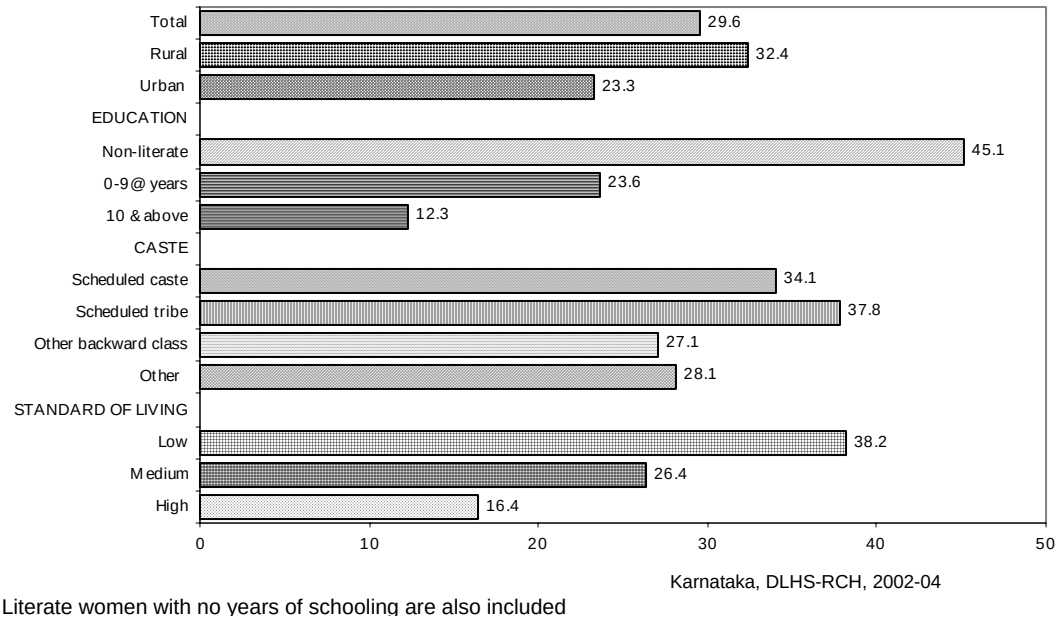
Background characteristic	Birth order				Total percent	Number of births
	1	2	3	4+		
Age of women						
15-19	69.6	25.3	4.9	0.2	100.0	1,283
20-24	40.6	36.7	16.1	6.6	100.0	3,598
25-29	24.4	34.2	21.5	20.0	100.0	2,163
30-34	13.1	28.3	19.0	39.6	100.0	678
35-39	9.4	22.8	17.6	50.2	100.0	228
40-44	7.9	15.6	15.0	61.5	100.0	55
Place of residence						
Rural	35.2	32.3	17.1	15.3	100.0	5,523
Urban	42.3	34.4	13.6	9.7	100.0	2,481
Education (Years of schooling)						
Non-literate	26.9	28.0	21.0	24.1	100.0	3,290
0-9@ years	39.8	36.6	15.1	8.5	100.0	2,711
10 years & above	51.5	36.2	9.1	3.2	100.0	2,002
Religion						
Hindu	37.9	33.5	15.9	12.7	100.0	6,600
Muslim	33.0	28.5	18.1	20.3	100.0	1,205
Christian	46.3	38.8	10.3	4.6	100.0	144
Other	(53.8)	(41.0)	(2.6)	(2.6)	100.0	49
Caste/tribe #						
Scheduled caste	37.1	28.8	17.5	16.6	100.0	1,595
Scheduled tribe	34.0	28.2	18.1	19.7	100.0	715
Other backward class	37.9	35.1	14.9	12.2	100.0	3,808
Other	38.3	33.7	16.5	11.6	100.0	1,809
Standard of living index						
Low	31.5	30.3	18.8	19.4	100.0	3,550
Medium	39.1	34.5	15.3	11.1	100.0	2,873
High	47.6	35.9	11.2	5.2	100.0	1,581
Total	37.4	32.9	16.0	13.6	100.0	8,004

Note: Total includes 5 births with missing information on mother's education. # Total number of births may not add up to N due to don't know and missing cases. ( ) Based on less than 50 unweighed cases

A little more than one-third or 37 percent of the births in the three years period preceding the survey were of first order, 33 percent of second order and the remaining about 30 percent were of 3 and higher order births in Karnataka state. By current age of eligible women, more than 50 percent of births to women in the age group 35-39 years and 40-44 years were of 4 and higher order births. For women in age 15-19 years, around 70 percent of the births were of first order and 25 percent were of second order births. While in the case of eligible women in urban areas, 23 percent were of 3 and higher order births, whereas the proportion of birth order 3 and more constituted 32 percent among rural women. This indicated that higher order births were more concentrated in rural areas. Of the total births among illiterate women, 45 percent were of 3 and higher order births, followed by 24 percent among women with 0-9 years of schooling and 12 percent among women who had 10 or more years of schooling. In short, births occurred to illiterate women were more of higher order, whereas births occurred to women who had completed 10 or more years of schooling were more of lower order. Looking at the differentials by religion in birth order distribution, it is observed that 38 percent of births among Muslim

women were of 3 and higher order births. The birth order of 3 and higher constituted 29 percent and 15 percent, respectively for Hindu and Christian religion women. The occurrence of 3 and higher order births were higher among scheduled tribes (38 percent) than among scheduled castes (34 percent), other backward classes (27 percent) and other general castes (28 percent) women. Classified by household standard of living index, birth of order 3 and more were 16 percent, 26 percent and 38 percent for women belonging to high, medium and low standard of living households, respectively.

Figure 3.1
Birth Order 3 & above by selected Background Characteristics

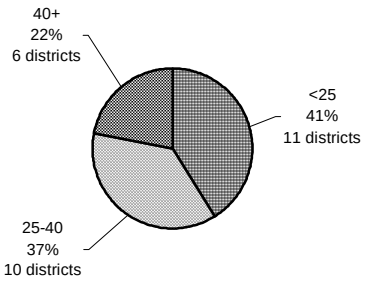


@ Literate women with no years of schooling are also included

3.8 Birth Order by Districts

Table 3.8 and Figure 3.2 show the births order distribution by districts in Karnataka. The proportion of 3 and higher order births varied from the lowest of 12 percent in Bangalore and Hassan districts to the highest of 51 percent in Gulbarga and Koppal districts. The districts that could be considered as having lower proportion of births of order 3 and more were Bangalore (12 percent), Chikmaglur (18 percent), Hassan (12 percent), Mandya (15 percent) and Mysore (20 percent). Similarly, the districts which could be considered as having higher proportion of births of order 3 and more were Bagalkot (35 percent), Belgaum (33 percent), Bellary (42 percent), Bidar (45 percent), Bijapur (42 percent), Dharwad (34 percent), Gadag (31 percent), Gulbarga (51 percent), Haveri (34 percent), (Koppal (51 percent) and Raichur (49 percent). The remaining districts could be considered falling midway between these districts with respect to occurrence of births of order 3 and more.

Figure 3.2
Birth Order 3 & above by Districts



Karnataka, DLHS-RCH, 2002-04

Table 3.8 BIRTH ORDER BY DISTRICT

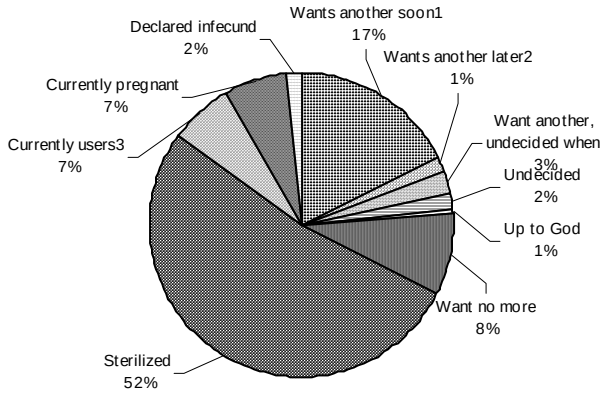
Percent distribution of births during three years preceding the survey by birth order, according to district, Karnataka, 2002-04

	Birth order			
District	1	2	3	4+
Bagalkot	33.9	31.2	22.2	12.7
Bangalore	49.9	37.9	10.0	2.2
Bangalore Rural	39.0	39.5	13.0	8.5
Belgaum	32.5	34.6	18.2	14.7
Bellary	33.3	25.0	20.0	21.7
Bidar	30.1	24.4	19.7	25.7
Bijapur	30.2	28.2	20.8	20.9
Chamarajnagar	39.3	39.0	15.0	6.7
Chikmagalur	42.7	39.8	13.0	4.6
Chitradurga	39.1	34.6	15.3	11.0
Dakshina Kannada	33.4	38.9	17.1	10.6
Davanagere	42.6	33.4	15.4	8.6
Dharwad	33.4	32.8	19.5	14.3
Gadag	36.0	32.7	20.5	10.8
Gulbarga	25.4	23.5	19.5	31.6
Hassan	53.0	34.9	9.4	2.6
Haveri	32.4	34.2	20.0	13.5
Kodagu	45.8	34.2	9.5	10.5
Kolar	37.3	36.8	13.0	12.9
Koppal	25.4	24.0	22.9	27.7
Mandya	51.0	34.3	8.4	6.3
Mysore	42.1	38.1	12.9	6.9
Raichur	26.2	25.2	18.4	30.2
Shimoga	35.1	39.1	17.7	8.0
Tumkur	43.3	35.1	12.4	9.2
Udupi	48.4	32.9	13.9	4.7
Uttara Kannada	40.9	32.7	15.7	10.8
Karnataka	37.4	32.9	16.0	13.6

3.9 Fertility Preferences

The distribution of currently married women desiring additional children and preferred sex of additional children by number of living children of the women are given in Table 3.9 and Figure 3.3. Out of the 2,658 women with no living child, 21 percent were currently pregnant and 1 percent were using spacing methods, while 64 percent wanted to have a child within two years, 1 percent wanted to have a child after two years, 4 percent were undecided about the timing of birth of the child and 2 percent desired not to have a child. The women's desire for additional children dwindled down with increasing number of living children. It may be noted that about 17 percent of the women with one living child were using spacing methods, 36 percent of them wanted an additional child within two years, 5 percent wanted it after two years, 7 percent were undecided about the timing of the next child, 10 percent wanted no more additional children and 7 percent were sterilized. The use of permanent as well as temporary methods of contraception tended to increase with increasing number of living children. Out of the total 22,655 currently married women surveyed in Karnataka, 18 percent desired to have additional child within two years, 1 percent desired it after two years, 9 percent wanted no more children, 7 percent were currently pregnant and 59 percent were using either terminal or temporary contraceptive methods. A total of 5,385 women wanted additional children irrespective of the number of living children they had. Out of the 1,947 women who had no living children at the time of survey and desired children, around 19 percent wanted a boy to be their first child, about 4 percent desired a girl to be their first child, for 43percent the sex of the child was immaterial and 14 percent left it to God. With increasing number of living children, male child was predominant preferred sex of the next child, although a sizeable proportion of women desiring additional children felt that sex of the child was immaterial for them.

Figure 3.3
Fertility Preference



Karnataka, DLHS-RCH, 2002-04

Table 3.9 FERTILITY PREFERENCE
Percent distribution of currently married women by desire for children, according to number of living children, Karnataka, 2002-04

Desire for children	Number of living children					Total
	0	1	2	3	4+	
Desire for additional child						
Wants another soon[1]	63.7	35.7	8.8	5.0	2.9	17.8
Wants another later[2]	0.9	4.7	0.9	0.8	0.4	1.4
Want another, undecided when	4.1	6.8	1.9	0.9	0.5	2.5
Undecided	3.0	3.3	1.1	0.6	0.6	1.5
Up to God	1.6	1.0	0.2	0.3	0.4	0.6
Want no more	1.8	9.5	9.2	6.7	12.6	8.6
Sterilized	0.4	6.9	65.2	78.7	75.1	52.5
Currently users[3]	1.3	16.6	8.6	3.2	2.9	6.8
Currently pregnant	20.9	13.5	3.1	2.3	1.4	6.5
Declared infecund	2.3	1.9	0.9	1.5	3.3	1.8
Missing	0.1	0.0	0.1	0.1	0.0	0.0
Total percent	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	2,658	3,861	6,711	4,747	4,678	22,655
Preferred sex of additional children						
	18.5	28.6	43.6	50.7	57.6	30.1
	3.7	14.6	15.9	12.3	11.2	10.6
Boy	42.7	33.8	22.3	20.2	15.2	33.5
Girl	35.1	23.0	18.2	16.8	16.0	25.9
Doesn't matter						
Upto God	100.0	100.0	100.0	100.0	100.0	100.0
Total percent	1,947	1,990	865	359	223	5,385
Number of women						

[1] Wants next births within 2 years. [2] Wants to delay next birth for 2 or more years. [3] Other than sterilization.

Pregnancy Outcomes

Table 3.10 provides the data on distribution of pregnancy outcomes including live births, stillbirths, induced abortions and spontaneous abortions by districts in Karnataka. For the state as a whole 93 percent of the pregnancies ended in live births, around 2 percent in induced abortions, about 4 percent in spontaneous abortions and 2 percent in stillbirths. Marginally a higher proportion of pregnancies in rural areas ended in live births (93 percent) than in urban areas (92 percent), while the incidence of induced abortions was comparatively a little higher in urban areas (3 percent) than in rural areas (1 percent). The proportion of pregnancies ending in live births varied from 90 percent in the districts of Bijapur, Chikmagalur, Chitradurga and Gadag, to 99 percent in Udupi district. Apart from Bijapur, Chikmagalur, Chitradurga and Gadag the districts that could be considered as having comparatively lower proportion of pregnancies ending in live births were Bangalore rural, Bangalore urban, Bellary, Chamarajnagar, Davangere, Haveri, Kodagu and Tumkur with 91, 92, 91, 91, 92, 92, 92 and 91 percent of the pregnancies ending in live births in these districts, respectively. Dakshina Kannada, Dharwad, Gulbarga and Shimoga were the four other districts with 95 or higher percentage of pregnancies ending in live births besides Udupi district. The incidence of stillbirths was highest in Chitradurga and

Davanagere districts (5 percent each) followed by Bellary, Dharwad, Gadag, Haveri and Mysore districts (3 percent each) and nil Bangalore and Udupi districts. The proportion of induced abortions was relatively higher in the districts of Bangalore urban (3 percent), Bangalore rural (30 percent), Chikmagalur (4 percent) and Kodagu (3 percent) in comparison with other districts. The proportion of spontaneous abortions was lowest in Raichur and Udupi districts (1 percent each) and highest in Chamarajnagar and Gdag districts (6 percent each) for the state. were somewhat. Notably, Bangalore urban rural districts had comparatively somewhat higher incidence of induced and spontaneous abortions.

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, Karnataka, 2002-04

Districts	Live birth	Stillbirth	Induced abortion	Spontaneous abortion	Missing	Total percent
State-Rural	93.3	2.3	0.8	3.5	0.0	100.0
State-Urban	92.1	1.0	2.8	3.9	0.2	100.0
State-Total	93.0	1.9	1.5	3.6	0.1	100.0
Bagalkot	93.9	1.8	0.3	4.0	0.0	100.0
Bangalore Rural	91.1	2.2	3.0	3.7	0.0	100.0
Bangalore Urban	92.2	0.0	3.3	4.5	0.0	100.0
Belgaum	92.8	1.3	1.2	4.7	0.0	100.0
Bellary	90.5	2.9	2.2	4.4	0.0	100.0
Bidar	94.2	2.1	0.6	3.0	0.1	100.0
Bijapur	90.4	2.5	1.7	5.0	0.3	100.0
Chamarajnagar	91.0	2.3	0.4	6.2	0.0	100.0
Chikamagalur	90.0	1.4	3.5	5.1	0.0	100.0
Chitradurg	90.0	5.0	1.4	3.4	0.2	100.0
Dakshina Kannada	95.3	1.6	0.7	2.0	0.4	100.0
Davanegere	91.6	4.5	0.7	3.2	0.0	100.0
Dharwad	95.8	2.5	0.0	1.8	0.0	100.0
Gadag	90.2	2.9	1.1	5.7	0.0	100.0
Gulbarga	95.1	1.7	0.7	2.2	0.2	100.0
Hassan	93.5	1.2	0.4	5.0	0.0	100.0
Haveri	91.6	3.2	0.9	4.3	0.0	100.0
Kodagu	91.8	0.4	2.8	4.5	0.5	100.0
Kolar	92.8	2.0	2.4	2.8	0.0	100.0
Koppal	94.1	2.2	0.4	3.3	0.0	100.0
Mandya	93.7	1.3	2.2	2.7	0.0	100.0
Mysore	92.8	3.1	0.7	3.3	0.0	100.0
Raichur	94.2	2.1	2.3	0.9	0.5	100.0
Shimoga	95.7	0.8	0.6	2.9	0.0	100.0
Tumkur	91.4	2.4	1.6	4.6	0.0	100.0
Udupi	99.0	0.0	0.0	1.0	0.0	100.0
Uttara Kannada	93.7	1.3	1.5	3.4	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.

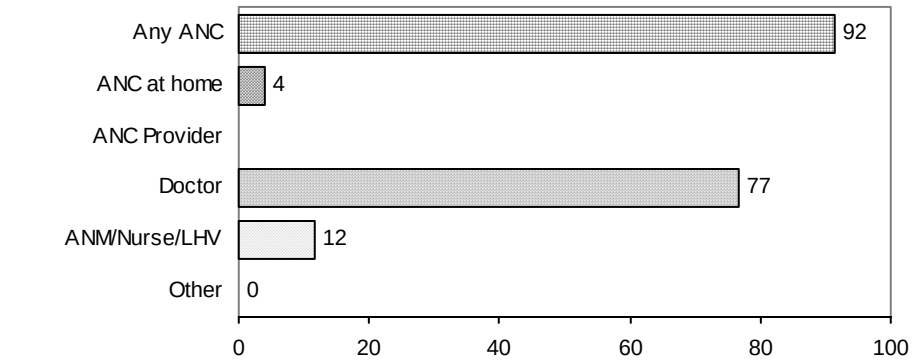
The National Population Policy (NPP), 2000 adopted by the Government of India (Ministry of Health and Family Welfare, 2000) reiterates the Government's commitments to the safe motherhood programme within the wider context of reproductive health. Among the national socio-demographic goals for 2010 specified 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 Checkups

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 (84 percent). Seventy-seven percent of women received antenatal check-ups from doctors, and 12 percent from ANM/Nurse/LHV. Only four percent women received antenatal check-ups at the doorstep from the ANMs or health worker.

Figure 4.1
Source of Antenatal Care



Note: Based on last live/still birth, born during three years preceding the survey

Karnataka, DLHS-RCH, 2002-04

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 (97 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 (92 percent) than in rural areas (69 percent), and on the other hand an 15 percent of rural women received antenatal check-ups from auxiliary nurse midwife, nurse or LHVs, the same for women in urban areas is 5 percent. Eighty-two percent of non-literate women received antenatal check-ups, nearly all women (99 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. The proportion of women who received antenatal check-ups from a doctor, increased steadily with the level of education and the

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, Karnataka, 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	90.6	4.2	71.8	14.6	0.1	0.1	1,117
20-34 years	92.1	3.9	78.0	11.0	0.2	0.1	6,173
35 years & above	82.4	5.8	65.7	11.8	0.0	0.0	307
Children ever born							
1	96.6	1.3	86.2	9.6	0.0	0.1	2,551
2	94.6	2.5	80.7	12.1	0.2	0.1	2,570
3	87.7	7.0	68.4	13.2	0.2	0.3	1,308
4+	77.2	10.7	54.3	13.3	0.1	0.1	1,121
Residence							
Rural	88.9	5.8	69.3	14.7	0.2	0.1	5,163
Urban	96.8	0.4	92.0	5.1	0.1	0.1	2,434
Education							
Non-literate	82.3	8.1	59.2	15.7	0.1	0.1	3,114
0-9 @ years	96.8	1.7	84.1	12.1	0.2	0.2	2,505
10 years & above	99.1	0.6	94.4	4.6	0.1	0.0	1,977
Religion							
Hindu	91.1	4.4	75.2	12.3	0.1	0.1	6,258
Muslim	92.0	2.7	81.2	8.6	0.2	0.2	1,143
Jain	100.0	0.0	99.0	4.5	0.0	0.0	53
Other	99.4	1.2	91.7	7.7	0.0	0.0	138
Caste/tribe#							
Scheduled caste	88.2	4.5	68.5	16.1	0.2	0.2	1,499
Scheduled tribe	84.6	7.4	61.4	16.3	0.4	0.2	677
Other backward class	92.6	3.9	79.7	9.7	0.1	0.1	3,610
Other	94.7	2.6	82.7	10.1	0.1	0.2	1,740
Standard of living index							
Low	85.4	6.8	62.3	16.8	0.1	0.1	3,306
Medium	94.3	2.6	83.1	9.9	0.2	0.1	2,675
High	99.1	0.7	94.9	3.9	0.2	0.1	1,616
Availability of health facility[4] in the village							
No	87.8	6.5	68.5	13.6	0.1	0.1	2,861
Yes	90.3	4.9	70.3	16.0	0.3	0.2	2,302
Total	91.5	4.1	76.6	11.6	0.1	0.1	7,597

Note: * Women who had their last live/still birth since 1-1-1999/1-1-2001. Total includes 45 women with zero parity and 5 with missing information on education 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 responses. [3] 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-centre, primary health centre, community health centre or referral hospital, government hospital, and government dispensary within the village.

standard of living index. Fifty-nine percent non-literate women as compared to 94 percent having education of more than 10 years received ANC from doctors. Similarly, 62 percent women belonging to households with a low standard of living against 95 percent of that from a high standard of living fall in this category. The proportion of Hindu women who received antenatal check-ups from doctors (75 percent) was much lower than that of Jain women (99 percent), Muslim (81 percent), and 'other' religion women (92 percent). Eighty-three percent of women from the 'other castes' category received antenatal check-ups from doctors, while it was 80 percent for other backward classes women, and 69 percent for scheduled caste women, and for women from scheduled tribe, it was 61 percent. Women from scheduled tribes were more likely to receive antenatal check-ups from auxiliary nurse midwives, or

LHVs. Sixteen percent of both among scheduled tribe and scheduled caste women received antenatal check-ups from ANMs, while it was 10 percent of women both among from other backward class and 'other' castes category.

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 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 37 percent of women received antenatal check-ups at Government health facility, including 9 percent through primary health centre and 3 percent through sub-centre, and 43 percent at a private health facility. Other than this, less than one percent of women reported that they had received antenatal check-ups at the Government Indian system of medicine, and 5 percent at 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 (43 percent) than older women 36 percent for age 20-34 and 28 percent for age 35 and above. Thirty-nine percent women from rural areas availed government health facilities for antenatal check-ups that were much higher than women in urban areas (32 percent), and a high proportion of women (56 percent) from urban areas availed private health facilities for antenatal check-ups than women from rural areas (37 percent). It may be mentioned that about twelve percent of women from rural areas and younger women aged below 20 years (13 percent) received antenatal check-ups at primary health 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 women with no years of schooling.

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, Karnataka, 2002-04

Background characteristic	Antenatal check-up only at home	Place of antenatal check-ups[1]							Number of women
		Govern-ment [2] health facility	Private[3] health facility	PHC	SC	ISM[4] facility		Other	
						Govt.	Private		
Age group									
Less than 20 years	4.2	43.0	37.2	13.3	4.1	0.5	3.8	0.6	1,117
20-34 years	3.9	36.2	43.9	7.6	2.4	0.5	5.3	0.8	6,173
35 years & above	5.8	28.1	42.3	9.2	2.8	0.0	4.9	1.8	307
Children ever born									
1	1.3	33.6	53.5	5.7	1.9	0.4	6.0	0.4	2,551
2	2.5	41.1	42.5	9.3	2.3	0.7	5.5	0.8	2,570
3	7.0	38.6	35.5	11.7	3.8	0.1	3.4	0.8	1,308
4+	10.7	32.2	28.8	10.5	4.9	0.1	2.7	1.9	1,121
Residence									
Rural	5.8	39.1	36.7	11.9	3.9	0.4	3.7	1.0	5,163
Urban	0.4	32.1	56.0	2.4	0.4	0.6	7.5	0.4	2,434
Education									
Non-literate	8.1	39.3	28.5	12.7	5.0	0.1	2.9	1.3	3,114
0-9 @ years	1.7	45.4	43.1	8.5	2.3	0.5	4.0	0.4	2,505
10 years & above	0.6	22.1	65.3	3.6	0.5	0.9	8.8	0.5	1,977
Religion									
Hindu	4.4	37.0	42.0	9.2	2.9	0.5	4.6	0.8	6,258
Muslim	2.7	37.1	46.4	5.8	1.6	0.1	5.9	0.5	1,143
Christian	1.2	35.2	51.8	6.5	3.4	0.0	10.7	0.5	138
Jain	0.0	20.8	49.4	1.0	0.0	0.0	22.5	0.0	53
Caste/tribe#									
Scheduled caste	4.5	48.5	28.2	10.8	4.3	0.2	3.8	0.8	1,499
Scheduled tribe	7.4	41.7	28.7	14.3	6.0	0.2	3.7	1.2	677
Other backward class	3.9	34.0	46.6	7.3	1.9	0.5	4.8	0.8	3,610
Other	2.6	31.3	52.7	7.4	1.9	0.6	6.9	0.5	1,740
Standard of living index									
Low	6.8	43.6	27.4	14.0	4.9	0.1	3.1	1.2	3,306
Medium	2.6	38.4	47.3	6.3	2.0	0.5	4.7	0.5	2,675
High	0.7	20.6	67.3	3.0	0.1	0.9	8.7	0.4	1,616
Availability of health facility[5] in the village									
No	6.5	37.5	36.5	9.0	3.2	0.5	3.1	1.1	2,861
Yes	4.9	41.2	36.9	15.3	4.8	0.2	4.4	0.7	2,302
Total	4.1	36.9	42.9	8.5	2.7	0.5	5.1	0.8	7,597

* Women who had their last live/still birth since 1-1-1999/1-1-2001.

Note: Table includes Total includes 47 women with zero parity, 1 women with missing information on education who were not shown separately. Total includes 6 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.

4.3 Antenatal Check-Ups by District

Table 4.3 indicates the antenatal coverage in Karnataka that ranges from the highest of 100 percent in Dakshina Kannada to the lowest of 70 percent in Raichur. Almost all districts, except Raichur more than 80 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 Raichur (48 percent), and Bellary (59 percent), and in all the remaining districts more than half of the women received antenatal check-ups from doctor and it is highest both in Dakshina Kannada and Bangalore (97 percent) followed by Udupi (96 percent) and Mandya (94 percent). In about 10 districts, around 20 percent of women received antenatal check-ups by ANM/Nurse/LHV and the rest of districts it is below 10 percent.

The extent of utilisation of government health facilities for antenatal check-ups was lower than that of private health facilities. The range of antenatal check-ups coverage through government facilities was highest in Mysore (64 percent) to the lowest of 7 percent in Uttara Kannada, and in four districts Belgaum, Dakshina Kannada, Bangalore and Bijapur more than half of the women visited private health facility. In Karnakata, 20 percent pregnant women in Udupi district availed the Indian system of medicine (either government or private) for an antenatal check-up. In 4 out of 27 districts, more than 10 percent of women availed such services through the Indian system of medicine.

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, Karnataka, 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
Bagalkot	88.0	8.8	59.8	20.2	23.9	49.5	7.5
Bangalore	99.5	0.0	96.7	3.2	38.0	52.4	9.6
Bangalore Rural	92.8	0.5	81.0	13.1	41.1	49.4	1.8
Belgaum	95.6	3.7	76.2	17.3	8.0	60.5	0.4
Bellary	79.9	3.7	58.7	17.8	43.4	32.2	2.6
Bidar	87.3	8.5	70.5	8.1	26.9	47.8	1.5
Bijapur	84.1	4.8	64.1	15.6	25.3	51.8	2.9
Chamarajanagar	96.3	0.4	81.8	16.0	64.5	32.2	0.7
Chikmagalur	98.3	1.9	84.5	12.8	27.2	38.0	2.9
Chitradurga	92.7	4.9	83.1	4.8	53.4	34.9	2.9
Dakshina Kannada	99.7	0.5	97.0	2.8	30.6	60.1	11.2
Davanagere	94.0	5.5	67.2	22.8	60.4	18.1	11.1
Dharwad	95.4	5.0	88.7	2.2	44.4	45.6	1.1
Gadag	85.0	5.9	68.8	10.6	34.1	43.1	2.9
Gulbarga	80.0	9.3	67.0	4.8	15.8	49.3	4.4
Hassan	98.7	1.7	89.9	7.5	52.2	44.0	3.3
Haveri	89.6	1.1	60.4	29.9	43.0	45.4	1.8
Kodagu	99.1	4.4	91.3	5.7	60.0	34.7	1.5
Kolar	94.4	0.4	72.2	22.8	60.0	30.4	3.3
Koppal	81.1	13.4	60.4	7.5	19.4	42.1	4.5
Mandya	97.4	0.0	94.1	3.3	59.8	36.4	1.9
Mysore	95.6	1.8	79.7	16.3	64.1	22.3	10.0
Raichur	69.7	12.8	48.4	9.2	21.3	30.9	2.0
Shimoga	97.7	0.5	83.8	13.4	43.6	48.3	5.9
Tumkur	94.2	2.4	82.2	10.0	48.8	42.5	1.9
Udupi	99.6	0.0	96.2	2.5	39.0	40.8	19.8
Uttara Kannada	98.8	0.7	89.1	8.7	6.8	46.4	10.8
Karnataka	91.5	4.1	76.6	11.6	36.9	42.9	4.8

* 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 checkups 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-one percent of women were weighted, 78 percent had their blood pressure checked, and 80 percent had an abdominal examination as the part of the antenatal check-ups. Other common components of antenatal check-ups were blood test (78 percent), urine test (76 percent), the measurement of height (47 percent), internal examination (51 percent), and breast examination (48 percent). About 38 percent of women had a sonogram or ultrasound, 8 percent had an X-ray and only four 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 79 percent of urban women as compared to 66 percent of rural women and 71 percent in general. Fifty-five percent of the women received advice on delivery care, fifty-two percent on danger signs of pregnancy, and fifty percent on breastfeeding. Women were less likely to receive advice on newborn care (46 percent). Advice on family planning was given to 28 percent of rural women and 40 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, Karnataka, 2002-04

Components of antenatal check-ups	Total	Rural	Urban
Antenatal measurements/tests			
Weight measured	71.3	63.5	86.4
Height measured	47.0	39.8	60.9
Blood pressure checked	77.6	71.1	90.1
Blood tested	77.7	70.6	91.5
Urine tested	76.3	68.9	90.7
Abdomen examined	79.5	74.4	89.3
Internal examined	50.5	46.3	58.6
Breast examined	47.8	40.8	61.6
X-ray	8.0	8.1	8.0
Sonography /ultrasound	37.6	26.1	60.0
Amniocentesis	4.1	3.7	5.0
Antenatal advice			
Diet	70.7	66.3	79.3
Danger signs of pregnancy	52.4	46.0	64.8
Delivery care	54.7	48.6	66.6
Breast feeding	50.4	44.8	61.1
New born care	45.5	39.3	57.5
Family planning	32.3	28.2	40.3
Number of women who received any antenatal check-up	6,948	4,591	2,358

* 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 Karnataka, 80 percent of the women received at least three antenatal check-ups and 71 percent had four or more check-ups. At least three antenatal check-ups were received by 89 percent of women in urban areas compared with 76 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. Sixty-five percent of non-literate, 87 percent literate women (educated below high school) and 94 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 eighty percent of women with parity one received three antenatal check-ups compared to fifty 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, Karnataka, 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	8.5	11.0	3.2	17.6	3.2	0.9	3.4	5.4	12.2	22.8
1	4.1	4.6	3.2	6.0	3.5	2.1	3.0	3.9	4.5	7.0
2	7.3	8.5	4.6	10.9	5.9	3.3	6.1	6.5	8.4	10.0
3	9.4	10.3	7.6	12.4	9.8	4.1	7.9	9.6	11.2	10.4
4+	70.7	65.6	81.4	53.0	77.6	89.7	79.7	74.5	63.6	49.7
Missing	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0
Stage of pregnancy at the time of the first antenatal check-up										
No antenatal check-up	8.5	11.0	3.2	17.6	3.2	0.9	3.4	5.4	12.2	22.8
First trimester	67.7	62.5	78.9	51.6	72.7	87.0	76.8	72.9	59.2	45.7
Second trimester	20.6	22.8	16.0	25.9	22.0	10.4	16.9	19.5	25.4	25.6
Third trimester	3.1	3.6	2.0	4.8	2.2	1.7	2.9	2.1	3.1	5.8
Missing	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0
Women who received TT										
No TT	12.9	15.7	6.8	23.6	6.1	4.5	8.5	9.5	14.3	28.7
1	6.1	7.1	4.1	8.0	6.1	3.3	4.8	5.1	8.1	9.3
2+	79.5	75.9	87.3	66.5	87.0	90.7	85.5	83.4	76.5	60.8
Do not remember/missing	1.4	1.3	1.8	1.9	0.9	1.4	1.2	1.9	1.1	1.2
Women who received IFA tablets/syrup										
No IFA/syrup	21.1	23.2	16.6	31.0	15.3	12.7	15.8	17.8	25.1	35.5
Received but not consumed	4.0	4.3	3.4	5.0	3.6	2.9	3.0	4.2	4.5	5.5
Consumed one IFA per day	48.6	46.8	52.2	41.7	54.3	52.0	48.7	52.6	46.9	40.6
Received 100+ IFA tablets/syrup	33.3	29.8	40.7	21.9	37.0	46.6	40.5	34.0	29.5	20.3
Percentage of women who received full [1] antenatal check-ups	29.9	26.5	37.1	18.5	34.2	42.2	36.8	30.6	26.4	17.2
Number of women	7,597	5,163	2,434	3,114	2,505	1,977	2,551	2,570	1,308	1,121

Note: Total includes 47 women with zero parity and 1 with missing information on education 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.

Continued…….

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 iron and were given iron folic acid (IFA) tablets/syrup during pregnancy, and percentage who received full antenatal check-ups by some selected background characteristics, Karnataka, 2002-04

	Religion				Caste#				Standard of living index			Availability of health facility[2] in the village	
Antenatal care indicators	Hindu	Muslim	Christian	Jain	Scheduled caste	Scheduled tribe	Other backward class	Other	Low	Medium	High	No	Yes
Number of ANC visits													
No visit	8.8	8.0	0.6	0.0	11.7	15.4	7.4	5.3	14.6	5.6	0.8	12.1	9.6
1	4.4	3.2	2.2	0.0	4.9	5.7	4.1	3.0	5.7	3.7	1.8	4.9	4.1
2	7.3	7.1	8.9	2.7	8.1	9.5	6.7	7.2	9.4	6.6	4.0	9.0	7.9
3	9.5	9.2	8.8	4.1	12.0	12.5	8.0	8.7	11.7	9.7	4.2	10.7	9.7
4+	69.9	72.6	79.5	93.2	63.2	56.9	73.8	75.8	58.7	74.3	89.1	63.2	68.5
Missing	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.0
Stage of pregnancy at the time of the first antenatal check-up													
No antenatal check-up	8.8	8.0	0.6	0.0	11.7	15.4	7.4	5.3	14.6	5.6	0.8	12.1	9.6
First trimester	67.2	69.0	74.6	87.2	60.1	55.5	70.1	74.1	55.5	71.7	86.2	60.9	64.5
Second trimester	20.7	20.6	17.2	11.2	24.3	25.9	19.3	18.1	25.8	19.9	11.1	23.3	22.1
Third trimester	3.1	2.4	7.6	1.5	3.8	3.2	3.2	2.4	4.1	2.7	1.8	3.6	3.7
Missing	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.0
Women who received TT													
No TT	13.5	11.0	2.1	4.8	15.7	21.4	12.1	8.9	20.4	9.0	3.9	17.4	13.6
1	6.2	6.2	3.3	0.0	6.2	7.5	6.4	5.3	8.1	5.5	3.2	7.6	6.5
2+	78.9	81.2	94.0	82.9	76.8	69.8	80.1	84.4	70.0	84.1	91.5	73.9	78.4
Do not remember/missing	1.3	1.6	0.6	12.2	1.4	1.2	1.4	1.3	1.5	1.4	1.4	1.1	1.4
Women who received IFA tablets/syrup													
No IFA/syrup	20.8	23.7	8.6	31.0	21.5	27.9	21.4	17.3	26.7	19.0	13.0	24.8	21.2
Received but not consumed	4.0	4.2	3.3	0.0	5.2	4.6	3.4	3.9	4.8	3.6	3.0	4.6	3.8
Consumed one IFA per day	48.6	47.8	59.3	31.5	47.9	47.8	48.1	50.9	44.8	50.9	52.4	43.9	50.5
Received 100+ IFA tablets/syrup	33.4	31.0	45.5	42.0	30.7	21.4	35.4	35.7	26.4	33.5	47.2	29.2	30.6
Percentage of women who received full [1] antenatal check-ups	29.9	28.0	42.3	40.9	27.1	18.4	32.4	31.4	22.9	30.3	43.3	26.1	27.0
Number of women	6,258	1,143	138	53	1,499	677	3,610	1,740	3,306	2,675	1,616	2,861	2,302

Note: Total includes 6 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

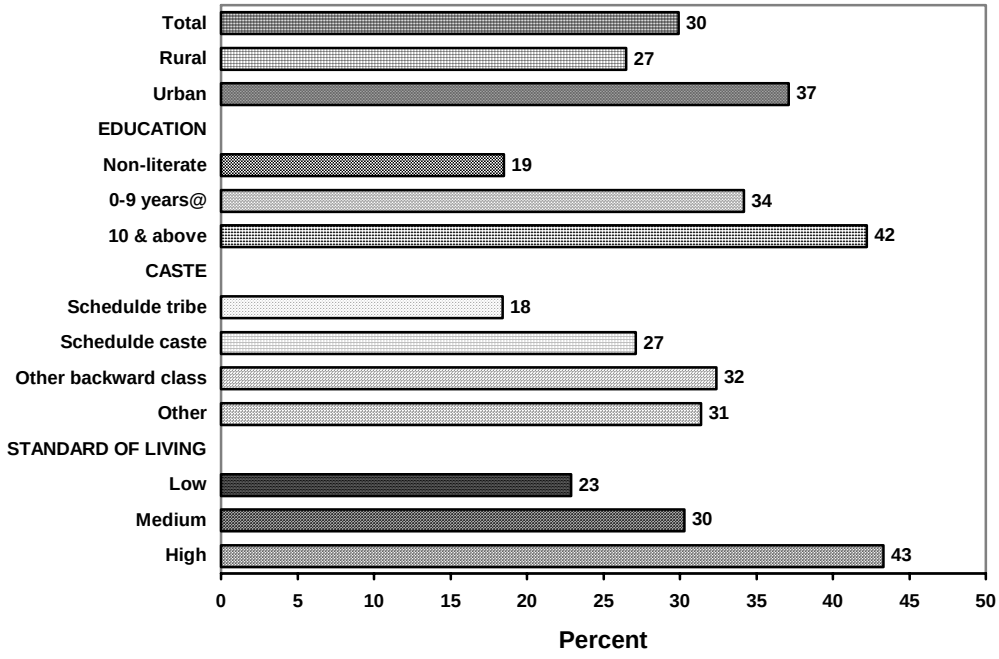
Jain women (97 percent) were more likely to have at least three visits for antenatal check-ups than Christian (88 percent), Muslim women (82 percent), and women from Hindu religions (79 percent). Coverage is substantially lower for women from scheduled-tribes (69 percent) than to women of other than scheduled tribe (75-84 percent). Having three or more antenatal visits also increased with the standard of living 70 percent for women with a low standard of living, 84 percent for women with a medium standard of living and 93 percent for women with a high standard of living. Availability of health facility in the village does not make any difference to the minimum three visits for antenatal check-ups.

Data on timing of first antenatal check-ups shows that about sixty-eight percent of the women received their first antenatal check-up in the first trimester of pregnancy, and another 21 percent received their first check-up in the second trimester, and 3 percent of women received their first check-up in the third trimester. A relatively higher proportion of women in the urban areas (79 percent) as compared to those in rural areas (63 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. Fifty-two percent of non-literate women had undergone their first antenatal check-up in the first trimester, and 87 percent of women who had completed at least 10 years of schooling received their first antenatal check-up in the first trimester. More than seventy-six of the women with parity-1 were visited in first trimester and only forty-six percent women with parity- four and above had undergone antenatal check-up in first trimester. Hindu women were less likely to go for first antenatal check-up in first trimester of their pregnancy as compared to Jain, Christian and women of Muslim religion, and fifty-six percent of scheduled tribe women were visited in first trimester for first antenatal check-ups compared with 60 percent to scheduled caste women, 70 percent of other backward class of women and 74 percent women from ‘other’ caste category. Fifty-six percent women with low standard of living, 72 percent with medium standard of living, and 86 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 Karnataka received IFA supplements for 86 percent of the last birth during three years preceding the survey. The coverage of IFA tablets is relatively higher in urban areas (96 percent) than in rural areas (81 percent). IFA coverage is much below for women of higher parity, women with low standard of living, and scheduled caste-tribe women. IFA coverage is also lower among Jain religion women (74 percent) than Hindu (86 percent) and Muslim (83 percent) women. Again, during pregnancy in the last three years preceding the survey, only 30 percent of women received 100 or more IFA, 27 percent in rural areas and 37 percent in urban areas. Intake of 100 or more IFA is positively associated with education and high standard of living index and negatively associated with parity. Women from other religions and other backward classes received 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 Eighty percent of the women received two or more tetanus toxoid injections. Coverage of two or more TT injection is slightly higher in urban areas (87 percent) than that in rural areas (76 percent). The coverage of at least one tetanus toxoid injection for Christian women (97 percent) is more than that for Muslim women (87 percent), Hindu (85 percent), and women from Jain religions (83 percent). Coverage of at least one tetanus toxoid injection is almost similar for 'other' caste category (90 percent), other backward classes (87 percent), schedule caste (83 percent), and for scheduled tribe women (77 percent). Non-literate women received at least one tetanus toxoid injection for 75 percent of their last birth, whereas literate women with 9 years of schooling received at least one tetanus toxoid injection for 93 percent, and women who had completed 10 years or more of schooling received at least one tetanus toxoid injection for 94 percent of their last birth. Ninety-five percent of women with a high standard of living received at least one tetanus toxoid injection, and 78-90 percent women with low or medium standard of living received at least one tetanus toxoid injection for their last live/still birth. The coverage varies inversely by parity. At least one tetanus toxoid injection was received by 90 percent women of Parity-1 compared with 70 percent of Parity 4 and above.

Figure 4.2
Full Antenatal Care by Background Characteristic



Literate mothers with no years of schooling are also included.

Karnataka, DLHS-RCH, 2002-04

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. Thirty percent of women in Karnataka received full antenatal care. Coverage of full antenatal care is low for non-literate women, women with higher parity, Muslim women, women from scheduled tribe, 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 (27 percent) than in urban areas (37 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, Karnataka, 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
Bagalkot	56.4	66.8	83.6	18.4	14.4
Bangalore	85.0	93.7	97.3	52.2	49.6
Bangalore Rural	71.8	88.3	88.1	57.1	55.7
Belgaum	72.8	85.6	87.2	28.1	26.6
Bellary	45.4	58.0	74.8	21.8	19.1
Bidar	49.0	71.8	77.3	22.6	19.1
Bijapur	50.2	63.2	79.7	21.4	16.2
Chamarajanagar	84.9	90.1	95.6	38.0	36.5
Chikmagalur	84.4	91.6	89.1	46.3	40.9
Chitradurga	61.0	78.7	87.8	34.5	28.6
Dakshina Kannada	84.5	94.7	97.0	26.9	24.5
Davanagere	69.9	86.0	92.1	12.4	11.2
Dharwad	65.5	83.8	91.6	32.7	28.0
Gadag	56.5	67.4	85.1	23.9	18.1
Gulbarga	49.1	61.8	66.7	16.0	14.6
Hassan	75.1	91.4	95.7	29.6	27.2
Haveri	70.6	80.7	93.6	42.7	36.6
Kodagu	82.4	89.8	90.5	40.3	35.7
Kolar	71.6	86.9	91.5	40.9	37.7
Koppal	48.4	61.2	67.7	29.8	24.7
Mandya	87.2	95.3	96.1	35.4	35.1
Mysore	77.1	85.0	95.4	16.4	15.1
Raichur	39.4	50.9	56.1	30.3	25.5
Shimoga	86.1	90.1	96.0	39.0	34.6
Tumkur	67.1	83.6	81.9	51.4	41.8
Udupi	88.1	99.0	97.7	49.9	49.5
Uttara Kannada	89.2	95.3	81.8	43.0	35.3
Karnataka	67.7	80.0	85.7	33.3	29.9

* Women who had their last live/still birth since 1-1-1999/1-1-2001

[1] 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

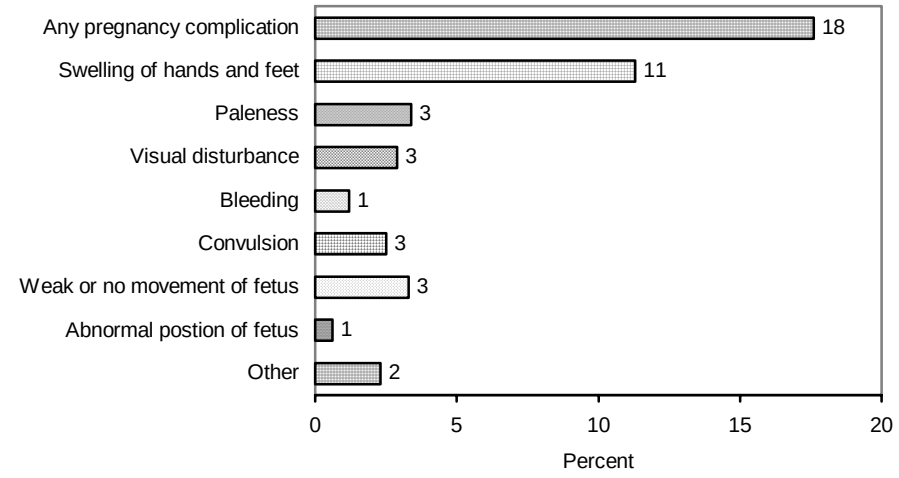
The utilisation of antenatal care services differs from district to district. Except 5 out of 27 districts, Gulbarga, Bidar, Koppal, Bellary and Raichur less than half but all other districts are more than three-fourth of the women received their first antenatal check-up in the first trimester of pregnancy. The percentage of women who received at least three visits for antenatal check-ups ranges from 51 percent in Raichur to 99 percent in Udupi. In two districts namely Raichur and Bellary, the coverage of at least three visits of ANC were below 60 percent (see Map-3). There has been good coverage of tetanus toxoid injection in the all districts, ranging from 56 to 98 percent, but on the other hand, performance regarding receipt of 100 or more IFA is poor. In all, excluding four districts, the value ranges from 12 to 43

percent, and it is lowest in Davanagere. The percentage of women who received full antenatal care ranges from 11 percent in Davanagere to 56 percent in Bangalore Rural. In 15 of 27 districts, Davanagere, Bagalkot, Gulbarga, Mysore, Bijapur, Gadag, Bellary, Bidar, Dakshina Kannada, Koppal, Raichur, Belgaum, Hassan, Dharwad and Chitradurga 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.

Figure 4.3
Percentage of women with Pregnancy Complication and by Symptoms



Karnataka, DLHS-RCH, 2002-04

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, Karnataka, 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	16.7	10.8	3.2	3.5	0.9	2.9	2.6	0.5	1.7	1117
20-24	17.2	10.9	3.2	3.1	0.8	2.6	3.2	0.6	2.1	3220
25-29	17.2	11.3	3.5	2.2	1.5	2.2	2.9	0.9	2.4	2188
30-34	21.7	13.2	3.8	2.8	2.0	2.2	4.9	0.6	4.3	765
35-39	19.1	13.5	4.1	4.5	1.4	2.7	6.2	0.1	1.1	246
40-44	16.7	11.5	8.3	2.1	2.0	2.2	3.7	1.7	1.2	61
Children ever born										
1	20.7	13.5	3.6	2.8	1.3	2.6	4.0	0.6	2.9	2551
2	16.1	9.6	3.3	2.7	1.0	2.1	3.0	0.6	2.3	2570
3	14.4	9.4	3.6	2.8	1.1	3.5	2.6	0.9	1.7	1308
4+	16.9	11.5	3.1	3.7	1.2	2.0	3.1	0.5	1.3	1121
Residence										
Rural	17.5	11.0	3.9	3.3	1.3	2.9	3.9	0.6	1.6	5163
Urban	17.8	12.0	2.5	2.1	0.9	1.7	2.0	0.7	3.7	2434
Standard of living index										
Low	18.0	11.6	3.9	3.6	1.5	2.9	3.8	0.4	1.5	3306
Medium	16.2	10.0	3.1	2.7	0.8	2.4	2.8	0.9	2.7	2675
High	19.2	13.0	3.1	1.9	1.0	1.7	3.2	0.7	3.3	1616
Received any ANC										
Yes	18.5	11.9	3.6	3.0	1.2	2.6	3.6	0.7	2.5	6948
No	8.5	5.6	1.4	2.0	0.3	1.3	0.2	0.0	0.5	646
Total	17.6	11.3	3.4	2.9	1.2	2.5	3.3	0.6	2.3	7597

Note: Total includes 47 women with zero parity, 3 with missing information on whether received any ANC who were not shown separately.
@ Literate women with no years of schooling are also included.

About 18 percent of the women experienced at least one pregnancy-related problem. It does not differ between rural (18 percent) and urban (19 percent) women. Women aged 30 years and above, and women with low parity face at least one pregnancy related problem more than younger women and women with high parity do. This proportion is relatively high among women who had received some kind of antenatal care during the pregnancy. Nineteen percent of women who had an antenatal check-up reported that they had experienced at least one problem during their pregnancy while 9 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' (11 percent), 'paleness' (3 percent), 'weak or no movement of foetus' (3 percent), 'visual disturbance' (3 percent) and 'convulsion' (3 percent). Only 1 percent each reported 'abnormal position of foetus', and 'vaginal bleeding'. Other problems related to pregnancy were reported by 2 percent of women. Swelling of hands and feet is more common among older women, women with parity-1 and parity-4 and above, and women with low and high standard of living. The percentage of women who were more anaemic belonging to the age group 35-39 years, and 40-44 years, women from rural areas, women with a low standard of living. Anaemia, visual disturbance, and convulsion increased steadily with increase of parity, whereas women with parity-1 reported vaginal bleeding, weak or no movement of foetus and abnormal position of foetus more. The younger women (15-19 years of age) were more likely to report visual disturbance, convulsion and weak or no movement of foetus and abnormal position 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. Seventy-one percent of women reported that they had obtained advice or consulted someone for their problem. The proportion was higher among urban women (77 percent) than among rural women (68 percent), and 71 percent of women sought treatment from those villages where health facility was available as compared to 65 percent of women with non-availability of health facility within the village.

Among women who sought treatment for pregnancy complications, 35 percent visited a government health facility including a primary health centre (6 percent) and sub-centre (2 percent). More than half of them visited a private health facility, and 8 percent had gone to a facility with the Indian system of medicine, while another 1 percent obtained advice from another health facility. The proportion of women who visited a private health facility is higher in urban areas (63 percent) than in rural areas (52 percent). Among women who sought treatment, 92 percent went to a doctor and 8 percent to an auxiliary nurse midwife or nurse or LHV. Ninety-four percent of these women in urban areas, and 91 percent in rural areas were examined by a doctor, whereas ANM/Nurse/LHV examined 9 percent women in rural areas and 6 percent in urban 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, Karnataka, 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	70.8	67.7	77.2	65.3	70.5
Number of women	1,338	905	433	482	423
Percentage sought treatment at health facility					
Government health facility[1]	35.2	40.7	25.1	41.4	40.0
Primary health centre	6.3	9.0	1.4	6.9	11.2
Sub centre	1.5	2.3	0.0	0.6	4.2
Private health facility[2]	56.2	52.3	63.2	51.3	53.5
ISM[3] facility	8.1	7.2	9.6	7.2	7.2
Other	1.0	1.1	0.8	1.4	0.8
Percent distribution of women who obtained treatment from					
Doctor	91.7	90.6	93.7	90.3	90.9
ANM/nurse/midwife/LHV	8.1	9.1	6.3	9.4	8.8
Other[4]	0.2	0.3	0.0	0.3	0.3
Missing	0.0	0.0	0.0	0.0	0.0
Total percent	100.0	100.0	100.0	100.0	100.0
Number of women	947	613	334	315	298

[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

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. A little less than one-third of the birth (29 percent) took place both in the government and private health institutions, and a large proportion of births (42 percent) took

place at home. About eighty-four percent of the deliveries in urban areas and forty-six percent of the deliveries in rural areas took place in health institutions. Deliveries in health facilities in Karnataka rose from 50 percent in Round-I to 58 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, Karnataka, 2002-04

Background characteristics	Health institutions		Home	Other	Missing	Total percent	Number of women
	Public	Private					
Age group (in years)							
Below 20	31.0	17.7	51.1	0.1	0.0	100.0	1,117
25-34	29.1	30.9	39.8	0.1	0.0	100.0	6,173
35 and above	21.1	29.4	49.3	0.0	0.1	100.0	307
Children ever born							
1	35.2	39.9	24.9	0.0	0.0	100.0	2,551
2	29.2	28.7	41.9	0.1	0.1	100.0	2,570
3	26.6	20.9	52.2	0.3	0.0	100.0	1,308
4+	17.2	13.6	69.2	0.0	0.0	100.0	1,121
Residence							
Rural	26.7	18.9	54.2	0.1	0.0	100.0	5,163
Urban	34.0	50.1	15.8	0.1	0.0	100.0	2,434
Education							
Non-literate	23.5	10.2	66.1	0.1	0.1	100.0	3,114
0-9@ years	37.1	28.3	34.6	0.1	0.0	100.0	2,505
10 years & above	27.6	59.3	13.0	0.1	0.0	100.0	1,977
Religion							
Hindu	29.1	26.7	44.0	0.1	0.0	100.0	6,258
Muslim	28.8	36.8	34.4	0.0	0.0	100.0	1,143
Christian	35.4	44.2	20.4	0.0	0.0	100.0	138
Jain	12.6	80.1	7.3	0.0	0.0	100.0	53
Caste#							
Scheduled caste	30.8	16.4	52.4	0.3	0.1	100.0	1,499
Scheduled tribe	24.9	14.3	60.6	0.2	0.0	100.0	677
Other backward class	29.8	30.5	39.6	0.1	0.0	100.0	3,610
Other	27.7	41.3	30.9	0.0	0.0	100.0	1,740
Standard of living index							
Low	26.7	10.5	62.6	0.1	0.1	100.0	3,306
Medium	35.0	30.1	34.8	0.1	0.0	100.0	2,675
High	24.0	64.7	11.2	0.0	0.1	100.0	1,616
Number of antenatal check-ups							
No check-up	13.0	4.4	82.6	0.0	0.1	100.0	646
1	26.0	13.4	60.1	0.0	0.6	100.0	315
2	24.1	17.2	58.5	0.2	0.0	100.0	552
3	26.0	17.6	56.2	0.2	0.0	100.0	714
4+	32.1	35.5	32.3	0.1	0.0	100.0	5,368
Delivery characteristics							
Normal	28.9	24.6	46.4	0.1	0.0	100.0	6,588
Caesarean	32.0	64.6	3.4	0.0	0.0	100.0	783
Assisted	24.4	29.0	45.3	0.9	0.4	100.0	210
Availability of health facility[1] in the village							
No	25.7	16.9	57.3	0.1	0.0	100.0	2,861
Yes	28.0	21.5	50.4	0.1	0.1	100.0	2,302
Total	29.0	28.9	41.9	0.1	0.0	100.0	7,597

Note: Total includes 47 women with zero parity,1 with missing information on education,3 on number of ANC visits and 16 on delivery characteristics who were not shown separately. Total includes 6 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] 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 slightly higher for women aged 35 years and above (51-60 percent) than for young women under 35 years (49 percent). Institutional deliveries, particularly in private health facilities, increase sharply with education and the standard of living. Around one-fourth (24 percent) of the births to non-literate women and 65 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 (75 percent) to parity four and above (31 percent). Institutional delivery is much lower for Muslim women (66 percent) than for Hindus (56 percent), Christian (80 per cent) and Jain women (93 percent). Only 39 percent births of women from scheduled-tribes are institutional deliveries as compared to 47 percent of births to women from scheduled-castes, 60 percent to other backward classes and 69 percent of births to women from the 'other' caste category. Institutional deliveries are more common among women who had four or more antenatal check-ups (68 percent) than among who had fewer antenatal check-ups (39-44 percent). Institutional deliveries are least prevalent among births to women who did not receive any antenatal check-ups (17 percent). As expected, a large proportion of births occurred through caesarean section (97 percent), and 53 percent of assisted deliveries took place at health institutions. At the same time, 3 percent of caesarean deliveries and 45 percent of assisted deliveries took place at home. Fifty percent of births took place at health institutions in the village with availability of health facility compared to 43 percent of births from villages without any health facility.

4.8.1 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 9 percent of home deliveries were attended by doctors, 12 percent by ANM or nurse or LHV, 12 percent by trained birth attendants, 23 percent by untrained *dais*, 44 percent were attended by relatives and friends and 1 percent of home deliveries were not attended by anyone (Figure 4.4). Overall, health professionals attended 21 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 20-21 percent of births attended by health professional for women age below 20 and 20-34 years and only 15 percent of births for women age 35 and above were attended by health professionals. In rural areas, 19 percent of births were attended by health professionals as compared to 34 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 more than double as compared to non-literate women. About one-fourths (24 percent) of home deliveries to women with a medium standard of living and 17 percent of deliveries to women with a low standard of living were attended by health professionals. Home deliveries are more likely to be attended by health

professionals among Christian women (35 percent) than among Muslim women (23 percent) and Hindu (20 percent). Only 14 percent

Table 4.10 ASSISTANCE DURING HOME DELIVERY AND SAFE DELIVERY

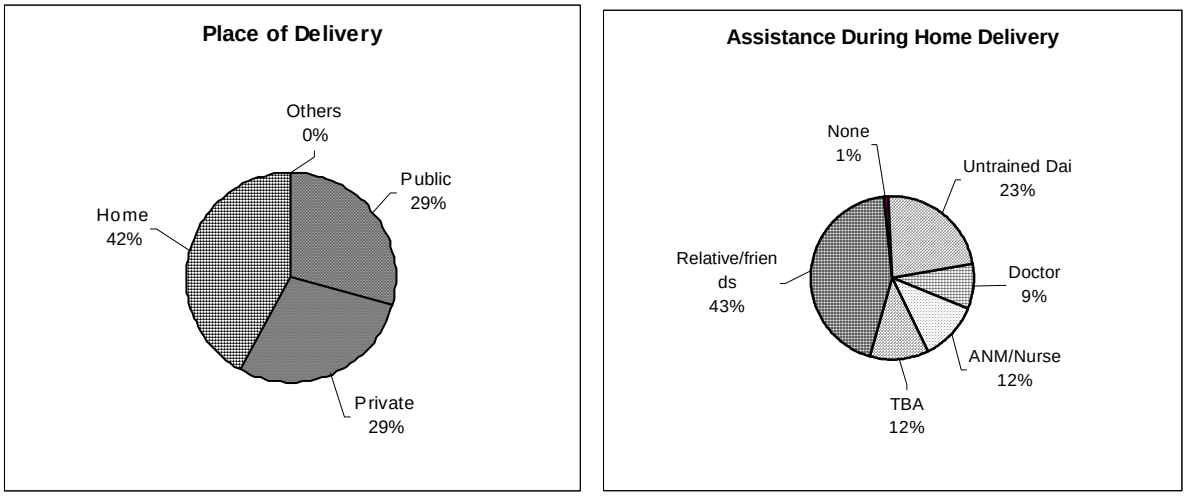
Percent distribution of women who had given live/still births during three years preceding the survey, by assistance during home delivery, and percentage of safe delivery, according to selected background characteristics, Karnataka, 2002-04

	Attendant assisting during home delivery[1]							
Background characteristics	Doctor	ANM/ Nurse/ LHV	TBA	Un-trained *dai*	Relative / friends	None	Number of women	Percentage of safe[2] delivery
Age group (in years)								
Below 20	8.4	11.5	10.1	24.2	44.5	1.3	571	58.9
25-34	9.0	12.1	12.0	22.3	43.8	0.7	2,459	68.4
35 and above	8.8	6.5	12.1	29.1	43.5	0.0	152	58.1
Children ever born								
1	13.6	15.9	10.8	21.0	38.4	0.4	635	82.4
2	8.4	13.7	12.0	23.7	41.1	1.1	1,077	67.1
3	8.7	10.0	13.5	21.4	45.7	0.8	683	57.2
4+	6.2	7.4	10.4	24.9	50.5	0.7	776	40.2
Residence								
Rural	8.4	10.4	11.6	23.4	45.3	0.8	2,798	55.9
Urban	12.4	21.5	11.9	19.8	34.0	0.3	384	89.5
Education								
Non-literate	7.8	7.3	10.8	23.4	49.9	0.8	2,059	43.6
0-9@ years	9.5	18.3	12.7	23.5	35.3	0.7	866	75.0
10 years & above	16.1	25.2	14.6	17.6	25.6	0.9	257	92.2
Religion								
Hindu	8.9	11.1	11.7	23.1	44.3	0.9	2,753	64.6
Muslim	8.3	15.1	11.3	23.2	41.9	0.2	393	73.7
Christian	(13.8)	(20.7)	(10.3)	(10.3)	(44.8)	(0.0)	28	87.3
Caste#								
Scheduled caste	6.8	7.3	10.3	24.3	50.1	1.2	786	54.6
Scheduled tribe	9.2	7.2	7.7	22.8	52.5	0.6	410	49.1
Other backward class	8.3	15.2	12.7	22.3	40.9	0.6	1,429	69.6
Other	12.6	12.7	14.0	23.0	36.7	0.9	538	76.9
Standard of living index								
Low	8.2	8.9	10.2	23.4	48.4	0.9	2,070	47.9
Medium	9.2	15.2	14.3	23.0	37.6	0.7	931	73.6
High	15.2	26.8	14.5	18.1	25.4	0.0	181	93.5
Number of antenatal check-ups								
No check-up	6.7	4.1	9.1	24.0	55.6	0.5	533	26.3
1	10.8	5.1	13.1	24.9	46.1	0.0	189	48.9
2	10.3	7.2	10.1	23.8	47.2	1.4	323	51.5
3	6.0	8.7	12.4	24.3	47.5	1.1	401	51.9
4+	9.8	16.4	12.4	21.9	38.7	0.8	1,734	76.0
Delivery characteristics								
Normal	7.9	10.9	12.0	23.5	44.9	0.8	3,060	62.2
Caesarean	(32.1)	(10.7)	(0.0)	(10.7)	(42.9)	(3.6)	27	98.1
Assisted	34.7	37.2	5.4	6.3	16.4	0.0	95	86.0
Availability of health facility[3] in the village								
No	8.0	8.0	12.4	24.4	46.1	1.2	1,639	51.8
Yes	9.1	13.8	10.5	22.0	44.2	0.4	1,159	61.0
Total	8.9	11.7	11.7	23.0	43.9	0.8	3,182	66.6

Note: Total includes 10 women with zero parity and 2 women with missing information on number of ANC visits who were not shown separately. Total includes 4 Jain women and 4 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
[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

of births to women from scheduled castes, 16 percent to scheduled tribes, 26 percent to other backward classes and 25 percent to women belonging to 'other castes' category were attended by health professionals. Eleven percent of home deliveries to women who did not have any antenatal check-ups were attended by health professionals as compared to 26 percent of home deliveries to women who had four or more antenatal check-ups.

Figure 4.4
Place of Delivery and Assistance During Delivery



Note: Percentage may add more than 100.0 due to rounding

Karnataka, DLHS-RCH, 2002-04

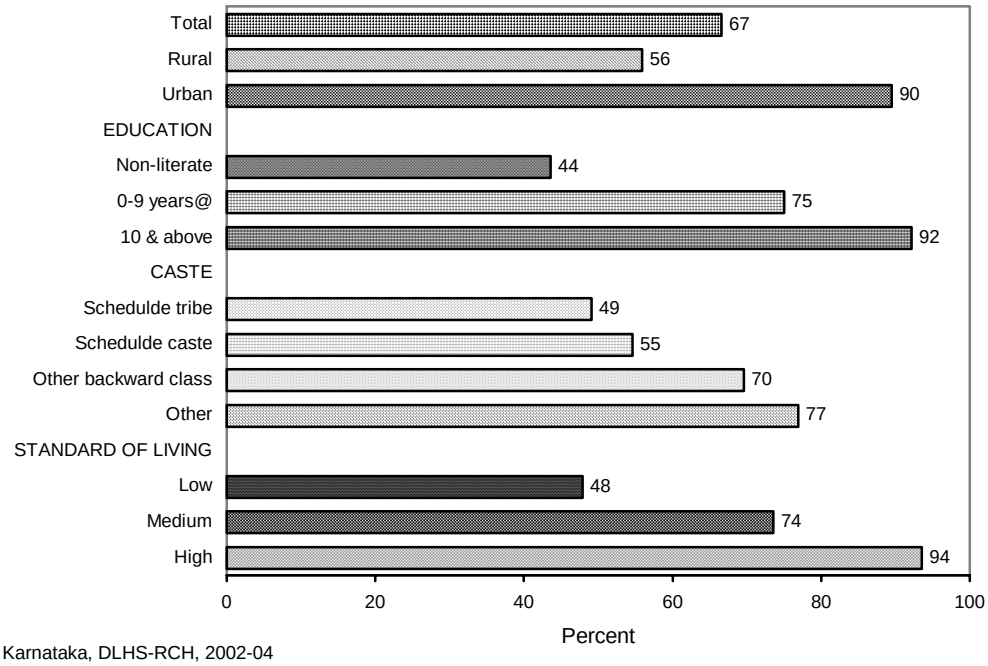
About 19 percent of home deliveries that were normal were attended by health professionals, which differ substantially to births by either caesarean section or assisted (49-72 percent), but the result should be interpreted with caution due to the small number of cases. Sixteen- percent home deliveries were attended by health professionals in villages with non-availability of a health facility compared to 23 percent from villages with availability of a health facility.

4.8.2 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 two-third of the births (67 percent) were safe in Karnataka. In urban areas, about ninety percent of the deliveries were safe as against fifty-six percent in rural areas. About 59-68 percent of the deliveries were safe for younger women aged below 35 than to elderly women (58 percent). The proportion of safe deliveries was lower among Hindu women (65 percent) than among Muslim and Christian women (74-87 percent). Only 49 percent of births to women from scheduled-tribe were safe deliveries, compared to 55 percent to women from scheduled-castes, 70 percent to women from other backward classes, and 77 percent of births to women from 'other castes' category. Proportion of safe deliveries decreases as parity rises from 1 (82 percent) to 4 and above (40 percent).

Safe deliveries were least prevalent among women who did not receive any antenatal check-ups (26 percent), and it is most prevalent among women who had four or more antenatal check-ups (76 percent). The proportion of safe deliveries increased sizeably with women's education and standard of living. Only forty-four percent of non-literate women had safe deliveries whereas its prevalence is 75 percent among women who had completed at least high school. Women with a high standard of living had 92 percent safe deliveries compared to 74 percent of women with a medium standard of living and 48 percent with a low standard of living. As compared to women who had caesarean and assisted deliveries (86-98 percent) only 62 percent of women with normal deliveries are safe deliveries. The proportion of safe deliveries was much higher in villages with a health facility than to women from those villages were health facilities are not available.

Figure 4.5
Delivery Assisted by Skilled Person by Background Characteristic



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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. Seventy percent of the women stated that it was not necessary to deliver in health institutions. As it can be seen that a higher proportion of rural women (70 percent) than urban women (60 percent) felt this way. Also, 73 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 70 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' (3 percent), 'poor quality service' (1 percent), 'family did not allow' (1 percent), 'lack of knowledge' (1 percent) and 'other' (2 percent). About 6-10 percent reported 'better care at home' and 'no time to go' to health institutions. The corresponding figures were 7-15 percent in urban areas and 6-9 percent in rural areas. It is also needs mention that 7-9 percent of women from villages with a health facility reported 'better care at home' and 'no time to go' to health institutions.

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, Karnataka, 2002-04

		Residence		Availability of health facility[1] in the village	
Reason	Total	Rural	Urban	No	Yes
Not Necessary	69.5	70.8	60.1	69.5	72.7
Not customary	2.5	2.2	5.0	2.0	2.4
Cost too much	3.3	3.4	3.1	3.9	2.7
Health facility too far/ No transport	2.9	2.6	5.2	3.0	2.0
Poor quality service	0.8	0.7	1.2	0.5	1.1
No time to go	10.1	9.4	15.0	9.9	8.8
Family did not allow	1.4	1.5	0.1	2.0	0.8
Better care at home	6.4	6.4	6.5	6.2	6.8
Lack of knowledge	0.9	1.0	0.6	1.1	0.7
Other	2.1	2.0	3.2	2.0	2.0
Total percent	100.0	100.0	100.0	100.0	100.0
Number of women	3,182	2,798	384	1,639	1,159

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

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 both Koppal and Raichur (21 percent) and followed by Bellary (25 percent) and Gulbarga (31 percent) and it is highest in both Udupi and Dakshina Kannada (94 percent) and followed by Bangalore (92 percent) and Kodagu (76 percent).

Table 4.12 DELIVERY CHARACTERISTICS BY DISTRICT

Place of delivery, assistance during home deliveries, and percentage of safe deliveries by district, Karnataka, 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
Bagalkot	48.6	50.5	20.8	59.1
Bangalore	92.4	7.6	(32.7)	94.9
Bangalore Rural	69.4	30.6	22.6	76.3
Belgaum	61.3	38.7	23.8	70.5
Bellary	25.4	74.4	18.4	39.0
Bidar	45.6	54.4	8.7	50.3
Bijapur	57.2	42.8	16.0	64.0
Chamarajanagar	71.5	28.5	22.2	77.8
Chikmagalur	70.0	30.0	28.8	78.7
Chitradurga	53.6	45.7	23.8	64.4
Dakshina Kannada	93.9	5.3	(34.8)	95.7
Davanagere	55.5	44.1	25.0	66.6
Dharwad	60.1	39.6	25.9	70.3
Gadag	44.5	55.2	25.0	58.3
Gulbarga	31.1	68.9	9.3	37.5
Hassan	65.9	34.1	38.5	79.0
Haveri	43.0	56.7	16.7	52.5
Kodagu	75.8	24.2	16.2	79.7
Kolar	53.2	46.8	23.5	64.2
Koppal	20.6	79.4	20.1	36.6
Mandya	70.2	29.8	53.6	86.2
Mysore	64.9	35.1	11.3	68.9
Raichur	20.6	79.4	20.1	36.6
Shimoga	69.2	29.8	30.6	78.4
Tumkur	63.9	36.1	32.7	75.7
Udupi	94.1	5.9	(48.8)	97.0
Uttara Kannada	74.6	25.4	25.2	81.0
Karnataka	58.0	41.9	20.7	66.6

*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. ( ) Based on less number of cases.

Deliveries in a private and government health facility are varies across the districts of Karnataka. A little less than 60 percent of births are institutional delivery in the state, but in 8 of 27 districts, more than half of the births took place at home and Koppal, Raichur and Bellary had more than 70 percent of home deliveries. Except Mandya district, more than fifty-four percent of home deliveries were attended by a health professional followed by Udupi (49 percent) and Hassan districts (39 percent). The extent of safe deliveries also varies by district, in 10 of 27 districts, the proportion of safe deliveries are below state average, it ranges from 37 percent in both Koppal and Raichur to 97 percent in Udupi. The proportion of safe

deliveries is less than 40 percent in four districts i.e. Koppal, Raichur, Gulbarga and Bellary (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. More than one-fourth 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 (28 percent) than among rural women (19 percent). Younger women below the age of 20 and 20-34 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. Ten 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 20-23 percent of women who had received some kind of antenatal check-up. Among women who had assisted or caesarean delivery, 40-68 percent reported experiencing such problems, and 16 percent women with normal deliveries also cited complications during delivery. A relatively higher proportion of women who delivered in health institutions (25-33 percent) faced at least one delivery complication compared to those who delivered at home or other places (13 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, Karnataka, 2002-04

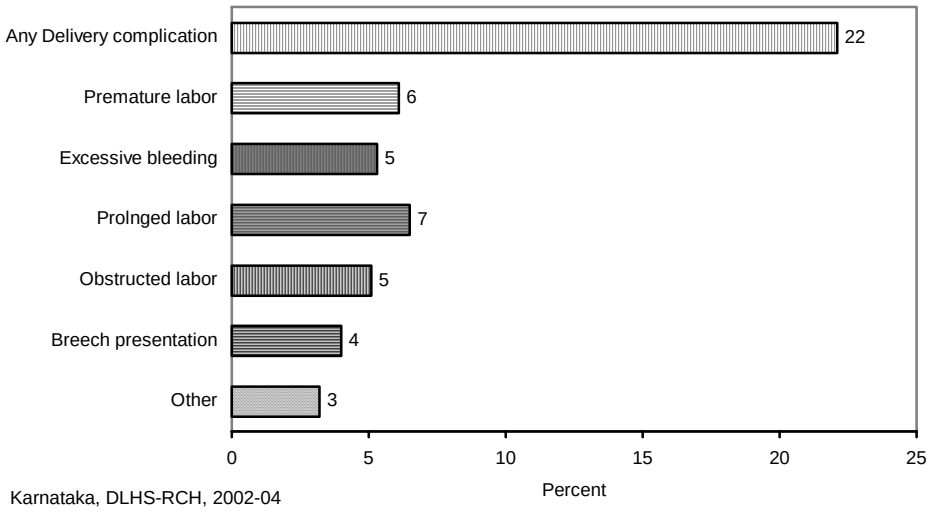
Background characteristics	Any delivery complic-ation	Type of delivery complication; Prematu-re labour	Excessi-ve bleeding	Prolong-ed labour	Obstruct-ed labour	Breech presnta-tion	Other	Number of women
Age group (in years)								
Below 20	22.4	7.6	6.2	8.8	5.5	3.4	1.6	1,117
20-34	21.9	5.8	5.0	6.1	4.8	4.0	3.5	6,173
35 and above	24.9	6.0	8.5	6.6	7.9	6.4	2.5	307
Children ever born								
1	28.3	6.9	6.0	9.3	6.6	6.7	3.8	2,551
2	21.0	5.9	5.1	5.6	5.0	3.1	3.7	2,570
3	16.9	5.2	4.5	3.7	3.7	2.2	2.7	1,308
4+	14.9	4.9	4.5	4.5	3.1	2.0	0.8	1,121
Residence								
Rural	19.1	6.4	5.6	6.0	4.3	3.1	1.5	5,163
Urban	28.3	5.5	4.6	7.6	6.7	5.9	6.9	2,434
Number of antenatal check-ups								
No check-up	10.4	4.8	1.9	3.5	2.2	0.4	0.5	646
1	21.8	4.8	6.2	8.2	6.7	3.3	2.8	315
2	19.8	5.8	6.3	6.8	6.5	2.1	0.8	552
3	22.3	7.3	7.8	7.2	5.8	1.8	1.3	714
4+	23.7	6.2	5.2	6.7	5.1	5.0	4.0	5,368
Delivery characteristics								
Normal	15.9	5.7	4.9	5.2	3.5	1.1	1.1	6,588
Caesarean	68.4	8.2	7.8	14.6	17.9	26.3	17.6	783
Assisted	40.4	7.5	8.4	17.2	6.0	9.0	13.2	210
Place of delivery								
Government sector	25.0	6.6	6.5	8.5	5.8	4.5	2.9	2,207
Private sector	32.8	8.3	5.4	7.8	7.0	8.2	7.3	2,197
Home	12.7	4.2	4.3	4.2	3.2	0.8	0.6	3,182
Total	22.1	6.1	5.3	6.5	5.1	4.0	3.2	7,597

Note: Total includes 47 women with zero parity, 3 women with missing information on number of ANC visits, 16 on delivery characteristic and 3 on place of delivery who were not shown separately.
Total includes 9 women in other place of delivery who were not shown separately.

The major problems reported were ‘obstructed labour’ (5 percent), ‘prolonged labour’ (7 percent), ‘premature labour’ (6 percent), and ‘excessive bleeding (5 percent). Only 4 percent reported ‘breech presentation’, and 3 percent reported ‘other’ problems related to delivery. Premature labour, prolonged labour, obstructed labour and excessive bleeding are more common among younger women, and women with low parity. Rural women were more likely to report delivery complications such as premature labour, excessive bleeding, and prolonged labour, whereas premature labour and excessive bleeding are more prevalent among urban women. Breech presentation, obstructed labour, prolonged labour, and other health problems related to delivery were more among women whose last delivery was caesarean, and prolonged labour and other problem was more likely among those who had a

assisted 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.

Figure 4.6
Percentage of women with Delivery Complication and by Symptoms



Karnataka, DLHS-RCH, 2002-04

4.12 Post Delivery Complications and Treatment

Table 4.14 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. Seventeen 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 rural areas (18 percent) than in urban areas (15 percent). Younger women below the age of 20, and women with lower parity and over, had there deliveries assisted by a ANM/nurse/LHV, trained birth attendant, untrained *dai,* or relatives or friends, 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.

Table 4.14 POST DELIVERY COMPLICATIONS

Percentage of women who had given last live/still births during three years preceding the survey by post delivery complication, according to selected background characteristics, Karnataka, 2002-04

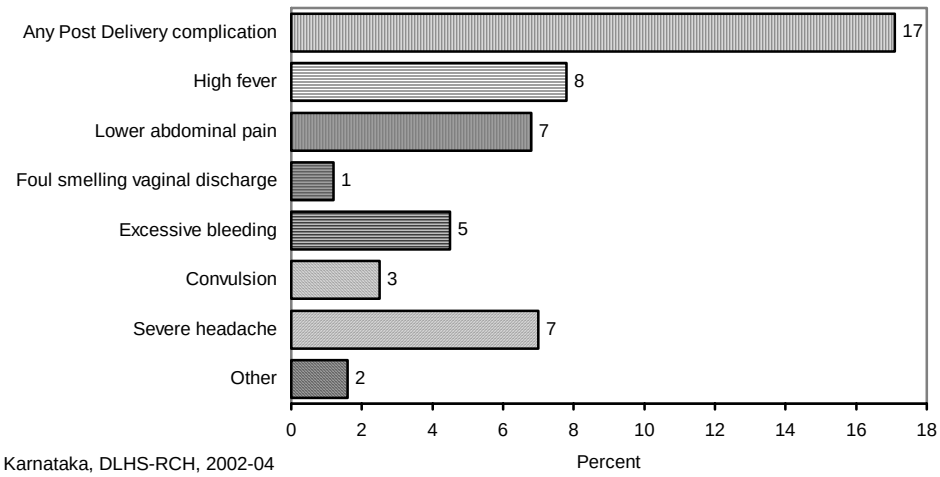
Background characteristics	Any post delivery complic-ation	Type of post delivery complication; High fever	Lower abdom-inal pain	Foul smelling vaginal discharge	Excess-ive bleeding	Convul-sion	Severe head-ache	Other	Number of women
Age									
Below 20	20.2	11.3	5.9	1.0	6.4	3.2	7.6	1.9	1,117
20-34	16.5	7.0	6.9	1.2	4.1	2.3	6.8	1.6	6,173
35 and above	18.0	9.5	7.3	1.2	6.3	3.6	8.6	1.1	307
Children ever born									
1	17.4	8.2	5.0	1.6	4.8	2.4	6.0	1.2	2,551
2	16.6	7.6	6.9	0.8	4.8	2.5	7.3	2.2	2,570
3	17.4	6.5	8.7	1.0	3.8	2.9	8.2	1.6	1,308
4+	16.3	8.2	7.9	1.2	3.8	2.2	6.7	1.2	1,121
Residence									
Rural	18.2	8.4	7.6	1.4	4.6	3.0	7.6	1.6	5,163
Urban	14.9	6.4	5.2	0.8	4.4	1.5	5.6	1.8	2,434
Delivery characteristics									
Normal	16.5	7.5	6.7	1.2	4.2	2.3	6.6	1.6	6,588
Caesarean	20.7	9.1	6.5	1.6	6.6	3.4	8.1	2.4	783
Assisted	25.7	13.2	12.1	1.6	8.4	7.1	12.9	1.0	210
Place of delivery									
Government sector	17.5	7.7	6.8	1.3	5.6	2.5	6.6	1.2	2,207
Private sector	14.7	6.4	5.5	1.0	4.5	2.0	5.7	1.2	2,197
Home	18.5	8.8	7.7	1.3	3.9	2.9	8.1	2.2	3,182
Assistance during home delivery									
Doctor	20.9	11.9	10.5	1.0	6.4	4.3	9.1	3.5	284
ANM/Nurse/LHV	15.7	5.7	6.8	0.3	3.5	1.4	5.2	4.0	374
TBA	19.9	7.0	5.5	1.1	6.4	2.7	9.4	1.7	371
Untrained *dai*	18.2	10.1	7.9	1.3	1.9	3.3	8.2	2.1	730
Relative/friends	18.6	8.9	7.8	1.7	3.8	2.8	8.4	1.5	1,398
None	(24.0)	(8.0)	(8.0)	(4.0)	(8.0)	(4.0)	(8.0)	(8.0)	25
Total	17.1	7.8	6.8	1.2	4.5	2.5	7.0	1.6	7597

Note: Table include 47 women with zero parity, 16 with missing information on delivery characteristic and 3 on place of delivery who were not shown separately.
Total includes 9 women in other place of delivery who were not shown separately.
() Based on less than 50 unweighted cases.

Women reported high fever, lower abdominal pain and severe headache (7-8 percent), excessive vaginal bleeding (5 percent), foul smelling vaginal discharge and convulsion (1-3 percent). About three percent of women reported other problems. Rural-urban differences in all symptoms of postpartum complication are large. All the postpartum complications, except foul smelling vaginal discharge, convulsions and other problems are more prevalent among younger women below the age of 20 and older women aged 35 years and above than among women 20-34 years. The symptoms of postpartum complications except high fever, excessive bleeding and foul smelling vaginal discharge 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 'foul smelling vaginal discharge', 'excessive bleeding', 'convulsion', 'severe headache', and 'other' postpartum problems during the first six weeks of delivery. Symptoms like high fever, lower abdominal pain and severe headache are more common for women who delivered at home assisted by a doctor than for women whose home deliveries were assisted by a ANM/nurse/LHV, trained birth attendant, untrained *dai,* or relatives or friends.

Figure 4.7
Percentage of women with Post Delivery Complication and by Symptoms



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 4.15 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. Sixty-nine percent of women reported that they had obtained advice or had consulted someone for their problems. The proportion was higher among urban women (73 percent) than among rural women (68 percent), and 67 percent of women sought treatment from those villages where health facility was available as compared to 68 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, Karnataka, 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	69.0	67.5	72.7	67.6	67.4
Number of women	1301	938	363	540	398
Percentage sought treatment at health facility					
Government health facility[1]	42.3	46.0	33.5	46.0	46.1
Primary health centre	6.9	9.2	1.5	7.0	12.2
Sub centre	3.0	3.9	0.7	2.7	5.7
Private health facility[2]	50.2	46.5	58.9	45.4	48.0
ISM[3] facility	4.1	3.2	6.2	4.2	1.9
Other	3.9	4.6	2.2	4.7	4.3
Percent distribution of women who obtained treatment from					
Doctor	88.6	87.3	91.7	89.0	84.9
ANM/nurse/midwife/LHV	8.6	10.2	4.6	7.8	13.5
Other health professionals[4]	0.6	0.8	0.0	1.2	0.3
Other	1.4	1.6	1.1	2.0	1.0
Missing	0.8	0.1	2.5	0.0	0.2
Total percent	100.0	100.0	100.0	100.0	100.0
Number of women	897	633	264	365	268

[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 practitioner

[5] Includes sub-centre, primary health centre, community health centre or referral hospital, government hospital, and government dispensary within the village

Among women who sought treatment for complications in the postpartum period, only 42 percent visited a government health facility including primary health centre (7 percent) and sub-centre (3 percent). Fifty percent of women visited a private health facility, and 4 percent went to a facility with the Indian system of medicine (either government or private) and another 4 percent obtained advice from other health facilities. The proportion of women who visited a government health facility is relatively higher in rural areas (46 percent) than in urban areas (34 percent). On the other hand, the proportion of women seeking treatment from a private health facility is more among women who belonged to villages with availability of health facility within the village. Among women who sought treatment, 89 percent preferred to go to a doctor and 9 percent visited an auxiliary nurse midwife or nurse or LHV, 1 percent went to other health professionals, and 1 percent went to some one else. Ninety-two percent of

these women in urban areas, and 87 percent in rural areas went to a doctor, whereas a visit to an ANM/nurse/LHV was 10 percent in rural areas and 5 percent in urban areas. There are also differences by availability of health facilities and non-availability of health facilities in the village. Eighty-nine percent of women who belonged to villages with non-availability of health facilities were seen by doctor compared to 85 percent of women belonging to villages with availability of health facilities.

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 4.16 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, 18 percent, 22 percent and 17 percent of the women experienced pregnancy, delivery and post delivery complications respectively. About 71 percent of the women sought treatment for pregnancy complications and 69 percent for post delivery complications. In 21 out of 27 districts, a minimum of less than twenty percent (7-19 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, Karnataka, 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
Bagalkot	14.9	60.2	26.9	13.7	100.0
Bangalore	13.1	90.2	30.0	15.1	68.1
Bangalore Rural	11.1	87.0	18.5	13.8	77.6
Belgaum	25.4	81.3	26.0	24.9	79.7
Bellary	16.8	55.6	22.3	21.6	60.2
Bidar	18.6	72.7	19.3	19.0	67.8
Bijapur	25.4	68.9	29.6	17.8	72.3
Chamarajanagar	11.0	54.6	8.0	5.4	(81.5)
Chikmagalur	42.5	70.5	43.4	30.5	63.8
Chitradurga	12.6	50.1	23.8	14.9	61.6
Dakshina Kannada	7.9	(67.2)	14.1	3.4	(74.3)
Davanagere	17.5	89.0	17.5	15.8	70.5
Dharwad	17.3	67.8	18.8	17.9	76.8
Gadag	18.7	61.0	20.9	24.8	79.7
Gulbarga	18.0	73.4	16.1	18.8	63.5
Hassan	18.8	66.0	20.5	18.5	47.9
Haveri	15.0	85.4	15.4	14.3	95.6
Kodagu	32.6	79.8	26.9	26.0	67.6
Kolar	16.4	71.4	21.3	19.3	65.0
Koppal	16.3	62.7	14.9	19.4	74.0
Mandya	10.8	(61.3)	20.3	14.0	41.2
Mysore	13.8	49.7	18.6	14.8	66.6
Raichur	11.6	53.5	14.2	12.4	54.8
Shimoga	18.4	45.8	22.5	10.1	72.8
Tumkur	23.4	60.7	26.5	19.2	53.9
Udupi	6.8	(73.3)	14.9	5.2	(81.1)
Uttara Kannada	37.6	81.4	33.8	22.8	75.9
Karnataka	17.6	70.8	22.1	17.1	69.0

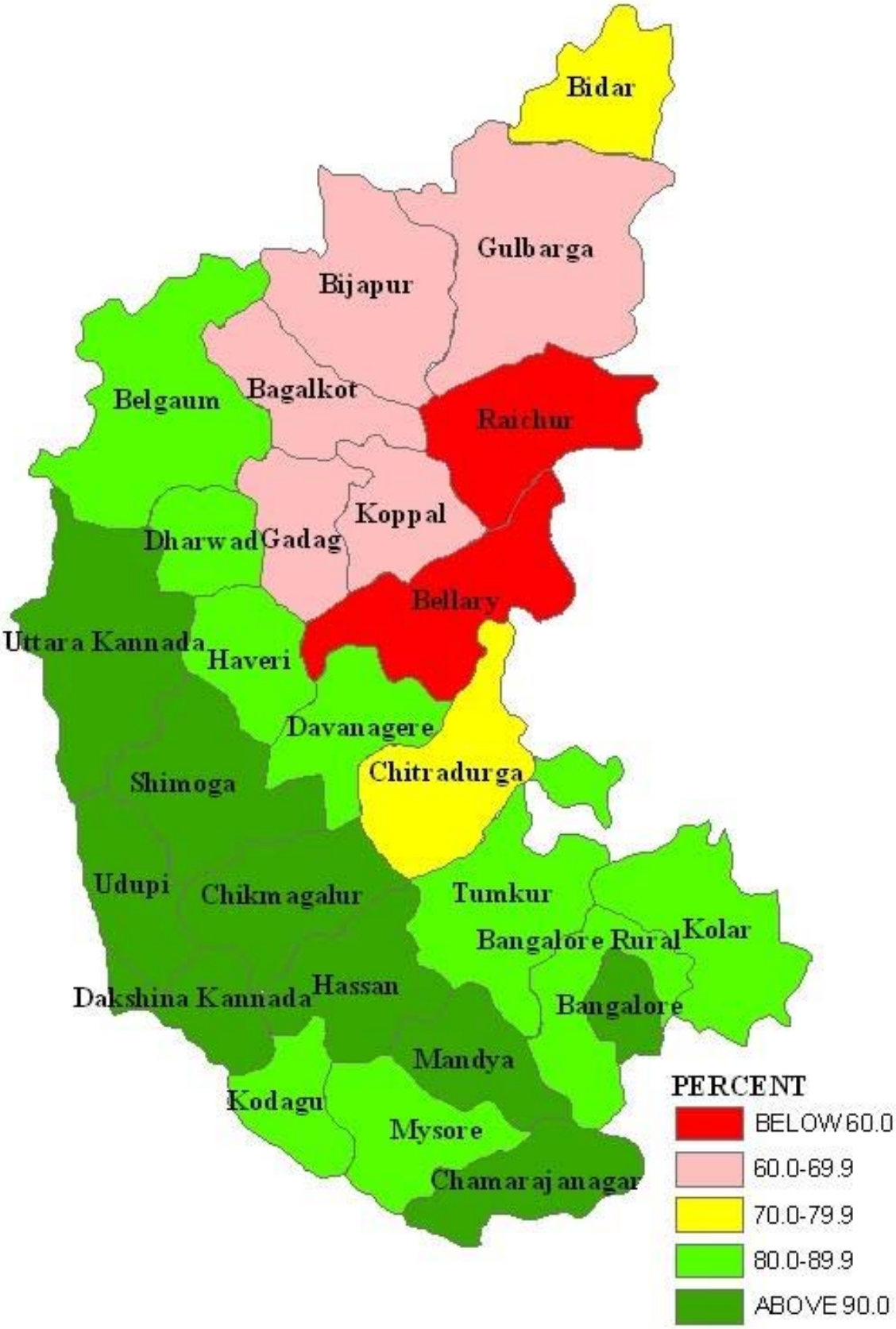
[1] Women who had last live/still birth during three years preceding the survey. [2] Women who reported at least one complication of pregnancy. [3] Women who reported at least one post delivery complication. ( ) Based on less number of cases.

In 6 out of 27 districts like, Chikmagalur (43 percent), Uttara Kannada (38 percent), Kodagu (33 percent), Belgaum (25 percent), Bijapur (25 percent), and Tumkur (23 percent), the incidence of pregnancy complications is comparatively higher than other districts. The incidence of delivery complication is higher than that of pregnancy and post delivery complications. The percentage of women who experienced at least one type of delivery complication ranges from 8 percent in Chamarajnagar to 43 percent in Chikmagalur, and incidence of post delivery complication varies from 3 percent in Dakshina Kannada to 31

percent in Chikmagalur. The incidence of all three types of complications seems to be linked with each other in varying proportions.

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 (except Bangalore, Davanagere, Bangalore Rural, Haveri, Uttara Kannada, Belgaum and Kodagu,) less than 80 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 41 percent in Mandya to 100 percent in Bagalkot.

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



Map-4: Delivery attended by skilled person, Karnataka, 2002-04

CHAPTER V

CHILD CARE AND IMMUNIZATION

Child health services under the Reproductive and Child Health (RCH) programme include health education to mothers on breastfeeding 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 Karnataka. Although, the practice of breastfeeding is common in Karnataka, the initiation of breastfeeding within two hours of the birth of the child is not always followed. Forty percent of the children were breastfed within two hours of birth, and 57 percent were breastfed within one day of birth (including those who were breastfed within two hours of birth), while 42 percent of children were breastfed after one day of birth. As shown in Figure 5.1, about 17 percent of the children were breastfed within one day of birth but after two hours of birth, 31 percent were breastfed after the first day of birth but before 3 days, and 12 percent children were put to the breast after three days. A little less than half of the women (45 percent)

who gave birth to children during the three years preceding the survey squeezed the first milk from the breast before they began breastfeeding. Not more than 63 percent of children in any socio-economic groups shown in Table 5.1 were breastfed within two hours of birth. Thirty-one percent of children from scheduled tribe were breastfed within two hours of birth, and 55 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 (67 percent), Christian (84 percent), children from other castes (64 percent), children of educated mothers of 10 and above (69 percent), and children from households with a high standard of living (71 percent) were put to the breast within 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, Karnataka, 2002-04

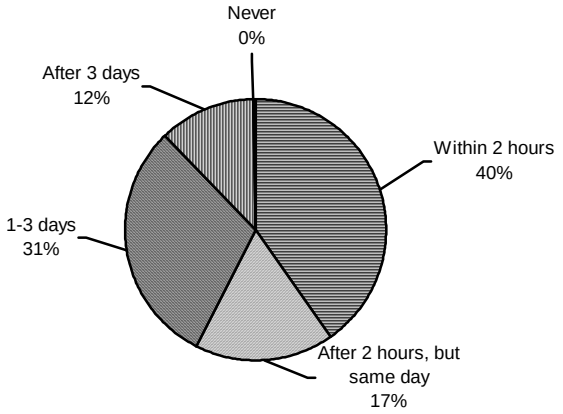
Background characteristic	Percentage started breastfeeding			Percentage whose mother squeezed first milk from breast	Number of children
	Within two hours of birth	Within one day of birth[1]	After one day of birth		
Residence					
Rural	36.6	52.9	46.6	49.4	4,512
Urban	48.2	66.9	32.8	36.6	2,124
Mother's education					
Non-literate	27.8	42.0	57.5	55.4	2,655
0-9@ years	47.7	66.8	32.9	43.3	2,221
10 and above	50.1	68.8	31.0	32.5	1,759
Religion					
Hindu	39.7	56.4	43.2	45.9	5,470
Muslim	41.6	59.7	39.8	43.4	986
Christian	63.0	83.8	15.4	34.0	127
Other	26.2	56.8	43.2	43.4	53
Caste/tribe#					
Scheduled caste	38.3	54.7	44.9	49.1	1310
Scheduled tribe	31.4	44.9	54.9	53.7	595
Other backward class	42.2	58.0	41.5	43.5	3,138
Other	42.5	63.8	36.1	42.1	1,534
Standard of living index					
Low	31.7	47.1	52.4	53.9	2,863
Medium	44.0	61.8	37.7	43.1	2,373
High	51.8	71.0	28.8	31.4	1,399
Total	40.4	57.4	42.2	45.3	6,636

Table based on youngest living child born during the three years preceding the survey
Table includes 1 child with missing information on mother's education were not shown separately
[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.

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 rural areas, mothers from Hindu religion, mothers of scheduled caste children, and children whose mothers are Non-

literate. Children who live in households with a high standard of living are less likely than children in other households to have mothers who squeezed the first milk from the breast before breastfeeding. 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.

Figure 5.1
Initiation of Breastfeeding



Karnataka, DLHS-RCH, 2002-04

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, Karnataka, 2002-04

Age in months	Status of exclusive breastfeeding			Number of children
	Exclusive breastfeeding	At least 4 months	At least 6 months	
<2	87.3	*	*	280
2-3	79.1	*	*	412
4-5	60.0	80.2	*	450
6 -7	27.9	72.7	39.0	440
8-9	13.6	81.3	41.8	424
10-11	7.6	75.1	29.0	399
12-13	9.7	75.8	37.4	460
14-15	8.8	78.1	43.0	455
16-17	7.7	73.1	29.6	373
18-19	1.7	69.8	30.4	413
20-21	1.8	75.1	26.3	359
22-23	0.4	74.9	24.6	381
24-25	1.2	73.9	31.6	429
26-27	2.3	74.6	36.9	327
28-29	3.8	77.0	32.6	312
30-31	0.7	77.9	31.8	254
32-33	4.2	75.8	37.7	238
34-35	2.5	78.4	37.4	230
< 4 months	82.4	*	*	692
4-6 months	51.7	78.4	*	690
7-9 Months	15.0	77.7	39.3	624

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

In Karnataka, more than 82 percent of children less than four months of age are exclusively breastfed. The percentage of infants exclusively breastfed drops steadily from 87 percent for children under 2 months of age to 60 percent for children who are 4-5 months old. About 78 percent of children in the age group 4-6 months were exclusively breastfed up to 4 months and 39 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 Karnataka, except Udupi (78 percent), Davanagere (69 percent), Bangalore (64 percent), Kodagu (63 percent), Shimoga (62 percent) and Bangalore Rural (60 percent), not more than 60 percent of the children were put to the breast within two hours of birth. Less than 20 percent of the children were breastfed within two hours of birth in Bijapur, Koppal, Bellary, Raichur and Mysore district. Not more than twenty-five percent of the children were put to the breast after one day of birth in Udupi, Kodagu, Dakshina Kannada, Davanagere, Shimoga and Bangalore districts. Udupi district is the lowest (6 percent) as compare to other district while children were put to the breast after one day of birth. In 11 of the 27 districts, the mothers of more than 53 percent children squeezed the first milk before breastfeeding.

Table 5.3 BREASTFEEDING BY DISTRICT
Percentage of children under age 3 who 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 exclusively breastfeed by District, Karnataka, 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		
Bagalkot	29.3	42.4	56.6	59.8	49.0
Bangalore	63.9	75.2	24.8	38.1	22.7
Bangalore Rural	60.4	65.2	33.2	30.8	25.7
Belgaum	38.6	49.3	50.1	38.3	42.5
Bellary	15.7	36.5	63.1	59.3	61.0
Bidar	30.8	43.2	56.0	44.1	11.9
Bijapur	19.3	34.7	64.5	64.1	24.5
Chamarajanagar	53.0	69.2	30.8	69.0	15.6
Chikmagalur	46.2	73.9	26.1	37.8	31.0
Chitradurga	41.3	67.6	32.0	53.2	21.8
Dakshina Kannada	38.5	83.7	16.3	25.3	42.3
Davanagere	68.9	77.5	21.9	61.2	20.3
Dharwad	25.5	47.5	51.1	62.8	85.5
Gadag	30.5	48.1	50.8	61.0	53.9
Gulbarga	21.2	32.6	67.4	58.0	8.9
Hassan	57.6	68.3	31.2	28.6	41.6
Haveri	52.0	71.7	28.3	55.3	24.8
Kodagu	62.9	83.8	15.9	34.3	35.1
Kolar	53.9	67.7	32.3	36.2	36.0
Koppal	17.6	26.7	72.8	47.1	28.6
Mandya	47.1	71.0	29.0	33.5	52.4
Mysore	14.5	65.9	33.7	24.4	39.5
Raichur	14.7	25.2	74.7	58.0	38.4
Shimoga	61.7	78.0	22.0	49.0	44.9
Tumkur	37.9	63.7	35.8	46.7	39.1
Udupi	78.1	93.5	5.6	39.0	24.6
Uttara Kannada	44.5	67.3	32.1	40.3	37.2
Karnataka	40.0	57.1	42.4	45.1	34.1

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 breastfeed 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 Dharwad (86 percent) and lowest in Gulbarga (9 percent) and in Bidar (12 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 administrated 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 (pertusis), 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. More than 71 percent of the children are fully vaccinated, and around 5 percent have not received any routine vaccination. Coverage of each vaccination except Polio 0 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 83 percent of the children have received three doses of DPT and 82 percent of the children received 3 drops of Polio, and only 77 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 are 9-percentage point for DPT and 10 percentage points for polio.

There has been some improvement in full vaccination coverage in Karnataka 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 Karnataka, coverage levels are still slightly 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

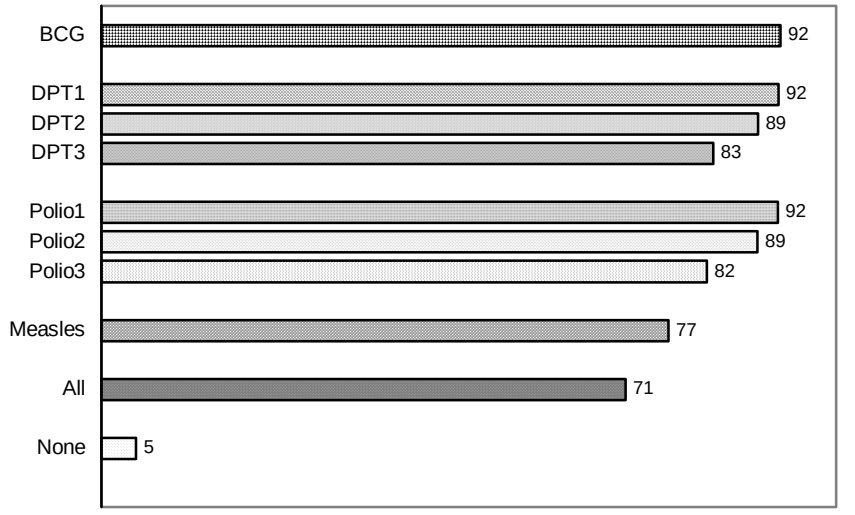
Percentage of children age 12-23 months who received vaccination according to some selected background characteristics, Karnataka, 2002-04

Background characteristic	Polio 0	BCG	DPT 1	DPT 2	DPT 3	Polio 1	Polio 2	Polio 3	Measles	Full [1] vaccination	No vaccination	Number of children
Residence												
Rural	61.7	91.2	91.2	88.2	80.9	91.1	88.4	80.2	74.1	67.8	5.1	1,781
Urban	87.7	95.1	94.6	92.1	88.5	94.1	91.1	87.2	83.8	78.9	3.8	826
Sex of the child												
Male	70.1	92.6	92.0	89.1	83.1	92.2	89.4	82.7	77.4	71.4	5.0	1,357
Female	69.7	92.2	92.5	89.7	83.4	91.9	89.2	82.2	76.9	71.2	4.5	1,250
Birth order												
1	77.5	94.3	93.1	90.4	86.9	92.8	90.3	85.8	82.6	77.9	4.0	887
2	73.5	94.9	94.9	92.2	87.8	94.2	91.5	86.7	80.5	73.8	3.3	886
3	66.4	93.7	93.6	90.4	81.0	93.7	90.5	79.8	71.5	65.6	2.9	465
4+	47.7	80.3	82.2	79.0	66.7	83.0	80.2	67.5	63.5	56.6	12.3	369
Mother's education												
Non-literate	52.3	85.6	86.3	82.2	72.7	86.8	83.0	72.2	64.8	57.8	8.7	1,069
0-9@ years	77.9	96.3	95.5	93.1	89.0	95.0	92.4	88.3	83.5	78.2	2.6	911
10 years and above	88.5	98.5	97.7	96.3	93.0	96.8	95.5	91.4	89.1	84.3	0.9	626
Religion												
Hindu	68.4	92.3	92.1	89.3	83.3	91.8	89.2	82.5	76.9	71.0	4.9	2107
Muslim	75.6	92.1	92.0	88.9	80.8	92.0	88.4	79.6	75.9	69.1	4.8	426
Christian	74.9	97.5	98.2	96.4	96.4	98.2	96.4	96.4	93.6	91.7	0.6	57
Caste/tribe#												
Scheduled caste	62.0	90.3	93.0	89.1	80.8	92.8	89.1	80.2	75.7	69.1	5.2	506
Scheduled tribe	59.6	88.1	87.4	84.2	77.7	88.8	85.5	78.0	67.1	59.5	6.2	239
Other backward class	72.3	93.5	92.3	90.0	84.5	91.9	90.0	83.8	78.4	73.3	4.7	1,250
Other	74.9	93.4	93.1	90.1	84.6	92.7	89.0	82.9	79.7	73.2	4.0	586
Standard of living index												
Low	55.9	87.1	87.4	84.3	75.5	87.6	84.9	75.3	68.3	61.8	7.9	1,107
Medium	75.3	95.4	94.7	92.2	87.0	94.3	91.8	85.4	79.5	74.2	3.2	991
High	90.0	98.4	98.1	95.1	93.0	97.4	94.0	92.2	91.9	86.5	0.8	509
Total	69.9	92.4	92.2	89.4	83.3	92.1	89.3	82.4	77.2	71.3	4.7	2,607

Table includes only last and last but one living child born since 1.1.1999/1.1.2001.
Total includes 18 women in other religion who were not shown separately.
@ Literate mothers with no years of schooling are included. # Total figure may not add to N due to do not and missing cases.
[1] BCG, three injection of DPT, three doses of Polio (excluding Polio 0) and measles

The data indicates that the coverage of each type of vaccine is more in urban areas than in rural areas. Seventy-nine percent of the children in urban areas had received all the recommended vaccinations by the time of the survey, compared with 68 percent in rural areas. Differentials in rural-urban against polio 0 may be observed from the table. Eighty-eight percent of the children have received polio vaccine at the time of birth in urban areas whereas 62 percent of the children have received the same in the rural areas.

Figure 5.2
Percentage of Chidren Age 12-23 months who have Received Specific Vaccinations,Karnataka

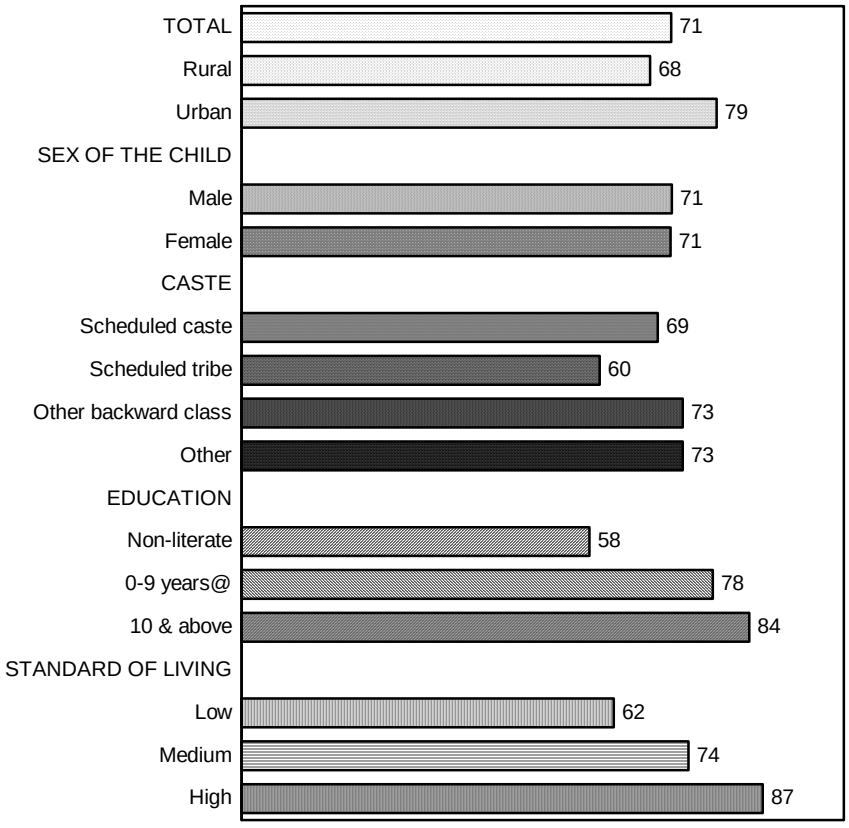


Karnataka, DLHS-RCH, 2002-04

Though male and female children (71 percent) are fully vaccinated, there has been slightly variation between these children to receive most of the individual vaccinations as a whole. 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 58 percent children of non-literate mothers are fully vaccinated compared to 78 percent of children with mothers' education below high school and 84 percent of mothers who have at least completed high school. Christian children are much more likely than Hindu and Muslim children to have received each of the recommended vaccinations except in the case of Polio O. The Muslim children are bypass the Christian and Hindu children to receive Polio O. Children from Scheduled Castes are more likely to have received each of the recommended vaccinations than Scheduled Tribes, and children from `other' caste category are more likely to have received each of the recommended vaccinations than Backward Classes. The standard of living index of the household has a strong positive relationship with vaccination coverage. Eighty-seven percent of children from households with a high standard of living are

fully vaccinated, whereas only 62 percent of children are from households with a low standard of living.

Figure 5 .3
Percentage of Children Age 12-23 months
Who Have Received All Vaccination, Karnataka



@ Literate mothers with no years of schooling are also included.

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 increased slightly from 71 percent for children in the age group 12-23 months to 77 percent for children in the age group 24-35 months. A rural-urban differential for the coverage of full vaccination is also observed. Sixty-eight percent of children in the age group 12-23 months are fully vaccinated against 74 percent of children in the age group 24-35 months in rural areas, and this gap is much wider in

urban areas (Figure 5.4). About 79 percent of children in the age group 12-23 months have received all vaccinations in urban areas compared to 83 percent with children in the age group 24-35 months. Elder children aged 24-35 months are more likely to receive each type of vaccine except Polio-0, Polio-2 and Polio-3, and DPT-2 and DPT-3.

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, Karnataka, 2002-04

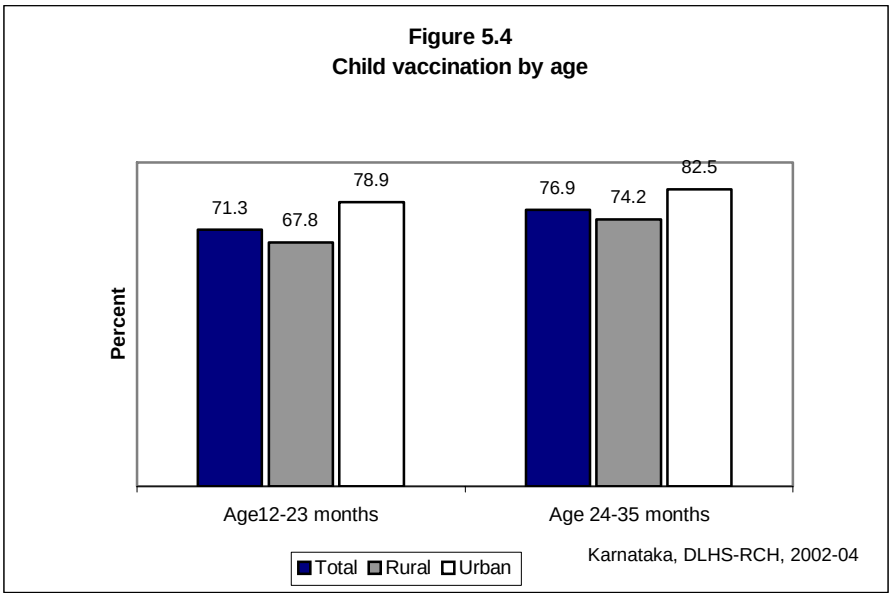
	Total		Rural		Urban	
Vaccination status	12-23 months	24-35 months	12-23 months	24-35 months	12-23 months	24-35 months
Vaccination card shown to interviewer	41.1	32.6	40.6	30.5	42.2	37.2
Percentage vaccinated by 12 months of age						
Polio 0	69.9	68.5	61.7	60.1	87.7	86.2
BCG	92.4	92.5	91.2	91.1	95.1	95.6
Polio doses						
No Polio	6.9	7.0	7.7	7.8	5.1	5.5
1	2.8	1.9	2.7	1.7	3.0	2.3
2	6.9	5.2	8.3	5.9	3.9	3.6
3	82.9	85.4	80.7	84.2	87.8	88.2
Don't remember	0.5	0.5	0.6	0.5	0.1	0.4
DPT injection						
No DPT	7.2	7.2	8.1	8.0	5.2	5.5
1	2.8	1.5	3.0	1.9	2.5	0.8
2	6.1	5.0	7.3	6.0	3.6	2.9
3	83.3	85.7	80.9	83.6	88.5	90.1
Don't remember	0.6	0.6	0.8	0.5	0.1	0.6
Measles	77.2	83.8	74.1	81.2	83.8	89.3
Full [1] vaccination	71.3	76.9	67.8	74.2	78.9	82.5
No vaccination at all	4.7	4.5	5.1	5.3	3.8	2.8
Number of children	2,607	2,521	1,781	1,711	826	810

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

Error!

Figure 5.4
Child vaccination by age



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. Most of the children (74 percent) were immunized at the government health facilities and only fourteen percent at private health facilities. Further, among the children immunized, 43 percent from Government/municipal hospital, 17 percent of them had received vaccination from the sub-centre, and 13 percent from community health centre or from primary health centre. The percentage of children receiving vaccination from the private sector is considerably lower in rural areas (2 percent) than in urban areas (7 percent). Even in urban areas, however, 62 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, Karnataka, 2002-04

Source of vaccination	Total	Residence		Availability of health facility[1] in the village	
		Rural	Urban	No	Yes
Government health sector					
Government/municipal hospital	43.0	40.4	48.5	45.5	33.9
Community/primary health centre	13.2	16.6	6.1	12.4	22.0
Sub-centre	16.8	21.3	7.1	19.1	24.2
RCH/MCP camp	1.3	1.8	0.1	2.1	1.5
Private health sector					
Private hospital	10.8	4.1	24.9	3.5	4.9
Private doctor	3.5	1.7	7.4	1.2	2.3
ISM[2] health facility	1.4	0.4	3.6	0.5	0.3
Other	9.6	13.1	2.2	15.4	10.2
Do not remember	0.3	0.4	0.2	0.3	0.5
Missing	0.0	0.0	0.0	0.0	0.0
Total percent	100.0	100.0	100.0	100.0	100.0
Number of children	6,952	4,730	2,233	2,656	2,073

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 Reason for Not Immunizing the Children

Table 5.7 presents the percent distribution of children under the age of three years who did not receive any vaccination by reason as reported by the mother according to place of residence and availability of health facilities in the village. About 17 percent of the children did not receive any vaccination because the mothers of children were unaware of the need for immunization, and 33 percent of children were not vaccinated, as the mothers feel that they were too young. The other reasons for not immunizing the children as reported by the mothers were fear of side effects (14 percent), place or time of vaccination was not known (8 percent), family problems (8 percent) no faith in vaccination (8 percent), ANM absent/ vaccine not available (5 percent), place or time of vaccination was inconvenient (5 percent), long waiting time (1 percent) and other reasons (2 percent). The percentage of children who did not receive any vaccinations is considerably lower in rural areas (17 percent) than in urban areas (20 percent), as they were unaware of the need for immunization as reported by their mothers. Children from those villages where health facilities are available are more likely to report that they were unaware of the need for immunization as compared to those villages where health facilities are available. Where health facilities were available, no faith in immunization and child too young were reported more as reasons for not immunizing the children compared to the areas without having the same.

Table 5.7 REASON FOR NOT GIVING VACCINATION

Percent distribution of children under age 3 who did not receive any vaccination by reason reported by mother for not giving vaccination, according to place of residence and availability of health facilities in the village, Karnataka, 2002-04

Reason	Total	Residence		Availability of health facility[1] in the village	
		Rural	Urban	No	Yes
Unaware of need for immunization	17.4	16.8	19.5	15.1	19.1
Place/time unknown	8.1	8.3	7.3	10.0	5.9
Place/time inconvenient	4.6	4.3	5.4	5.5	2.7
Fear of side effect	13.9	13.0	16.7	15.1	10.1
No faith	7.6	8.2	5.4	6.9	10.0
ANM absent/vaccine not	5.2	6.0	2.7	6.0	6.1
Long waiting time	0.8	0.5	1.6	0.5	0.6
Child too young	32.7	33.6	29.6	31.6	36.4
Family problems	7.9	7.4	9.3	7.3	7.5
Other	1.9	1.8	2.5	2.0	1.5
Total percent	100.0	100.0	100.0	100.0	100.0
Number of children	578	443	136	257	185

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] Includes mother too busy, family problems, including illness of mother, and illness of child

5.5 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 5.8 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 Karnataka as a whole, 47 percent of the children received at least one dose of Vitamin A, and only seven percent received IFA tablets/syrup. This indicates that a large number of children in Karnataka did not receive Vitamin A supplements and very few children received IFA tablets/syrup supplementation.

Table 5.8 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, State, 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	43.6	6.6	2,607
24-35 months	49.9	8.2	2,521
Sex of the child			
Male	48.6	7.9	2,648
Female	44.8	6.9	2,480
Birth order			
1	50.6	8.6	1,887
2	49.8	6.7	1,707
3	42.8	7.8	840
4+	33.5	5.5	694
Residence			
Rural	44.9	6.7	3,492
Urban	50.6	8.9	1,636
Mother's education			
Non-literate	36.9	5.0	2,101
0-9 years@	52.8	8.2	1,789
10 years and above	54.6	10.2	1,238
Religion			
Hindu	47.3	7.6	4,213
Muslim	40.9	5.8	790
Christian	67.8	13.2	98
Other	48.1	1.6	27
Caste/tribe #			
Scheduled caste	46.5	6.6	987
Scheduled tribe	45.4	7.6	470
Other backward class	46.9	6.0	2,433
Other	47.2	10.7	1,190
Standard of living index			
Low	40.2	6.1	2,202
Medium	48.7	6.8	1,883
High	56.8	11.2	1,043
Availability of health facility in the village[1]			
Yes	48.3	9.4	1,484
No	42.5	4.7	2,008
Total	46.7	7.4	5,128

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 and IFA tablets/syrup than female children. 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 4 or above are much less likely than children of birth order 1, 2 or 3 to receive any dose of vitamin A and IFA tablets/syrup. Similarly, children from Schedule Tribes are less likely to receive at least one dose of Vitamin A and a dose of IFA tablets/syrup than other caste category.

THE PARAGRAPH (5.6 Immunization Coverage by District) IS NOT CORRECTED BECAUSE OF WRONG ENTRY OF TABLE 5.9 WHICH IS BOLD THE FIGURES AT END IN KARNATAKA

{{{{{ 5.6 Immunization Coverage by District (TO BE MODIFIED) !

The coverage of vaccination rates for all vaccines for children in the age group 12-23 months in each district is presented in Table 5.9. 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 41 percent in Bagalkot to 96 percent in Uttara Kannada. In six districts, namely Bagalkot (41 percent), Koppal (42 percent), Raichur (43 per cent), Gulbarga (45 percent), Bijapur (49 percent) and Belgaum (50 percent) the coverage of full immunization is below 55 percent (see Map-5) and it is as good as more than double when compare to the coverage rate of full immunization is above the state average of 29 percent. Twenty-six percent of children in Raichur district were not vaccinated at all, (**(TO BE MODIFIED FROM HERE) !** and in five districts, the percentage of children not vaccinated is higher than the state average. In nearly all the districts, fewer children have received the measles vaccine than any of the other vaccinations. The coverage of polio drops at the time of birth varies from the lowest in Uttar Dinajpur and Murshidabad (30 percent) to the highest in Kolkata (86 percent).**}}}}**

District wise variations in the percentage of children who received at least one dose of Vitamin A are also shown in Table 5.9. The percentage of children in the age group 12-35 months who received at least one dose of Vitamin 'A' supplements ranges from 19 percent in Bagalkot to 79 percent in Udupi. Belgaum (21 percent), Bidar (26 percent), Gulbarga (27 percent), Bijapur (29 percent), Raichur (29 percent), Koppal (33 percent), Chitradurga (39 percent), Dharwad (42 percent), Haveri (43 percent), Gadag (44 percent), Bellary (45 percent) and Mysore (46 percent) stand out as having below the state average to receive at least one dose of Vitamin A.

5.7 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.

5.7.1 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 5.10.

Table 5.9 CHILDHOOD VACCINATION BY DISTRICT

Percentage of children who received specific vaccinations and Vitamin A supplementation by district , Karnataka, 2002-04

	Percentage vaccinated							Percentage received at least one dose of vitamin A
District	Polio 0	BCG	DPT3	Polio3	Measles	Full[1]	None	
Bagalkot	66.2	92.4	66.7	65.9	54.5	41.0	4.4	19.0
Bangalore	82.8	100.0	96.4	97.8	87.9	86.5	0.0	77.0
Bangalore Rural	99.0	100.0	96.1	96.1	92.4	91.0	0.0	64.4
Belgaum	58.3	90.1	67.8	67.8	54.7	50.1	9.3	20.8
Bellary	47.3	93.7	86.0	83.5	78.2	71.7	4.6	44.8
Bidar	52.4	92.5	77.2	78.0	65.9	59.8	5.1	26.3
Bijapur	73.6	88.6	64.2	67.7	64.1	49.2	4.5	29.4
Chamarajanagar	60.8	100.0	95.3	94.5	88.0	84.3	0.0	53.4
Chikmagalur	87.6	96.8	97.3	97.3	86.8	86.8	0.0	58.8
Chitradurga	63.8	96.9	92.2	89.6	83.9	80.9	3.1	39.4
Dakshina Kannada	89.4	100.0	93.0	92.7	95.2	90.0	0.0	49.7
Davanagere	48.8	100.0	87.5	86.4	87.7	76.8	0.0	68.0
Dharwad	81.2	94.0	82.8	81.7	78.1	71.8	6.0	41.6
Gadag	67.5	94.8	94.7	91.4	78.8	73.1	0.0	43.8
Gulbarga	42.2	72.3	60.6	58.0	53.5	44.8	13.1	26.8
Hassan	86.3	97.3	97.6	98.8	94.3	90.5	0.0	71.8
Haveri	61.9	93.0	93.6	92.2	70.7	66.0	4.1	43.1
Kodagu	92.3	93.2	96.1	94.4	95.0	89.9	0.0	70.6
Kolar	67.6	95.1	89.5	86.5	96.0	85.6	2.2	55.6
Koppal	54.1	73.6	58.1	57.9	53.7	41.9	17.9	32.9
Mandya	88.7	100.0	92.3	90.0	83.5	79.1	0.0	61.3
Mysore	80.2	98.5	95.6	91.4	96.3	89.9	0.0	45.5
Raichur	37.0	67.7	53.2	55.9	50.0	42.7	25.9	28.5
Shimoga	69.9	98.3	99.3	93.1	93.4	86.1	0.7	73.8
Tumkur	87.9	98.0	97.3	97.3	87.7	87.7	1.0	61.9
Udupi	94.6	100.0	100.0	94.8	94.9	89.7	0.0	79.1
Uttara Kannada	93.4	99.6	97.9	99.6	98.6	96.2	0.0	54.7
Karnataka	69.9	92.4	**16.7**	**17.6**	77.2	**28.7**	**95.3**	46.7

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

Table 5.10 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 suffered[1] from diarrhoea by selected background characteristics, Karnataka, 2002-04

Background characteristic	Knowledge of diarrhoea manage-ment	Type of practices to be followed do if child gets diarrhoea*						Number of women
		Give ORS	Salt and sugar solution	Continue normal food	Continue breastfe-ding	Give plenty of fluids	Do not know	
Age								
15-24	46.8	21.6	10.2	3.1	3.1	2.7	52.9	4,250
25-34	54.9	32.3	18.2	4.1	4.5	4.3	44.7	2,892
35-44	45.2	22.9	20.3	6.1	3.9	4.2	54.5	290
Residence								
Rural	44.6	21.7	10.4	3.3	3.3	2.8	55.0	5,009
Urban	60.9	34.1	20.5	4.2	4.4	4.5	38.9	2,423
Mother's education								
Non-literate	36.0	11.4	6.1	3.0	2.3	2.0	63.7	3,005
0-9@ years	51.6	28.6	13.3	3.0	3.7	2.8	48.0	2,455
10 and above	68.8	44.2	25.7	5.1	5.7	6.1	30.8	1,972
Religion								
Hindu	49.2	24.9	13.7	3.6	3.4	3.2	50.5	6,097
Muslim	50.6	26.8	12.4	3.0	4.1	3.8	49.0	1,127
Christian	63.7	45.5	21.7	4.8	8.3	6.3	35.2	144
Other	67.3	43.8	18.7	11.2	9.2	4.7	30.4	64
Caste/tribe#								
Scheduled caste	42.4	18.3	8.4	2.4	2.2	2.2	57.3	1,460
Scheduled tribe	40.0	18.2	9.2	4.4	3.1	3.1	59.6	660
Other backward class	53.8	27.4	13.6	2.7	3.0	2.4	45.9	3,513
Other	51.7	31.6	19.7	5.9	6.6	6.6	47.9	1,733
Standard of living index								
Low	38.4	15.8	7.8	2.9	2.4	2.1	61.3	3,180
Medium	52.0	27.3	13.1	3.5	3.7	3.3	47.8	2,639
High	69.0	42.9	26.4	5.1	6.2	6.0	30.4	1,614
Availability of health facility [2] in the village								
Yes	42.7	21.0	12.3	4.1	4.7	3.1	57.1	2,222
No	46.1	22.4	9.0	2.6	2.3	2.6	53.3	2,787
Total	49.9	25.8	13.7	3.6	3.7	3.4	49.8	7,432

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 canter, Community health centre or referral hospital, government hospital, and government dispensary within the village. Total includes 1 women missing information on education which are not shown separately

In Karnataka, 50 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 64 percent in Round I, and 26 percent were aware of ORS, as compared to 38 percent in Round I. Fourteen percent of the women were aware of salt and sugar solution. Some of the women also reported that they would continue normal food (4 percent), continue breastfeeding (4 percent), and give plenty of fluids (3 percent), and about 50 percent of women did not know what to give a child who had diarrhoea. As expected, knowledge of ORS is higher among urban women (34 percent) than rural women (22 percent), and among high school and above educated women (44 percent) as compared to non-literate women (11 percent). Women belonging to both Schedule Castes and Schedule Tribes (18 percent) are less likely to know about ORS than women belonging to other caste groups (32 percent). Forty-three percent of women with children having a high standard of living

know about ORS and it declines to 27 percent for women with a medium standard of living and 16 percent with a low standard of living. Knowledge of ORS is more among middle age groups than among younger and older women. Women from villages where health facilities are not available are slightly more aware of diarrhoea management than women from villages where health facilities are available.

5.7.2 Treatment of Diarrhoea

During the two weeks before the survey, 6 percent of the women reported that their children suffered from diarrhoea (Table 5.11). Women, whose children had diarrhoea, were further asked about treatment with ORS, any other medical treatment and source of treatment. About 33 percent of the women mentioned that they gave ORS therapy, and 72 percent of the women said that their child had been treated at health facility. Use of ORS for the treatment of childhood diarrhoea in Karnataka 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 are available within the village used ORS for the treatment of childhood diarrhoea.

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 65 percent of women visited private hospitals/clinics and 18 percent of women treated their children through the Indian System of Medicine.

Table 5.11 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, Karnataka, 2002-04

Sought treatment/ source of treatment	Total	Residence		Availability of health fcaility[2] in the village	
		Rural	Urban	Yes	No
Percentage of women whose child suffered[1] from diarrhoea	12.6	12.8	12.4	13.1	12.5
Number of women	7,432	5,009	2,423	2,222	2,787
Percentage of women whose child suffered[1] from diarrhoea treated with ORS	32.7	29.9	38.6	34.5	26.1
Percentage of women whose child suffered[1] from diarrhoea sought treatment	72.2	71.1	74.6	79.5	64.1
Number of women	940	639	300	292	348
Source of treatment					
Government health facility					
Hospital/dispensary	18.0	18.8	16.4	16.5	21.2
UHC/UHP/UFWC	0.2	0.3	0.0	0.0	0.6
CHC/ Rural hospital	1.0	1.1	0.8	0.8	1.3
Primary health centre	6.3	8.9	0.9	10.1	7.6
Sub centre	2.3	3.4	0.0	5.7	1.1
Private health facility					
NGO/Trust hospital/clinic	0.5	0.3	0.9	0.0	0.7
Private hospital clinic	65.0	60.2	75.0	61.7	58.6
ISM[3] facility	18.1	18.1	18.1	15.0	21.3
Home remedy	2.1	2.2	2.1	1.8	2.5
Other	1.6	1.7	1.3	1.2	2.2
Percent distribution of women who seek treatment by					
Doctor	90.8	88.5	95.7	88.4	88.5
ANM/Nurse/LHV	7.5	9.8	3.0	10.3	9.2
Dai (trained or untrained)	0.1	0.1	00	0.2	0.0
Relative/friends	0.3	0.4	0.1	0.3	0.5
Chemist/medical shop	1.3	1.3	1.3	0.8	1.8
Total percent	100.0	100.0	100.0	100.0	100.0
Number of women	679	455	224	232	223

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

5.7.3 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 5.12. It was found that a low proportion (16 percent) of women with births three years preceding the

survey in Karnataka were aware of danger signs of pneumonia. The figure was slightly up from 22 percent in Round I. Just 2 percent higher proportion of women in urban areas (17 percent) were aware of the danger signs of pneumonia as compared to women from rural areas (15 percent). Knowledge of danger signs of pneumonia is higher among older women (24 percent), women from other religion (29 percent), other castes category (21 percent), highly educated women (24 percent), women living in high standard of living household (23 percent), and women living in those villages with health facilities (17 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' (85 percent), 'pain in chest and productive cough' (43 percent), 'chest in drawing' (39 percent), 'not able to drink or take a feed' 29 percent), 'excessive drowsy and difficulty in keeping awake' (19 percent) 'wheezing / whistling' (15 percent), 'rapid breathing' (13 percent), and 'condition get worse than before' (12 percent).

5.6.4 Treatment of Pneumonia

About 24 percent of women reported that their child had suffered from pneumonia during two weeks before the survey, the corresponding figures were 25 percent in urban areas and 24 percent in rural areas (Table 5.13). The incidence of pneumonia varies little with availability of health facilities in the villages.

Table 5.13 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-four percent of women received some advice or treatment whose children were ill with ARI. This percentage is relatively low in rural areas (71 percent) than in urban areas (79 percent) and high in village with health facilities (76 percent) than village without health facility (67 percent).

Among them who got advice for children ill with ARI, 70 percent of women visited private hospital/clinic, and only 17 percent went to government hospital/dispensary, whereas just three percent of them obtained treatment through Indian System of Medicine as compared with home remedy (4 percent).

Table 5.12 AWARENESS OF PNEUEMONIA

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, Karnataka, 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	13.2	4,250	86.1	41.7	26.5	18.2	39.9	11.9	13.6	11.1	560
25-34	18.3	2,892	82.9	36.4	31.5	20.7	48.2	11.0	16.2	14.6	529
35-44	23.8	290	91.3	42.3	23.5	14.7	33.6	12.0	21.3	18.0	69
Residence											
Rural	15.1	5,009	84.9	39.3	26.4	18.8	39.9	11.8	13.3	10.9	757
Urban	16.5	2,423	85.0	39.4	32.7	19.8	49.8	11.0	18.9	17.3	400
Mother's education											
Non-literate	12.5	3,005	87.9	48.9	19.9	14.7	35.6	8.1	7.9	8.0	375
0-9@ years	12.5	2,455	85.7	31.9	36.8	27.3	45.3	13.9	15.7	13.9	307
10 and above	24.1	1,972	82.1	36.7	30.3	17.4	48.2	12.7	20.9	16.5	474
Religion											
Hindu	15.4	6,097	83.7	39.3	29.3	18.8	43.0	11.4	15.8	13.4	938
Muslim	14.4	1,127	90.8	38.1	24.4	18.0	36.7	10.3	11.8	7.7	162
Christian	26.5	144	(90.6)	(37.5)	(25.0)	(31.3)	(59.4)	(15.6)	(21.9)	(18.8)	38
Other	29.4	64	*	*	*	*	*	*	*	*	19
Caste/tribe#											
Scheduled caste	10.4	1,460	88.2	44.7	24.2	14.6	40.1	12.1	9.7	10.2	152
Scheduled tribe	16.9	660	87.7	40.8	24.7	19.0	49.4	8.6	7.1	4.8	112
Other backward class	15.1	3,513	83.2	39.0	35.0	20.3	41.9	10.9	14.2	16.4	529
Other	20.7	1,733	86.4	36.2	22.7	19.4	43.9	13.2	22.0	12.3	359
Standard of living index											
Low	13.8	3180	87.9	46.1	23.7	16.1	39.9	9.9	9.0	9.7	439
Medium	13.0	2639	83.3	35.4	31.5	23.9	39.2	12.8	16.4	14.9	343
High	23.3	1614	83.0	35.1	31.6	18.3	51.1	12.1	21.7	15.5	375
Availability of health facility [2] in the village											
Yes	17.3	2,222	81.8	38.5	19.3	16.4	45.8	11.5	13.5	9.7	384
No	13.4	2,787	88.1	40.2	33.7	21.3	33.8	12.0	13.2	12.2	374
Total	15.6	7,432	84.9	39.4	28.6	19.1	43.3	11.5	15.3	13.1	1,158

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 1 women with missing information on education who were not shown separately.

* percentages not shown : based on few cases

@ 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.

Table 5.13 TREATMENT OF PNEUEMONIA
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, Karnataka, 2002-04

		Residence		Availability of health fcaility[2] in the village	
Sought treatment/ source of treatment	Total	Rural	Urban	Yes	No
Percentage of women whose child suffered from cough, cold and difficulty in breathing	24.2	23.7	25.2	24.4	23.1
Number of women	7,432	5,009	2,423	2,222	2,787
Percentage of women sought treatment whose child suffered from cough and cold	73.5	70.8	78.7	75.8	66.6
Number of women	1,793	1,184	608	542	642
Source of treatment					
Government health facility					
Hospital/dispensary	16.6	17.9	14.2	16.3	19.5
UHC/UHP/UFWC	0.1	0.1	0.1	0.0	0.2
CHC/ Rural hospital	1.2	1.7	0.3	2.4	1.0
Primary health centre	5.6	8.2	0.9	9.9	6.6
Sub centre	2.0	3.1	0.1	4.4	1.8
Private health facility					
NGO/Trust hospital/clinic	0.1	0.1	0.1	0.3	0.0
Private hospital clinic	69.5	63.5	80.0	61.9	65.0
ISM[3] facility	2.6	3.3	1.3	3.2	3.4
Home remedy	3.5	3.1	4.0	3.5	2.7
Other	1.2	1.3	0.9	1.3	1.3
Percent distribution of women who seek treatment by					
Doctor	93.1	91.9	95.3	91.2	92.7
ANM/Nurse/LHV	4.8	5.4	3.9	5.9	4.9
Relative/friends	0.3	0.3	0.1	0.3	0.3
Chemist/medical shop	0.6	0.8	0.2	0.9	0.7
ISM practitioner	0.2	0.3	0.1	0.6	0.0
Total percent	100.0	100.0	100.0	100.0	100.0
Number of women	1,317	839	478	411	428

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

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

Table 5.14 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 low. Knowledge of ORS is also not common, and it is lowest in Gulbarga (6 percent). Women in Chamarajnagar, Bellary, Raichur, Bidar, Bagalkot, Koppal, Belgaum, Chitradurga, Gadag and Bijapur also have relatively low level of knowledge of ORS. The incidence of diarrhoea is 13 percent in the state as a whole and it varies from one percent in Mysore to 27 percent in Gadag. Table 5.14 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 Raichur (2 percent) and highest in Davanagere (39 percent). Incidence of ARI symptoms is comparatively high in nearly all the districts in Karnataka. It is highest in Dharwad (46 percent), Bangalore (42 percent), Gulbarga (37 percent), Bidar (33 percent), Kodagu (32 percent), Gadag (30 percent), Koppal (29 percent), Shimoga and Hassan (27 percent each), Uttara Kannada, Bijapur, Kolar and Belgaum (26 percent each), Chikmagalur and Raichur (25 percent each), Bangalore Rural (24 percent), Mandya (23 percent), Tumkur, Bagalkot and Chitradurga (20- 22 percent) and lowest in Mysore (2 percent), Dakshina Kannada (3 percent), Davanagere (11 percent), Udupi (14 percent), Bellary (15 percent), Haveri (16 percent) and Chamarajnagar (17 percent).

Table 5.14 KNOWLEDGE OF DIARRHOEA MANAGEMENT AND PNEUMONIA BY DISTRICT

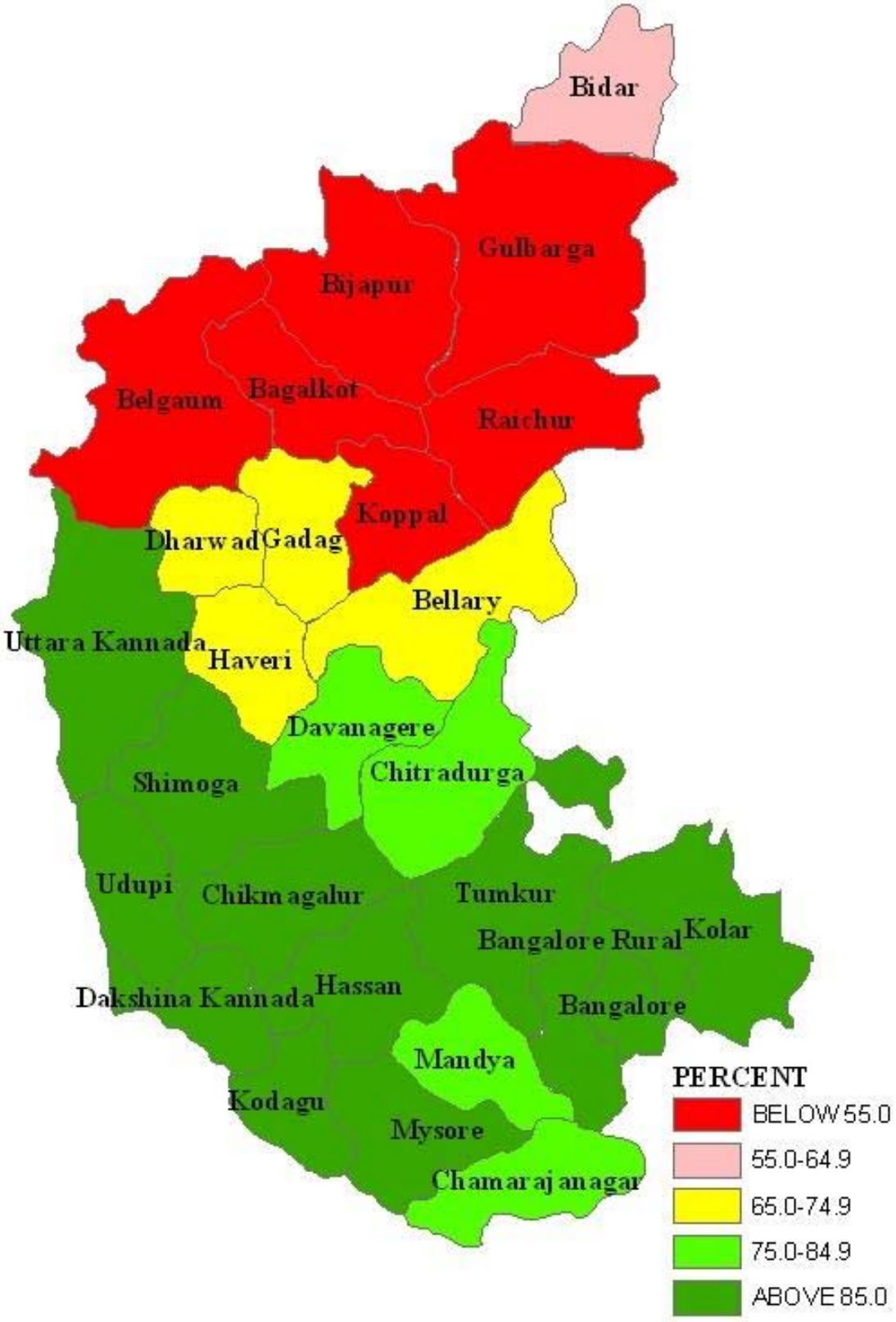
Percentage of women by awareness of diarrhoea management, ORS, danger signs of pneumonia and whose child had suffered from diarrhoea and pneumonia during last two weeks prior to survey by district, Karnataka, 2002-04

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			
Bagalkot	51.6	12.5	18.8	17.2	22.1
Bangalore	69.8	33.1	8.0	3.9	42.0
Bangalore Rural	78.3	42.3	10.8	6.3	24.4
Belgaum	50.6	15.2	17.8	35.9	25.6
Bellary	38.9	8.3	13.7	11.4	15.4
Bidar	34.4	9.3	20.3	28.7	32.5
Bijapur	41.2	18.2	13.6	18.9	25.8
Chamarajanagar	10.4	7.8	6.3	1.7	16.7
Chikmagalur	59.0	47.3	15.4	22.0	24.8
Chitradurga	23.3	17.7	12.3	3.7	20.0
Dakshina Kannada	36.6	33.4	2.1	13.6	3.3
Davanagere	56.3	42.5	7.2	38.5	10.5
Dharwad	43.0	23.8	20.9	5.3	46.2
Gadag	64.9	17.7	26.6	12.6	29.8
Gulbarga	30.6	6.1	16.9	32.4	36.8
Hassan	80.2	47.5	15.1	14.8	26.6
Haveri	33.4	28.0	5.0	3.8	15.9
Kodagu	60.1	45.6	20.6	18.4	31.5
Kolar	73.5	26.0	9.6	11.5	25.8
Koppal	34.7	13.2	11.0	2.5	29.1
Mandya	68.3	37.7	11.6	12.6	23.4
Mysore	31.6	30.8	1.2	3.2	1.6
Raichur	18.9	8.3	10.9	1.5	24.6
Shimoga	61.0	45.2	9.1	26.9	27.1
Tumkur	43.5	32.9	16.7	14.1	22.4
Udupi	72.9	55.7	1.3	26.4	13.7
Uttara Kannada	52.4	38.5	16.3	35.7	26.4
Karnataka	49.9	25.8	12.6	15.6	24.2

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: Full Immunization (Child age 12-23 months), Karnataka, 2002-04



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 Karnataka. 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 73 percent, and it is higher among the women with an urban residences as compare to rural counterpart. There are large differentials in knowledge of all modern methods with respect to the aforesaid background characteristics. For instance, 19.4 percent of women from rural areas are aware about all modern methods compared to 36.3 percent of their urban counterparts.

TABLE 6.1 KNOWLEDGE OF CONTRACEPTIVE METHODS

Percentage of currently married women aged 15-44 years who know any contraceptive method by specific method and selected background characteristics, Karnataka, 2002-04.

Contraceptive methods	Total	Residence		Availability of health facility in the village[3]	
		Rural	Urban	No	Yes
Any method	99.2	99.2	99.2	99.4	98.9
Any modern method	99.1	99.1	99.1	99.3	98.8
Any modern spacing method[1]	72.6	66.9	84.6	67.2	66.6
All modern methods[2]	24.9	19.4	36.3	18.0	21.2
Female sterilization	98.9	99.0	98.8	99.2	98.7
Tubectomy	92.5	91.6	94.4	91.6	91.5
Laparoscopy	85.4	83.5	89.3	83.7	83.4
Male sterilization	60.5	54.3	73.4	53.0	56.0
Vasectomy	41.3	35.1	54.4	34.9	35.3
No-scalpel vasectomy	15.6	13.8	19.4	11.0	17.4
IUD/Loop	59.8	52.3	75.6	50.8	54.0
Pills	69.8	63.5	83.0	63.9	62.9
Daily	63.1	55.6	78.8	55.9	55.3
Weekly	48.9	40.0	67.5	39.5	40.5
Condom/Nirodh	31.6	25.7	43.7	24.2	27.6
Sponge (today)	6.9	4.7	11.6	4.3	5.1
Injectables	8.5	6.1	13.6	5.0	7.5
Norplant	10.6	8.4	15.4	8.8	7.9
Contraceptive herbs	29.2	27.2	33.3	26.0	28.8
Any traditional method	36.4	34.9	39.7	33.0	37.2
Any other Indian system of medicinal contraceptives	1.9	1.8	2.0	1.6	2.0
Number of women	22,655	15,327	7,329	8,484	6,843

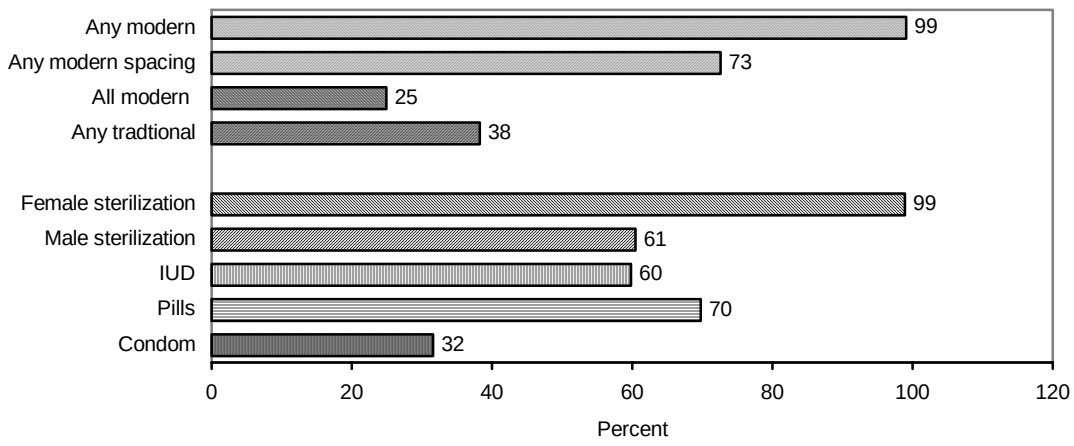
[1] Include IUD, pills and condom. [2] Include Female sterilization, Male sterilization, IUD, pills and condom
[3] Includes sub-centre, primary health centre, community health centre or referral hospital, government hospital, and government dispensary within the village.

Female sterilisation is the most widely known method of all contraceptive methods in Karnataka followed by Pills. Overall, 99 percent of the currently married women are aware of female sterilization and 60.5 percent knew about male sterilization. There is no rural - urban differentials in the knowledge of female sterilization but it is not the case with male sterilization. A sizable number of urban women (73.4 percent) know about male sterilization as compared to 54.3 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 (69.8 percent) and condoms (48.9 percent) respectively. Around 60 percent of women know about the IUD/Loop. There is a large differential in knowledge of spacing methods by residence only 26 percent of the rural women know condom compared to 44 percent of urban women. The modern spacing methods, Pill and IUD are known by 63.5 and 52.3 percent of rural women respectively while the corresponding figures in urban areas are 83 and 75.6 percent respectively. The knowledge of these spacing methods remains low as compared to knowledge of sterilization.

In Karnataka, more than 36 percent of the women are aware of a traditional method and only 2 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 aware about modern spacing methods.

Figure 6.1
Knowledge of Family Planning Method



Karnataka, DLHS-RCH, 2002-04

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, Karnataka, 2002-04

Districts	Any method	Any modern[1] method	Any modern spacing[2] method	All modern[3] methods	Male steriliz-ation	Female steriliz-ation	IUD	Pill	Condom /Nirodh	Any traditio-nal method
Bagalkot	98.9	98.9	67.2	20.4	57.1	98.6	53.1	62.5	26.2	55.7
Bangalore	99.7	99.7	95.1	44.5	91.9	99.3	94.3	94.7	47.3	36.3
Bangalore Rural	99.9	99.6	89.2	34.6	82.6	99.6	87.9	88.5	37.4	21.5
Belgaum	99.7	99.7	68.3	4.8	44.5	99.7	33.3	66.9	20.3	10.8
Bellary	99.7	99.5	65.1	27.6	70.3	99.4	53.7	61.9	30.4	76.6
Bidar	99.6	99.6	45.5	3.6	26.6	99.6	22.8	45.1	12.5	16.8
Bijapur	98.4	98.2	61.2	20.3	52.8	97.9	52.2	56.1	26.3	46.6
Chamarajanagar	100.0	100.0	86.3	30.7	78.1	100.0	84.7	78.3	39.6	28.8
Chikmagalur	99.1	99.1	79.1	9.7	48.9	98.5	44.1	71.0	22.3	12.9
Chitradurga	99.7	99.7	87.8	34.4	71.5	99.6	70.2	86.5	37.9	73.2
Dakshina Kannada	98.6	98.6	84.2	38.3	75.9	98.6	75.8	79.2	44.4	61.1
Davanagere	100.0	100.0	87.6	57.3	84.6	99.9	86.4	78.4	60.5	82.6
Dharwad	93.2	93.0	39.5	9.6	13.3	92.2	37.0	36.1	26.5	11.7
Gadag	98.0	98.0	54.4	19.1	45.8	97.5	52.0	49.9	26.8	30.0
Gulbarga	99.8	99.8	44.7	2.1	38.1	99.7	24.1	43.7	9.5	10.4
Hassan	99.6	99.6	83.4	36.2	72.9	99.6	80.4	81.5	41.0	26.4
Haveri	99.7	99.7	65.5	21.0	73.9	99.6	60.4	62.7	26.1	38.4
Kodagu	99.4	99.4	92.5	43.6	79.8	98.2	82.2	87.7	54.8	44.4
Kolar	99.8	99.6	78.7	30.2	69.4	99.6	74.9	76.8	32.9	25.0
Koppal	98.5	98.5	33.7	5.8	23.1	98.5	23.3	30.8	9.6	20.6
Mandya	99.6	99.5	85.7	42.8	74.7	99.3	81.7	83.0	49.4	21.6
Mysore	100.0	100.0	89.1	20.0	55.8	100.0	52.8	88.7	26.0	94.4
Raichur	97.6	97.3	26.4	3.2	20.7	97.3	19.2	24.0	5.4	21.4
Shimoga	99.8	99.8	79.3	44.7	71.4	99.7	77.3	73.9	53.1	54.8
Tumkur	97.6	97.6	69.8	12.4	41.8	97.2	47.5	64.9	21.4	18.0
Udupi	99.7	99.7	88.3	62.2	83.8	99.7	87.5	85.7	67.6	63.7
Uttara Kannada	98.5	98.5	80.7	6.5	44.0	97.6	38.2	77.1	23.6	11.1
Karnataka	99.2	99.1	72.6	24.9	60.5	98.9	59.8	69.8	31.6	36.4

[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 Karnataka. In all districts more than 72 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 2 percent of women in Gulbarga to 62 percent in Udupi district. There is not much variation in the knowledge of female sterilization, which is the lowest in Dharwad (92 percent) and highest, in both Mysore and Chamarajanagar districts (100 percent). Knowledge of IUD/Loop and condom are 23 and 13 percent respectively in Bidar, whereas the same is around 94 percent and 47 percent respectively for each method in Bangalore. As for any traditional

method, awareness is 94 percent in Mysore districts and the least in Gulbarga district (10 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 Karnataka is shown in Table 6.3. Only about 13 percent of the husbands know about no-scalpel vasectomy, 8.7 percent in rural area as compared to 21 percent in urban areas. For women residing in villages with a health facility, 8 percent of their husbands are aware of No-scalpel vasectomy and it is slightly more, that is, 9.4 percent for those living in villages without health facilities. Among the husbands who know about NSV, 45 percent reported that NSV is simpler than a conventional family planning method, 73 percent feel that reported as NSV does not lead to any complication and 32 percent reported that NSV does not affect a man's sexual performance. Only 30 percent of the husbands in villages with a health facility reported that, NSV does not affect sexual performance compared to 23 percent of husbands in villages without a health facility.

Table 6.3 NO-SCALPEL VASECTOMY (NSV)
Husbands knowledge of NSV by residence and availability of health facility in the village, Karnataka, 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	12.7	8.7	21.3	9.4	8.0
Who know that NSV is simpler than conventional vasectomy	44.9	41.2	48.3	34.2	51.4
Who feel that NSV does not lead to any complication	73.2	69.2	76.8	70.1	67.8
Who feel that NSV does not affect man's sexual performance	31.7	26.0	37.0	23.3	29.9
Number of husbands	13,904	9,548	4,355	5,300	4,248

[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

Awareness of No-scalpel vasectomy by districts in Karnataka is provided in Table 6.4. Only about 13 percent husbands are aware of NSV in Karnataka. The districts in which less than 5 percent of husbands know about NSV are Haveri (0.8 percent), Raichur and Davanagere are about 1 percent, Gadag and Koppal (around 4 percent each), Shimoga (4.5 percent) and Gulbarga (4.7 percent). The highest percent (37.4 percent) husbands in Mysore district know about the no-scalpel vasectomy. NSV does not lead to any complication was reported by 97 percent of the husbands in Mysore district, followed by 92 percent in Chitradurga and Udupi and 87 percent in Dakshina Kannada, 33 percent in Gulbarga and none in Haveri district reported the same. The

husbands who reported that the NSV does not affect a man's sexual performance were highest (64 percent) in Koppal and lowest in Chitradurga and Mysore districts (1 percent).

TABLE 6.4 NO-SCALPEL VASECTOMY BY DISTRICT

Percentage of husband of eligible women by knowledge of NSV by district, Karnataka, 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
Bagalkot	12.5	19.3	60.8	52.0
Bangalore	28.8	53.8	78.2	42.6
Bangalore Rural	15.5	88.4	74.4	15.4
Belgaum	10.0	64.5	57.7	29.6
Bellary	9.2	29.4	53.8	42.4
Bidar	9.5	90.1	49.0	30.1
Bijapur	18.3	35.9	49.3	45.1
Chamarajanagar	9.2	90.1	82.1	16.3
Chikmagalur	12.0	63.7	58.5	61.5
Chitradurga	20.7	6.4	92.3	1.0
Dakshina Kannada	6.4	41.7	88.6	12.0
Davanagere	1.4	100.0	69.1	55.7
Dharwad	7.7	59.6	57.5	35.6
Gadag	4.2	64.0	38.0	34.7
Gulbarga	4.7	59.6	33.3	41.2
Hassan	13.5	57.5	63.3	49.2
Haveri	0.8	38.7	0.0	38.7
Kodagu	18.0	49.6	59.6	51.5
Kolar	11.9	36.8	72.3	31.0
Koppal	4.4	72.3	62.6	63.7
Mandya	11.6	62.8	58.1	37.4
Mysore	37.4	1.7	96.5	1.3
Raichur	1.3	63.0	47.0	37.3
Shimoga	4.5	70.2	43.7	37.5
Tumkur	9.1	67.4	75.8	54.6
Udupi	7.1	82.3	91.5	16.0
Uttara Kannada	7.4	49.3	57.6	24.7
Karnataka	12.7	44.9	73.2	31.7

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 Karnataka. At the time of DLHS-RCH survey, 59 percent of currently married women were using some method of contraception and there is no differentiation between Round Round II and I. Current contraceptive use is slightly higher in rural areas (60 percent) than in urban areas (58 percent). Use of modern method is reported by 58 percent of the women, the breakdown of which is 53 percent for permanent methods and 5 percent for spacing. Among the users of sterilization methods most of them preferred female sterilization, which invalidate the use of male sterilization (0.2 percent).

TABLE 6.5 CONTRACEPTIVE PREVALENCE RATE

Percentage of currently married women age 15-44 years currently using any contraceptive method by selected background characteristics, Karnataka, 2002-04

Method	Any method	Any modern[1] method	Any modern spacing method[2]	Any steriliza-tion	Male steriliza-tion	Female steriliza-tion	IUD/ Loop	Pill	Condom / Nirodh	Any traditio-nal method[3]	Rhythm/ periodic abstinence	Withdr-awal	Number of women
Residence													
Rural	59.8	58.8	2.4	56.3	0.2	56.2	1.4	0.5	0.6	1.0	0.6	0.0	15,327
Urban	58.3	55.4	10.8	44.6	0.2	44.4	5.7	2.0	3.1	3.0	2.4	0.3	7,329
Education													
Non-literate	63.3	62.6	0.8	61.8	0.2	61.6	0.4	0.3	0.1	0.7	0.3	0.0	10,352
0-9@ years	57.4	56.1	4.4	51.6	0.1	51.5	2.8	0.7	1.0	1.3	1.0	0.1	7,179
10 years & above	54.0	50.1	14.8	35.1	0.1	35.0	7.5	2.6	4.7	4.0	3.3	0.5	5,119
Religion	60.8	59.3	4.5	54.7	0.2	54.5	2.5	0.7	1.3	1.5	1.1	0.1	19,189
Hindu	49.1	48.0	7.8	40.1	0.1	40.0	3.6	2.2	2.0	1.1	0.7	0.0	2,879
Muslim	56.4	47.8	7.7	40.1	0.2	39.8	5.1	1.4	1.2	9.7	8.6	1.1	390
Christian	68.6	67.6	19.7	47.5	0.0	47.5	12.8	0.5	6.3	1.0	1.0	0.0	181
Jain													
Caste/tribe#	56.1	55.0	1.7	53.2	0.1	53.1	0.8	0.5	0.4	1.2	0.6	0.0	4,038
Scheduled caste	55.5	54.9	1.2	53.7	0.2	53.5	0.5	0.5	0.2	0.6	0.5	0.0	1,788
Scheduled tribe	61.4	60.1	5.7	54.3	0.2	54.2	3.3	0.8	1.5	1.4	1.1	0.1	11,203
Other backward class	58.7	55.9	7.6	48.1	0.2	47.9	3.6	1.6	2.4	2.8	2.2	0.4	5,459
Other													
Standard of living index													
Low	57.8	57.1	1.0	56.0	0.1	55.9	0.5	0.3	0.3	0.7	0.4	0.0	9,289
Medium	58.9	57.7	4.2	53.4	0.2	53.2	2.6	0.9	0.7	1.2	0.8	0.0	7,980
High	62.5	58.8	13.5	45.2	0.2	45.0	6.9	2.2	4.3	3.8	3.2	0.5	5,386
Availability of health facility in the village[4]													
No	60.9	59.9	2.3	57.6	0.2	57.5	1.3	0.4	0.5	1.0	0.5	0.1	8,484
Yes	58.4	57.5	2.6	54.7	0.2	54.6	1.5	0.5	0.7	0.9	0.7	0.0	6,843
Total	59.3	57.7	5.1	52.5	0.2	52.4	2.8	0.9	1.4	1.6	1.2	0.1	22,655

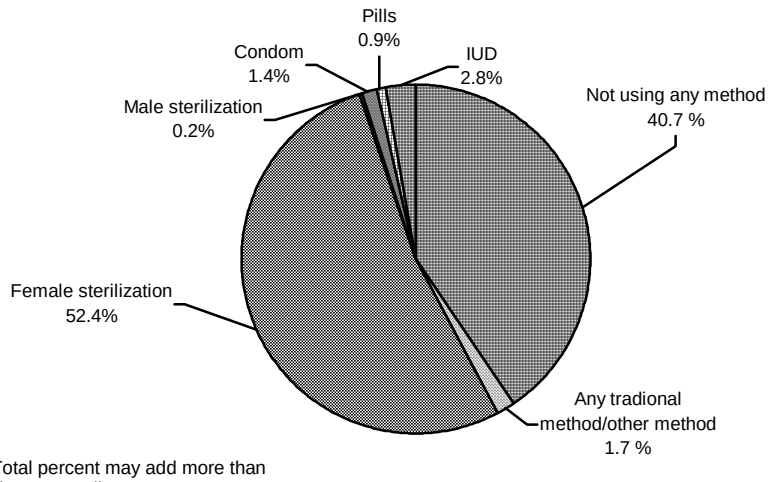
Total includes 4 women with missing information on education and 1 on religion who were not shown separately.

Total includes 15 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.

The use of traditional methods is reported by only 2 percent of the women of which 1.2 percent are using rhythm or periodic abstinence and very negligible percent practice withdrawal. The rural-urban differential is visible in the case of traditional methods, where 3 percent of the urban women are using traditional contraception compared to just 1 percent rural women.

Figure 6.2
Practice of Family Planning Methods



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

Karnataka, DLHS-RCH, 2002-04

Current use of contraception is high among women of other backward class (61 percent) and other caste (59 percent) than among than Scheduled caste and Scheduled tribe women (56 percent each). The current use is high among the women who have non-literates (63 percent) than the women who have less than 10 years of schooling (57 percent) and also among the women who have10 or more years of schooling (54 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 63 percent for women from the lowest to the highest standard of living households. The availability of the health facility in the village had no impact on the use contraception. The current use of the traditional method is higher among women with a higher education level and with high standard of living 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 Karnataka. 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 50 percent of eligible women except for the districts of Gulbarga, Raichur, Koppal, Bellary, Bagalkot, Bidar

and Bijapur (see Map-6). The state figure of current spacing methods use is 5 percent and it ranges from 1 percent in Koppal district to 14 percent in Bangalore.

Table 6.6 CONTRACEPTIVE PREVALENCE RATES BY DISTRICT

Percentage of currently married women age 15-44 years currently using any contraceptive method by district, Karnataka, 2002-04

Districts	Any method	Any modern[1] method	Any modern spacing[2] method	Male steriliz-ation	Female steriliz-ation	IUD	Pill	Condom / Nirodh	Any traditio-nal[3] method
Bagalkot	49.7	48.6	1.5	0.1	47.0	0.2	0.7	0.6	1.1
Bangalore	60.7	57.1	13.5	0.0	43.6	7.2	2.2	4.1	3.7
Bangalore Rural	67.6	67.3	5.2	0.0	62.1	3.8	0.2	1.2	0.5
Belgaum	57.4	56.0	4.4	0.3	51.1	2.1	1.0	1.2	1.3
Bellary	47.5	47.3	1.8	0.0	45.4	1.0	0.5	0.3	0.2
Bidar	48.6	47.2	2.6	0.0	44.6	1.0	0.4	1.2	1.4
Bijapur	49.4	47.7	4.2	0.1	43.1	1.7	1.6	1.0	1.7
Chamarajanagar	69.3	69.2	3.1	0.0	66.0	1.2	0.4	1.5	0.2
Chikmagalur	70.6	70.5	9.4	0.4	60.7	6.1	0.9	2.4	0.2
Chitradurga	59.5	59.0	2.9	0.3	55.6	1.2	1.1	0.6	0.5
Dakshina Kannada	53.8	48.1	10.0	0.3	37.7	5.5	1.4	3.0	5.7
Davanagere	66.2	63.8	5.0	0.2	58.6	2.7	1.1	1.1	2.2
Dharwad	60.9	60.7	3.0	0.2	57.2	1.6	0.8	0.6	0.2
Gadag	50.6	50.1	1.9	0.4	47.4	0.9	0.5	0.5	0.5
Gulbarga	41.7	40.3	2.7	0.4	37.2	1.0	1.1	0.6	1.4
Hassan	71.0	68.8	4.4	1.0	63.4	2.8	0.8	0.8	2.2
Haveri	57.4	56.6	1.9	0.0	54.8	0.7	0.5	0.7	0.8
Kodagu	64.6	59.7	8.9	0.0	50.8	4.2	1.9	2.8	5.1
Kolar	65.3	63.2	3.6	0.0	59.7	2.2	0.8	0.5	2.1
Koppal	43.0	42.4	1.3	0.1	41.1	0.7	0.3	0.2	0.6
Mandya	73.7	73.5	4.8	0.0	68.7	2.8	0.9	1.1	0.2
Mysore	67.5	66.5	2.3	0.1	64.1	1.5	0.5	0.4	0.9
Raichur	42.2	41.7	1.4	0.0	40.3	1.0	0.4	0.0	0.5
Shimoga	72.2	70.5	5.5	0.2	64.6	3.0	1.0	1.4	1.8
Tumkur	60.5	60.2	6.2	0.0	53.9	4.5	0.9	0.8	0.3
Udupi	69.0	64.4	10.8	0.2	52.6	6.4	1.5	3.0	4.6
Uttara Kannada	58.9	56.4	10.4	0.0	46.0	4.4	1.2	4.7	2.5
Karnataka	59.3	57.7	5.1	0.2	52.4	2.8	0.9	1.4	1.6

[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 existing pattern of use of contraceptive methods in Karnataka is different from the general pattern in India. The contraceptive prevalence rate is around 2 percent for traditional methods in the state is much lower than that in other states in the country. The use of oral Pills is less than 2 percent in the districts of Karnataka except Bangalore and Udupi districts. The districts in which the use of condom is more than 4 percent in Uttara Kannada and Bangalore.

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 around 8 percent and this attains a peak of 79 percent in the age group, 35-39 years. A similar age pattern of contraceptive use is also observed in case of modern method. The use of traditional method is about 2 percent for the women of all the age groups except aged 15-19 and 20-24. The use of modern methods ranges from 7 percent for women in the age group 15-19 years to 77 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, Karnataka, 2002-04

Demographic Characteristic	Percentage of women/husbands using				Percentage of women/husbands by contraceptive status		Number of women
	Any modern[1] method	Any traditional[2] method	Any method	Not using any method	Ever used	Never used	
Age-group							
15-19	7.2	0.6	7.9	92.1	9.1	90.9	2,261
20-24	34.5	1.1	35.7	64.3	39.5	60.4	4,690
25-29	63.8	1.8	65.6	34.4	68.5	31.5	4,905
30-34	75.1	2.2	77.2	22.8	79.8	20.1	4,347
35-39	77.1	1.8	78.8	21.2	80.9	19.0	3,633
40-44	74.5	1.8	76.3	23.7	78.5	21.5	2,819
Surviving children							
0	1.4	0.5	2.0	97.9	3.1	96.9	2,827
1	23.5	2.8	26.4	73.6	33.0	66.9	4,244
2	73.6	1.9	75.4	24.6	77.7	22.3	7,279
3 or more	80.5	1.1	81.5	18.5	83.0	16.9	8,305
Surviving sons							
0	22.4	1.8	24.3	75.7	27.8	72.2	6,644
1	64.3	1.9	66.2	33.8	68.8	31.2	8,831
2 or more	82.3	1.1	83.3	16.7	85.2	14.7	7,181
Surviving daughters							
0	37.4	1.4	38.8	61.2	41.5	58.4	8,093
1	66.4	1.9	68.3	31.7	71.6	28.4	8,289
2 or more	72.4	1.5	73.9	26.1	75.6	24.4	6,274
All women	57.7	1.6	59.3	40.7	62.0	38.0	22,655

[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 irrespective of methods in Karnataka. The use of any method of contraception is 83 percent for the women who have two or more sons and is marginally higher than the women who have two or more daughters (74 percent). The same trend can be observed in the

case of use of any modern method which is 82 percent for the women who have two or more surviving sons and it is higher than the women who have two or more daughters (72 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 Karnataka 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 14 percent and it gradually picks up with the age of husband, to a peak of 72 percent in the age group, 45 + years. A similar age pattern of contraceptive use is observed in the modern methods. Among the husbands in the age groups of 25-34 and 45 years and above the use of traditional methods is around 2 percent and it is least (0.9) percent among the husbands in the younger age group of below 25 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, Karnataka, 2002-04

Demographic *Characteristic*	Percentage of husbands/women using				Number of men
	Any modern[1] method	Any traditional[2] method	Any method	Not using any method	
Age-group					
<25	13.6	0.7	14.4	85.6	618
25-34	40.1	1.5	41.9	58.1	4,477
35-44	70.5	1.2	72.0	28.0	5,418
45+	72.4	1.7	74.2	25.8	3,390
Surviving children					
0	10.8	1.5	12.5	87.5	1,709
1	26.9	3.0	30.0	70.0	2,248
2	72.1	1.4	73.6	26.4	4,397
3 or more	75.6	0.7	76.7	23.3	5,550
Surviving sons					
0	26.6	2.5	29.3	70.7	3,887
1	65.8	1.3	67.3	32.7	5,244
2 or more	76.9	0.6	77.8	22.2	4,773
Surviving daughters					
0	40.4	1.5	42.2	57.8	4,685
1	66.7	1.3	68.2	31.8	5,155
2 or more	69.4	1.4	71.1	28.9	4,064
All men	58.6	1.4	60.3	39.7	13,904

[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 Karnataka. Among all the husbands interviewed, 94 percent reported about female methods. Reporting of female methods is higher in rural areas (96 percent) than in urban areas (89 percent). The reasons cited for not preferring the male methods are Female methods are more popular (56 percent), fear of weakness (35 percent), fear of operation (6 percent), fear of impotency (3 percent) and fear of method failure (2 percent). Only one percent reported lack of sexual pleasure as one of the reasons for not using male methods. However, there is not much rural-urban differential in the reasons for not using male methods, except in the case of female methods are more popular and fear of weakness. Popularity of female methods as a reason for not using male methods of contraception is more in rural areas (96 percent) than in urban areas (89 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, Karnataka, 2002-04

Female method users and reason for not accepting male methods	Total	Residence	
		Rural	Urban
Percentage of husband who have reported female methods	94.0	95.9	89.4
Number of men	8,383	5,842	2,541
Reasons for not accepting male methods*			
Fear of impotency	2.5	2.8	1.5
Lack of sexual pleasure	1.0	1.2	0.4
Fear of method failure	2.1	2.3	1.8
Fear of operation	6.0	7.4	2.6
Fear of weakness	35.1	39.6	24.0
Female methods are more popular	56.2	50.0	71.6
Other	5.6	5.8	5.1
Number of men	7,876	5,605	2,271

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

6.4 Source of Contraceptive Methods

To asses 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 Karnataka 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 (69 percent) followed by community health centres or primary health centres (15 percent), family planning camps or RCH camp (4 percent) and private hospital (9 percent). For male sterilization as well the aforesaid are the main sources obtaining the service. Among the IUD users, 35 percent reported the source as government/municipal hospital and 5 percent from the community health centres and 2 percent each from Government doctor, Government nurse/ANM and sub-centre. The private hospital is playing a dominating role in

providing the service for IUD users (40 percent). It is found that the chemist is the main source for Condom (60 percent) and Pills (45 percent).

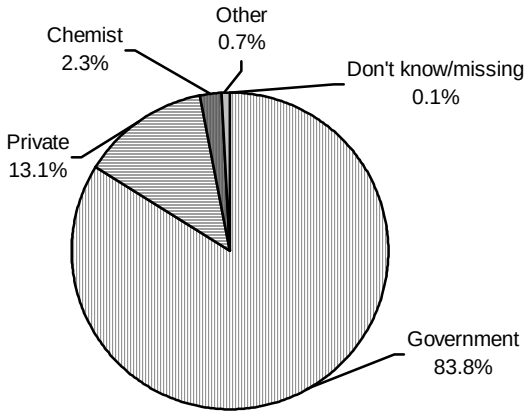
TABLE 6.10 SOURCE OF MODERN CONTRACEPTIVE METHODS

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

Source	Contraceptive method					All modern methods[1]
	Female sterilization	Male sterilization	IUD/ Loop	Pills	Condom/ Nirodh	
Government medical centre	88.4	(89.2)	46.0	27.8	24.1	83.8
Government/Municipal hospital	68.7	(70.3)	35.0	16.5	14.0	65.0
CHC/PHC	14.6	(16.2)	5.4	5.7	3.2	13.7
Sub-centre	0.6	(0.0)	1.8	2.4	1.3	0.7
Government doctor	0.2	(0.0)	1.6	0.0	0.3	0.3
Government nurse/ ANM	0.0	(0.0)	1.7	3.3	1.1	0.2
Family planning/RCH camp	4.1	(2.7)	0.2	0.0	0.0	3.7
Out reach/MCP clinic in village	0.0	(0.0)	0.0	0.0	0.0	0.0
Mobile clinic	0.0	(0.0)	0.3	0.0	4.3	0.2
Private medical centre	10.9	(8.1)	51.8	26.2	12.6	13.1
Private hospital	8.8	(5.4)	40.4	15.4	5.2	10.3
Private doctor	2.0	(2.7)	9.5	10.7	7.1	2.6
Private nurse	0.1	(0.0)	1.8	0.1	0.2	0.2
Chemist	0.1	(0.0)	0.6	44.8	60.4	2.3
Other	0.6	(2.7)	1.7	1.1	2.1	0.7
Do not know	0.1	(0.0)	0.0	0.0	0.8	0.1
Missing	0.0	(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	11,866	36	626	215	317	13,059

[1] Includes female sterilization, male sterilization, IUD, Pills or condom. CHC: Community health centre, PHC: Primary health centre. () Based on less than 50 unweighted cases.

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

Karnataka, 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 11 percent of the sterilized women have problem with the contraceptive methods in use. The most common problems experienced by sterilized women are body ache or backache (69 percent) weakness or inability to work (55 percent), white discharge (16 percent), excessive bleeding (10 percent) dizziness (9 percent), nausea or vomiting and cramps each (7 percent), irregular periods and (5 percent), weight gain (5 percent), Breast tenderness and spotting each (3 percent). With regard to the modern spacing methods, 11 percent and 8 percent of women had problems in using IUD and Pills respectively. The most common problems of IUD users were body ache/backache (53 percent), excessive bleeding (15 percent), white discharge and weakness or inability to work (each 14 percent), irregular period (6 percent), weight gain and spotting (each 5 percent), cramps (3.9 percent) and breast tenderness and dizziness (each around 1 percent).

Table 6.11 HEALTH PROBLEMS WITH CURRENT USE OF CONTRACEPTION

Percentage of women informed about side effects, had side effects with the method by use of method, Karnataka, 2002-04

Health problems/side effect	Type of method		
	Female sterilizations	IUD/loop	Pill
Women who were informed about all the available methods	39.0	0.0	0.0
Women who were informed about the side effects before adoption of the method	49.8	62.9	43.9
Women who had side effect/health problem due to use of contraceptive method	11.2	10.9	8.2
Number of current users	11,866	626	215
Type of health problems/side effects[1]			
Weakness/inability to work	54.7	13.5	*
Body ache/ backache	69.2	52.6	*
Cramps	6.6	3.9	*
Weight gain	5.4	5.1	*
Dizziness	8.9	0.5	*
Nausea/vomiting	7.3	0.0	*
Breast tenderness	2.9	1.0	*
Irregular periods	4.9	5.9	*
Excessive bleeding	10.2	15.1	*
Spotting	2.7	4.5	*
White discharge	16.1	14.2	*
Other	0.0	0.0	*
Number of users with side effects	1,328	68	18

[1] Percentages may add to more than 100.0 because multiple problems could be recorded.
* Percentages not shown, based on very 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 71 percent of the sterilized women sought treatment and 50 percent in the case of IUD. Regarding the satisfaction about the method, 96 percent of the sterilized women reported satisfaction with sterilization. In the case of spacing methods, 94 percent of women using Pills and 96 percent of women using IUD were satisfied with the respective methods.

Those women who had sought treatment for contraceptive use related problems, slightly more number of them have taken treatment from private hospitals/clinics. For female sterilization related health problems, 43 percent had taken treatment from private hospitals/clinics, 39 percent from government hospitals/dispensaries, 12 percent from PHC. Private hospital/clinic is the source of treatment for 61 percent of women who had health problem in using IUD.

Table 6.12 SOUGHT TREATMENT FOR HEALTH PROBLEMS WITH CURRENT USE OF CONTRACEPTION

Percentage of women sought treatment who had side effects, follow-up and satisfaction with the method by use of method, Karnataka, 2002-04

	Type of method		
Health problems/side effect	Female sterilizations	IUD/loop	Pill
Women who had follow up visit by health worker after adoption of method	47.6	36.2	21.6
Women who are satisfied with method of current use	96.0	96.0	93.7
Number of current users	11,866	626	215
Women who sought treatment for the health problem	70.9	50.2	*
Number of women with side effects	1,328	68	18
Source of treatments			
Government health facility			
Government hospital/dispensary	39.4	(31.7)	*
UHC/UHP/UFWC	0.5	(0.0)	*
CHC/Rural hospital	1.8	(0.0)	*
PHC	12.2	(2.4)	*
Sub-centre	1.9	(4.9)	*
Out reach/MCP clinic in village	0.4	(0.0)	*
Private health facility			
NGO/trust hospital clinic	0.4	(0.0)	*
Private hospital/clinic	43.1	(61.0)	*
ISM health facility[1]	1.3	(0.0)	*
Chemist/Medical shop	1.8	(0.0)	*
Home remedy	0.8	(0.0)	*
Other	1.0	(2.4)	*
Number of women with side effects	942	34	1

[1] Either government or Private. * Percentages not shown, based on very few cases.

() Based on less than 50 unweighted 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 19 percent of the women were advised by ANM/health worker to adopt any family planning method in Karnataka. There is no much variation among rural urban women in this respect.

TABLE 6.13 ADVICE ON CONTRACEPTIVE USE AND FUTURE INTENTION TO USE

Percentage of current non-users* 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, Karnataka, 2002-04

		Residence		Availability of health facility in the village[1]	
Advise/future intension to use	Total	Rural	Urban	No	Yes
Percentage of current non-users advised by ANM/health worker to use of contraceptive method	18.7	19.0	18.2	19.6	18.3
Number of non-users	7,317	4,844	2,473	2,591	2,253
Percent distribution of women who were advised by method					
Female sterilization	64.7	65.6	62.9	65.8	65.4
Male sterilization	3.3	3.7	2.5	2.5	5.1
IUD/loop	27.0	25.7	29.7	27.5	23.6
Pill	3.7	3.6	3.8	3.2	4.2
Condom/Nirodh	0.9	1.1	0.5	0.8	1.5
Rhythmic /periodic abstinence	0.1	0.1	0.2	0.2	0.0
Withdrawal	0.1	0.0	0.1	0.0	0.1
Other	0.1	0.1	0.2	0.0	0.2
Total percent	100.0	100.0	100.0	100.0	100.0
Number of non-users	1,371	921	451	507	413

* Exclude women in menopause or those who have undergone hysterectomy.
[1] Includes sub-centre, primary health centre, community health centre or referral hospital, government hospital, and government dispensary within the village.

The recommended contraceptive methods by ANM/health worker is dominated by female sterilization (65 percent) and IUD (27 percent). Only 4 percent were advised to adopt pill as spacing methods and condom/Nirodh is advised to only 1 percent of the women. 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, 33 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 slightly higher in rural areas (35 percent) than in urban areas (30 percent).

Among the women who intended to use permanent methods of contraception, 92 percent preferred female sterilization whereas only 0.6 percent of the women preferred male sterilization. In case of temporary methods, the preferred methods by women are IUD (6 percent), oral pills and rhythm/periodic abstinence (each1 percent) respectively.

Forty-nine percent of the husbands intended to use contraception in the future, among them 53 percent belong to rural areas and 41 from urban areas. Method wise choice in intention to use contraception is dominated female sterilization being reported by 95 percent, followed by IUD (2 percent), condom and Oral Pill (1 percent each).

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, Karnataka, 2002-04

	Women			Husband		
Future intention to use/method	Total	Rural	Urban	Total	Rural	Urban
Percentage of respondents who intend to use contraceptive in future	32.9	34.5	29.6	48.7	52.6	40.7
Number of non-users	7,317	4,844	2,473	5,393	3,600	1,793
Percent distribution of non-user who were preferred to use family methods by preferred method						
Female sterilization	91.5	93.6	86.7	94.6	94.5	94.7
Male sterilization	0.6	0.4	1.0	0.7	0.6	1.2
IUD/copper-T/loop	5.7	4.1	9.4	1.5	1.4	1.7
Oral pills	1.3	1.4	1.1	0.6	0.7	0.4
Condom/Nirodh	0.2	0.2	0.1	1.1	1.3	0.5
Rhythm/periodic abstinence	0.5	0.3	1.2	0.2	0.2	0.1
Withdrawal	0.0	0.0	0.0	0.1	0.0	0.2
Other	0.2	0.1	0.4	1.2	1.2	1.0
Total percent	100.0	100.0	100.0	100.0	100.0	100.0
Number of non-users	2,404	1,671	733	2,618	1,892	726

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

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 Karnataka. Among the current non-users, around 10 percent of the women intended to use contraception within the next twelve months. Only 7 percent of women wanted to use within one to two years whereas 16 percent reported their intention to use contraceptives after two years. About 39 percent are not sure of their intention to use, where as 28 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. About 64 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, Karnataka, 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	1.6	8.6	19.7	16.3	14.1	10.0
One to two years	1.4	9.0	11.2	9.6	3.8	6.9
More than two years	12.9	20.2	17.2	17.1	5.7	16.0
Does not intend to use	20.1	23.4	29.8	38.2	63.8	28.4
Not yet decided	64.0	38.8	22.0	18.8	12.6	38.8
Total percent	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	2,110	2,495	1,502	593	617	7,317
			Rural			
Intends to use in next 12 months	1.8	8.1	14.4	11.6	15.4	8.4
One to two years	1.4	10.3	13.7	10.6	3.7	7.7
More than two years	14.5	23.7	20.5	20.9	6.5	18.5
Does not intend to use	21.9	22.9	28.9	35.3	63.2	28.5
Not yet decided	60.4	35.1	22.5	21.6	11.2	37.0
Total percent	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	1,469	1,594	938	399	443	4,844
			Urban			
Intends to use in next 12 months	1.3	9.6	28.5	25.9	10.9	13.1
One to two years	1.5	6.8	7.1	7.5	4.1	5.4
More than two years	9.0	14.0	11.9	9.3	3.7	11.1
Does not intend to use	15.9	24.2	31.3	44.4	65.2	28.2
Not yet decided	72.3	45.3	21.2	12.9	16.1	42.2
Total percent	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	641	901	564	193	174	2,473

* 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, 48 percent of the women mentioned that they discontinued the use because they had wanted child, weakness/inability to work (12 percent), method failed/became pregnant and method was inconvenient (6 percent each) excessive bleeding (5 percent), supply not available and body ache and backache (3 percent each) and 8 percent of women has reported as other reason. For urban women 13 percent have reported weakness/inability to work and it is 11

percent among rural women, In Rural areas, 12 percent of women reported as method failed/became pregnant where as the same is just 2 percent among urban 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, Karnataka, 2002-04.

Reasons	Total	Place of residence	
		Rural	Urban
Reason for discontinuation			
Wanted child	48.1	41.2	53.0
Method failed/became pregnant	6.1	11.9	2.1
Supply not available	3.2	6.4	1.0
Difficult to get method	2.4	2.6	2.3
Weakness/inability to work	12.4	11.4	13.1
Body ache/ Backache	3.0	1.3	4.3
Cramps	0.2	0.0	0.3
Weight gain	0.8	0.7	1.0
Dizziness	0.1	0.3	0.0
Nausea/vomiting	1.0	0.5	1.3
Breast tenderness	1.3	2.7	0.4
Irregular periods	0.4	0.8	0.1
Excessive bleeding	4.9	3.5	5.9
Spotting	0.1	0.3	0.0
White discharge	1.2	2.3	0.5
Lack of pleasure	1.2	0.2	1.9
Method was inconvenient	5.6	8.5	3.5
Other	7.6	4.9	9.4
Missing	0.2	0.6	0.0
Total percent	100.0	100.0	100.0
Number of past users	601	251	351

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, opposed to family planning (17 percent), difficult to become pregnant (16 percent), health does not permit (11 percent), inconvenient to use method (7 percent), afraid of sterilization, not like existing method, lack of knowledge about FP method (6 percent each), worry about side effects (4 percent), against religion (3 percent), hard/inconvenient to get method and cannot work after sterilization (2 percent each). About19 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, Karnataka, 2002-04

Reason	Women			Husband*		
	Total	Rural	Urban	Total	Rural	Urban
Lack of Knowledge about FP method	5.7	6.7	4.0	4.7	5.6	3.2
Against the Religion	2.8	2.0	4.1	11.2	10.8	11.8
Opposed to family planning	17.2	19.6	13.1	9.7	8.5	11.8
Not like existing method	5.9	6.0	5.9	4.2	4.6	3.5
Afraid of sterilization	6.4	5.8	7.4	3.2	3.5	2.7
Can not work after sterilization	2.1	2.3	1.8	1.9	2.2	1.3
Worry about side effects	4.1	3.9	4.3	3.2	4.0	2.0
Costs too much	0.2	0.2	0.1	0.7	0.8	0.6
Health does not permit	11.0	10.3	12.1	13.3	14.8	11.0
Hard/inconvenient to get method	2.2	1.4	3.5	3.3	2.8	4.1
Inconvenient to use method	6.5	6.2	7.1	7.4	4.7	11.7
Difficult to become pregnant	16.4	14.8	19.2	19.6	20.8	17.6
Wife is pregnant[1]	-	-	-	3.3	2.8	4.0
Other	19.3	20.6	17.0	9.3	9.8	8.6
Missing	0.2	0.2	0.3	5.0	4.3	6.0
Total percent	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	3,431	2,142	1,289	1,767	1,080	687

[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 Karnataka 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 (20 percent) for both spacing and limiting. Among the older women of age 25-29 years, 13 percent have unmet need. Among the women age 30 years and above, unmet need is exclusively for limiting. The urban women have high unmet need (18 percent) than the rural women (14 percent). The unmet need for family planning is higher (18.5 percent) among the 10 or more years of schooling than among the women with 0-9 years of schooling (15 percent) and Illiterate (14 percent) women. Hindu women have lesser unmet need for family planning (14 percent) compared to the Muslim or Christian women (20 percent) respectively. Unmet need for family planning is higher (16 percent) for Other caste followed by Scheduled caste (15.5 percent), other backward class (15 percent) and Scheduled tribe (13 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, Karnataka, 2002-04

Background Characteristic	Unmet need for FP			Number of women
	Spacing[1]	Limiting[2]	Total	
Age				
15-19	17.4	2.4	19.9	2,261
20-24	14.3	5.8	20.1	4,690
25-29	5.7	7.0	12.7	4,905
30-34	2.2	9.5	11.7	4,347
35-39	1.0	12.7	13.7	3,633
40-44	0.5	13.8	14.3	2,819
Residence	7.0	6.9	14.0	15,327
Rural	5.6	12.0	17.5	7,329
Urban				
Education	5.5	8.1	13.6	10,352
Illiterate	7.2	7.7	14.9	7,179
0-9 @ years	7.8	10.7	18.5	5,119
10 years and above				
Religion	6.5	7.8	14.3	19,189
Hindu	7.4	12.9	20.3	2,879
Muslim	6.5	13.5	20.1	390
Christian	5.1	6.6	11.7	181
Jain				
Caste/tribe#	6.5	9.0	15.5	4,038
Scheduled caste	6.3	7.1	13.4	1,788
Scheduled tribe	6.9	7.8	14.7	11,203
Other backward class	6.0	10.2	16.2	5,459
Others				
Number of living children	7.1	1.8	8.9	2,827
0	19.0	9.3	28.3	4,244
1	4.4	9.4	13.8	7,279
2	2.1	6.9	9.0	4,789
3	1.8	13.5	15.3	3,515
4+				
Standard of living Index	7.0	7.6	14.6	9,289
Low	7.0	8.3	15.2	7,980
Medium	5.2	10.7	15.9	5,386
High				
	6.6	8.5	15.1	22,655
All women				

[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.

@ 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. Total includes 4 women with missing information on education and 1 on religion who were not shown separately. Total includes 15 women in other religion who were not shown separately.

Women in high standard of living have high (16 percent) unmet need than the women of medium and low standard of living (15 percent) each respectively. Unmet need is much higher for the women with one living child (28 percent) than women with either no children (9 percent) or two or more children (14 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

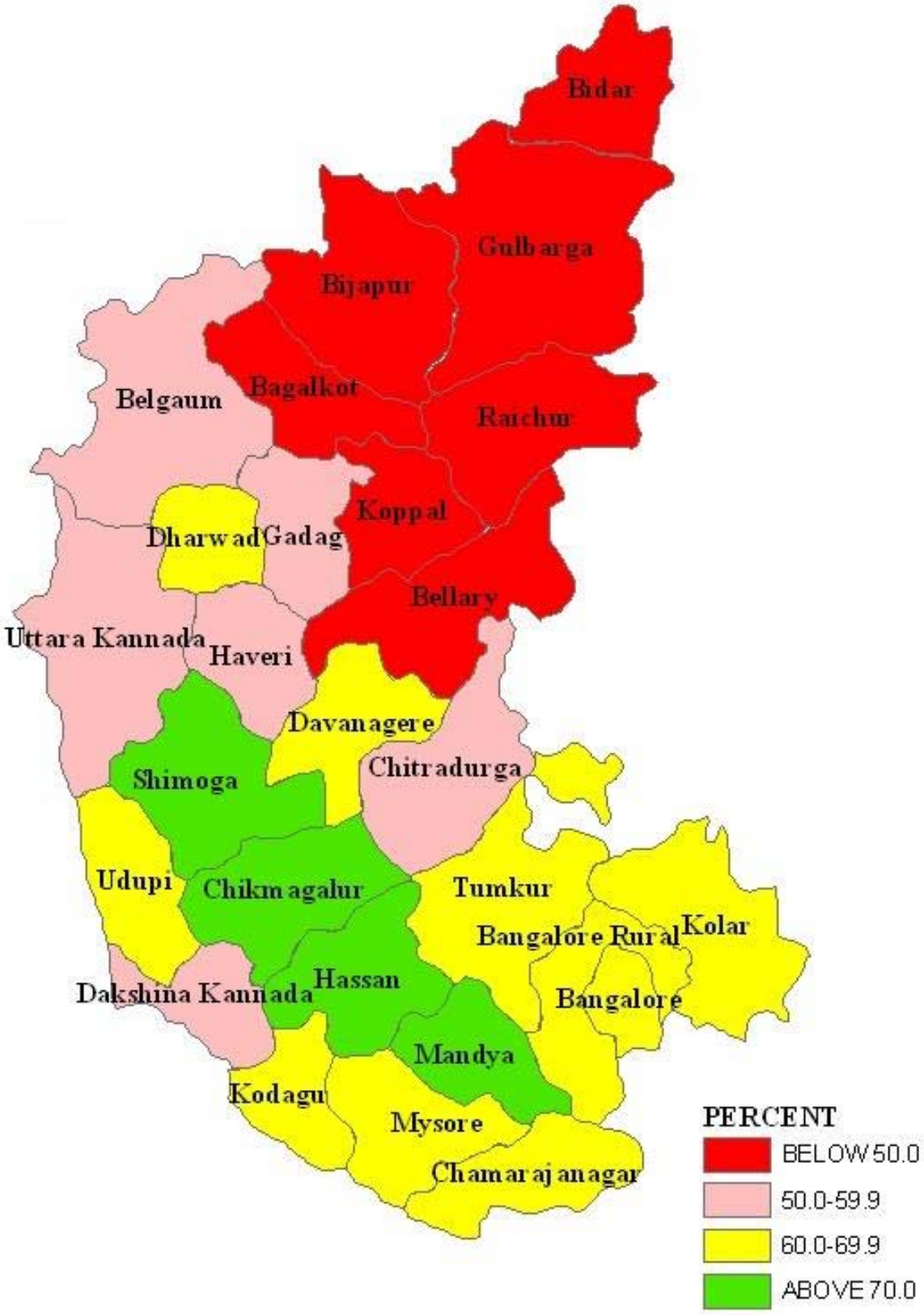
Table 6.19 provides the information about unmet need for limiting, spacing and total by district. The unmet need for family planning services for state is 15 percent and it ranges from 6 percent in Davanagere to 25 percent in Gulbarga. In 14, out of 27 districts unmet need for family planning is more than state average. Unmet need for limiting was found lowest in Mandya (4 percent) followed by Darwad, Hassan, Belgaum and Davanagere (5 percent each), and highest in Dakshina Kannada (15 percent). Similarly, unmet need for spacing was lowest to 1 percent in Davanagere to 14 percent in Gulbarga. It may also observe that except Gulbarga, Darwad, Bidar and Belgaum districts, in all the districts of Karnataka 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, Karnataka, 2002-04

Districts	Unmet need for		
	Spacing	Limiting	Total
Bagalkot	6.7	9.1	15.9
Bangalore	4.2	13.5	17.8
Bangalore Rural	4.3	9.7	14.0
Belgaum	10.2	4.9	15.2
Bellary	7.1	9.5	16.5
Bidar	10.3	9.3	19.6
Bijapur	8.7	9.7	18.4
Chamarajanagar	2.0	6.5	8.5
Chikmagalur	7.3	5.8	13.1
Chitradurga	3.8	11.3	15.1
Dakshina Kannada	4.4	15.4	19.7
Davanagere	1.0	5.3	6.3
Dharwad	13.2	4.7	18.0
Gadag	8.8	7.9	16.7
Gulbarga	13.8	11.5	25.4
Hassan	5.0	4.8	9.8
Haveri	5.0	8.7	13.7
Kodagu	6.7	11.0	17.7
Kolar	9.0	6.9	16.0
Koppal	5.7	10.0	15.7
Mandya	6.2	3.7	9.9
Mysore	3.0	6.5	9.5
Raichur	5.8	10.7	16.5
Shimoga	2.6	6.1	8.6
Tumkur	6.9	8.2	15.2
Udupi	4.9	7.8	12.7
Uttara Kannada	8.1	9.2	17.3
Karnataka	6.6	8.5	15.1

MAP-6
Current use of any family planning method, 2002-04



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. Around 18 percent of the women in Karnataka reported that the health worker visited them at their residence at least once in last three months preceding the survey. Younger women seemed likely to report a home visit than older women. Eighteen percent of women in the age group 15-24 years reported at least one home visit compared to only Seventeen percent of women in the age group 35 years and older. The percentage of women in Karnataka receiving home visits is higher in rural areas (23 percent) than in urban areas (6 percent). Women who were non-literate (19 percent) and women with a low standard of living (22 percent) seemed more likely to report home visits. More Hindu women (18 percent) reported home visits than Muslim, Christian and other religious groups (14, 15 and 10 percent). There was not much variation by caste/tribe. Home visits were at most same 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, 97 percent received services from ANM/LHV, 3 percent from male health worker and one percent from a doctor. There were less rural-urban differentials by visit of households by health worker. Seventy Eight percent of women who received services at home were satisfied with the time spent with them and 86 percent of women were satisfied with the services or advice given to them.

Table 7.1 HOME VISIT BY HEALTH WORKER

Percentage of women who had home visit by a doctor, ANM/LHV, or male health worker in the 3 months preceding the survey, among women who had home visit, satisfied with time spent by health workers and with services provided by selected background characteristics Karnataka, 2002-04

Background characteristic	Percentage with home visit	Number of women	Home visit by[1]			Percentage of women satisfied with		Number of women
			Doctor	ANM / LHV	Male health worker	Amount of time	Services/ advices	
Age								
15.24	17.9	6,951	0.7	97.9	1.9	77.9	87.7	1,245
25-34	18.0	9,253	1.0	96.4	3.9	77.5	84.9	1,662
35-44	17.2	6,452	1.0	95.8	3.7	78.0	84.9	1,110
Residence								
Rural	23.3	15,327	0.9	96.5	3.4	78.6	86.3	3,576
Urban	6.0	7,329	1.1	97.8	2.1	71.3	81.1	441
Education								
Non-literate	18.9	10,352	1.1	95.9	3.8	74.4	82.8	1,961
0-9@ years	18.3	7,179	0.8	97.1	2.8	81.4	88.7	1,315
10 and above	14.5	5,119	0.5	98.0	2.7	80.3	88.5	741
Religion								
Hindu	18.3	19,189	1.0	96.5	3.4	77.9	86.0	3,520
Muslim	14.4	2,879	0.4	98.2	1.8	75.8	83.2	416
Christian	15.6	390	0.0	96.1	3.9	79.6	91.2	61
Jain	9.7	181	*	*	*	*	*	18
Caste/tribe#								
Scheduled caste	18.5	4,038	0.9	96.1	3.4	77.7	88.1	748
Scheduled tribe	17.7	1,788	0.1	97.5	3.5	74.6	82.7	317
Other backward class	18.8	11,203	0.7	96.5	3.2	78.9	85.7	2,111
Other	15.1	5,459	1.6	97.4	3.1	76.6	85.3	827
Standard of living index								
Low	21.7	9,289	0.7	96.4	3.4	77.8	85.4	2,015
Medium	17.1	7,980	0.8	96.7	3.0	76.8	85.7	1,362
High	11.9	5,386	1.6	97.4	3.2	79.5	86.9	640
Availability of health facility[2] in the village								
No	23.1	8,484	0.8	95.6	4.0	78.4	85.0	1,959
Yes	23.6	6,843	0.9	97.7	2.7	78.7	87.9	1,617
Total	17.7	22,655	0.9	96.7	3.3	77.8	85.8	4,018

Note: Total includes 4 women with missing information on education and 1 in religion who were not shown separately.
Total includes 15 women in other religion who were not shown separately.
[1] Percentage add to more than 100.0 due to multiple responses. @ Literate mother with no years of schooling are 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.
* Percentages not shown: based on few cases.

The proportion of women who were satisfied with the amount of time spent, and advices provided by health workers varied across various background characteristics. There was not much differences regarding satisfaction with amount of time spent by the health workers during home visits by comparing older women with younger women. Eighty percent of women in the age group, 15-24 years and 25-34 years reported satisfaction with the time spent by health workers as compared to 78 percent of women aged 35 years and older. Eighty-Eight percent of women in the age group 15-24 years reported satisfaction with services as

compared to 85 percent of women in the age groups 25-34 and 35 years and older. Rural women (79 percent) were more likely than urban women (71 percent) to report that they satisfied with the time spent by health workers during home visits, and also with service/ advices received (86 percent and 81 percent). Women who were literate, women from other religious and other backward caste, and women with a high standard of living are more likely to report satisfied with amount of time spends by health workers during home visits. Women residing in the village with availability of health facility do not vary very much with the time spent from those villages where health facilities are not available.

7.2 Home Visit by Health Workers by Districts

In Karnataka, health workers visited less than 10 percent of the women at home in Bangalore, Chamarajnagar, Chitradurga and Dharwad. In more than half of the districts the percent of women visited by Health Worker ranged from 10-20 percent and none of the districts covered more than 20 percent of women. Districts like Chikmagalur, Davanagere, Hassan, Kolar, Koppal, Mandya, Tumkur, Udupi and Uttara Kannada (Table 7.2 and Figure 7.1). There is only one district (Kolar) in which about 35 percent of women were visited by healthworker. Among women who were visited by health worker at home, more than ninety percent of them approached by ANM/LHV in almost all the districts. Approached by male worker at home is nil in Chamarajnagar, Chitradurga, Hassan, Mysore, Udupi districts and highest only in Kodagu (10 percent) and Raichur (8 percent). Percentage of women visited by doctor was 7 percent only in Bijapur and lesser in almost all districts.

In all the districts except in Bellary (49 percent)more than 60 percent of women said that the worker had spent enough time with them. On the other hand, except in Gulbarga (60 percent) the percentage ranged from 70 to 90 percent Bagalkot, Bangalore, Bangalore rural, Belgaum, Bellary, Bidar, Bijapur, Chikmagalur, Dakshina Kannada, Dharwad, Gadag, Hassan, Haveri, Kodagu, Kolar, Koppal, Raichur and Tumkur reported satisfaction with service/advices given by health workers. It was more than 90 percent in Chamarajnagar, Chitradurga, Davanagere, Mandya, Mysore, Shimoga, Udupi and Uttara Kannada.

Figure 7.1
Distribution of Districts by
Home Visit by Health Worker

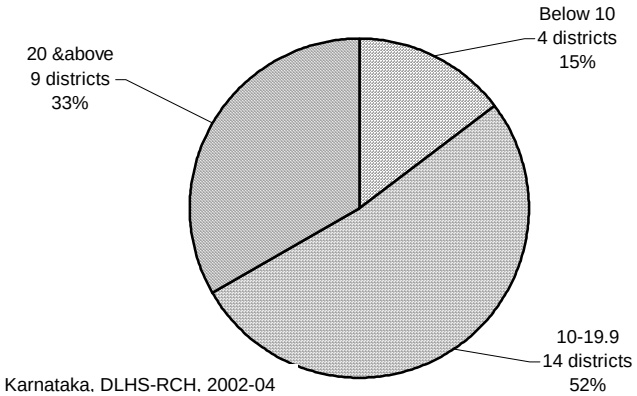


Table 7.2 HOME VISIT BY HEALTH WORKER BY DISTRICT

Percentage of women who had home visit by a doctor, ANM/LHV, or male health worker in the 3 months preceding the survey, among women who had home visit, satisfied with time spent by health workers and with services provided by district, Karnataka, 2002-04

District	Percentage with home visit	Home visit by[1]			Percentage of women satisfied with	
		Doctor	ANM / LHV	Male health worker	Time spent	Service
Bagalkot	18.3	3.7	95.3	5.7	66.3	85.2
Bangalore	7.3	0.0	96.4	3.6	85.4	87.5
Bangalore Rural	18.6	2.3	92.0	5.7	82.9	84.0
Belgaum	16.5	0.0	98.5	1.5	85.6	86.3
Bellary	16.0	0.4	99.7	3.0	48.9	84.0
Bidar	12.2	2.0	97.0	1.0	66.6	70.2
Bijapur	15.2	6.6	91.9	7.8	58.9	71.1
Chamarajanagar	8.6	0.0	100.0	0.0	96.9	98.5
Chikmagalur	29.9	0.0	99.4	0.6	59.6	86.1
Chitradurga	6.7	0.0	100.0	0.0	82.7	91.0
Dakshina Kannada	19.3	0.0	97.6	2.4	87.6	86.5
Davanagere	20.0	0.5	97.5	4.2	88.0	90.5
Dharwad	6.0	2.4	95.5	4.5	79.3	86.0
Gadag	17.4	2.6	97.0	4.7	74.4	81.4
Gulbarga	10.7	0.0	97.9	2.1	61.9	60.3
Hassan	26.5	0.2	99.8	0.0	85.7	86.3
Haveri	11.4	0.9	99.2	1.8	86.3	87.7
Kodagu	18.1	1.6	88.8	9.6	79.8	85.7
Kolar	35.3	0.6	95.5	4.9	79.5	78.4
Koppal	23.2	0.3	99.0	0.7	69.9	85.1
Mandya	22.0	0.4	99.2	0.4	85.6	92.9
Mysore	11.9	0.0	100.0	0.0	93.6	96.5
Raichur	16.1	0.0	91.7	8.3	58.1	85.1
Shimoga	17.6	0.0	98.2	1.8	81.2	92.6
Tumkur	25.2	0.9	92.8	6.8	69.8	89.8
Udupi	27.2	0.0	100.0	0.0	85.6	91.9
Uttara Kannada	26.1	3.3	91.6	5.1	89.3	92.7
Karnataka	17.7	0.9	96.7	3.3	77.8	85.8

[1] Percentage add to more than 100.0 due to multiple responses.

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 1,580 pregnant woman or women with children born during the reference period, and other women includes 1880 current users and 558 current non-users, who were visited by health workers at home.

The major focus of discussion during home visits was treatment of health problems (39 percent) and immunization (30 percent). In addition, discussions were also made on childcare (22 percent), family planning (17 percent), and antenatal care (14 percent), disease prevention (12 percent) nutrition as well as about (7 percent each). Discussions about family planning were mentioned more often by current users of contraception and by current non-users (14 percent) each than pregnant women or women with child born after reference period (17 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 women[1] who discussed specific topics with the health worker, Karnataka, 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	17.0	6.4	13.9	11.6
Family planning	(2.6)	(0.5)	(0.7)	(1.2)
Breastfeeding	2.7	1.1	1.1	1.7
Supplementary feeding	30.1	4.2	4.7	14.5
Immunization	6.7	2.7	3.1	4.3
Nutrition	11.5	19.0	18.8	16.0
Diseases prevention	39.1	53.4	52.9	47.7
Treatment of health problem	13.7	3.7	5.8	7.9
Antenatal care	8.0	1.1	1.6	3.9
Delivery care	6.1	0.8	1.5	3.0
Postpartum care	21.5	8.5	6.6	13.3
Childcare	3.0	3.8	1.9	3.2
Sanitation / cleanliness	(1.4)	(1.2)	(0.5)	(1.2)
Oral rehyderation	5.8	12.1	12.5	9.7
Other				
Number of women	1,580	1,880	558	4,018
During visit to health facility				
Family planning	8.9	2.2	4.7	5.9
Breastfeeding	(0.9)	(0.2)	(0.7)	(0.6)
Supplementary feeding	(0.7)	(0.2)	(1.1)	(0.6)
Immunization	22.3	1.2	0.7	12.1
Nutrition	(2.0)	(0.8)	(1.8)	(1.5)
Diseases prevention	4.1	9.8	8.3	6.7
Treatment of health problem	33.4	75.0	69.9	52.8
Antenatal care	23.6	5.7	4.6	14.8
Delivery care	8.9	1.0	2.4	5.3
Postpartum care	3.7	0.1	0.0	1.9
Childcare	13.5	3.6	3.2	8.6
Sanitation / cleanliness	(0.7)	(1.1)	(0.7)	(0.9)
Oral rehyderation	(0.3)	(0.5)	(0.7)	(0.4)
Other	2.0	4.5	8.3	3.6
Number of women	1,326	955	277	2,560

Note: Percentage add to more than 100.0 due to multiple responses.
[1] Women who visited private health facility are not included.
[2] Reference period for phase I, January 1st 1999 and for phase II, January 1st .2001
( ) Based on less than 50 cases

The topic discussed most often during visits to health facility by women was treatment of health problems (53 percent), antenatal care (15 percent), immunization (12 percent) childcare (9 percent) disease prevention (7 percent), and other health related topics (4 percent). Only six percent women reported that they discussed family planning during the visit. During visit to health facility about one-fourth of the pregnant women or women with children born during reference period discussed on immunization, 33 percent discussed about treatment of a health problem, antenatal care, 24 percent, Immunization 22 percent, childcare 14 percent, delivery care 9 percent discussed and 4 percent discussed disease prevention. A few pregnant women or women with children born after reference period also discussed about

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 34 percent of women needed to visit health facility but did not visit in comparison with 30 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 (35 percent) than in rural areas (28 percent). Among them who visited any health facility, 57 percent of women reported that they had visited a private Hospital, (49 percent in rural areas and 71 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, Karnataka, 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	34.1	35.7	30.7	36.8	34.3
Percentage of women who needed to visit health facility and visited	30.2	28.2	34.5	27.8	28.6
Number of women	22,655	15,327	7,329	8,484	6,843
Government health facility					
Hospital / CHC / FRU /RH	25.5	27.9	21.4	31.7	23.3
Dispensary	0.7	0.7	0.6	0.7	0.8
Primary health center	9.2	13.2	2.3	10.5	16.5
Sub-center	1.5	2.3	0.1	1.1	3.6
Private health facility					
Hospital	56.8	48.5	71.1	48.4	48.6
Dispensary	5.0	6.1	3.1	6.1	6.1
ISM[2] hospital/dispensary	0.7	0.6	0.7	0.6	0.7
Other	0.5	0.3	0.7	0.5	0.2
Total percent	100.0	100.0	100.0	100.0	100.0
Number of women	6,838	4,315	2,523	2,357	1,958

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
Total includes 14 missing cases in place of visits who were not shown separately.

Only thirty-seven percent of the women visited a government health facility, of which 26 percent visited government health facility such as, hospital/CHC/FRU/RH, 9 percent visited primary health centre, sub-centres 2 percent visited and less than one percent visited to government dispensary. One percent of the women reported that they visited Indian system of medicine hospital/ dispensary either government or private. There are not much 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. Sixty-six percent of currently married women in Chamarajanagar 61 percent in Haveri, 57 percent in Gulbarga and 54 percent in Bidar and needed to visit a health facility, but they did not visit. Out of 27 districts in 3 districts i.e. Bangalore, Kodagu and kolar more than fourty percent of the women visited health facility for their health problems In Dakshina Kannada only 19 percent of women visited health facility when needed. Among them who visited health facility, less than a quarter women visited government health facility in 4 districts (Bangalore, Dakshina Kannada, Gulbarga and Udupi), and except Chikmagalur, Hassan, Kodagu, Mandya and Mysore in all district more than half of the women visited to private health facility in past three months the survey.

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 by district, Karnataka, 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
Bagalkot	30.8	30.4	29.4	70.2
Bangalore	37.0	42.8	22.2	77.4
Bangalore Rural	33.4	39.6	39.7	59.6
Belgaum	46.8	25.5	29.5	69.7
Bellary	32.3	27.1	36.7	62.7
Bidar	53.5	28.2	27.4	72.6
Bijapur	34.2	32.3	31.9	68.1
Chamarajanagar	65.6	21.9	48.1	51.9
Chikmagalur	22.7	22.5	51.8	44.3
Chitradurga	25.0	32.2	40.3	59.7
Dakshina Kannada	44.4	18.7	17.4	82.6
Davanagere	13.2	24.7	40.4	59.6
Dharwad	1.1	20.2	44.7	55.3
Gadag	30.0	28.4	33.2	65.3
Gulbarga	56.7	28.9	22.2	76.0
Hassan	23.8	39.4	57.3	39.9
Haveri	60.7	37.5	33.7	66.3
Kodagu	27.1	40.5	50.5	49.4
Kolar	23.9	42.4	46.6	53.1
Koppal	22.6	22.1	30.9	69.1
Mandya	31.0	29.3	55.2	43.5
Mysore	35.0	26.4	55.9	43.7
Raichur	10.8	24.1	34.5	63.6
Shimoga	31.8	27.4	43.5	55.7
Tumkur	24.5	23.8	47.3	52.7
Udupi	28.1	20.8	17.2	82.8
Uttara Kannada	37.6	29.3	40.8	58.8
Karnataka	34.1	30.2	37.0	62.4

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 personnel manner of doctor (8 percent), nurse (5 percent), and other staff including paramedical staff (4 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 proceeding the survey, Karnataka, 2002-04

Quality indicator	Poor	Good	Excellent
The convenience of the health facility location	19.8	72.2	7.9
Length[1] of time spend towards waiting	26.8	68.7	4.5
Personal manner[2] of the physician[5]	8.0	83.9	8.1
The technical skills and quality[3] of the physician[5]	8.8	85.0	6.3
Personal manner[2] of nurse	11.6	83.4	5.0
The technical skills and quality[3] of nurse	11.4	84.1	4.5
Personal manner of other staff[5]	11.0	84.9	4.1
The technical skills and quality of other[4] staff	11.5	84.4	4.0
The explanation of what was done to her	10.4	82.6	7.0
Medical, surgical and diagnostic equipment	11.8	84.1	4.1
General comfort	10.0	85.1	4.9

[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. Thirty-seven percent of the currently married women reported Poor quality of services as one of the reason for not visiting the government health centre for their health problems, as expected this reason is more reported by rural women (40 percent) than urban women (33 percent), and women from those village where health facilities are available (40 percent). About 17 percent reported that Doctors/health workers do not examine properly, 17 percent in rural area and 17 percent in urban area. Other reasons for not visiting government health centres were: Not conveniently located (14 percent), time is not suited (13 percent), heavy rush (5 percent), non-availability or rare availability of doctors/ health workers (4 percent), medicine rarely/not given or of bad quality (2 percent).

Table 7.7 REASON FOR NOT PREFERRING GOVERNMENT HEALTH FACILITY

Percent distribution of women visited private health facility by reason for not visiting government health facility and according to residence and availability of health facilities in the village, Karnataka, 2002-04

Reason	Total	Residence		Availability of health facility[1] in the village	
		Rural	Urban	No	Yes
Not conveniently located	13.9	11.6	16.9	13.5	9.3
Time is not suited	12.7	9.6	16.7	9.0	10.4
Poor quality of services	36.8	39.5	33.3	39.1	40.0
Heavy rush	4.8	4.4	5.2	4.4	4.3
Non/rare-availability of doctors/health workers	4.4	5.9	2.5	6.0	5.9
Doctors/health workers do not examine properly	16.8	17.1	16.5	17.2	16.9
Medicine not/rarely given or of bad quality	1.9	2.6	1.1	2.7	2.5
Doctors/paramedical staff does not behave properly	0.2	0.2	0.2	0.2	0.3
Services are charged	1.1	1.1	1.1	1.2	1.0
Referred by government doctor	0.4	0.5	0.2	0.4	0.7
Other	6.9	7.5	6.3	6.4	8.7
Total percent	100.0	100.0	100.0	100.0	100.0
Number of women	4,265	2,382	1,883	1,298	1,084

[1] Includes sub-center, primary health center, Community health center or referral hospital, government hospital, and government dispensary within the village

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. Nineteen 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 (63 percent) and IUD (28 percent). Only three percent of women received advices 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 12 percent of condom users and 4 percent of pills users reported that they had a problem in getting these methods. A little higher proportion of urban women than rural 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 Karnataka, 2002-04

Method	Total	Rural	Urban
Percentage of non-users who were advised to adopt family planning method	18.5	18.9	17.7
Number of women	8790	5874	2915
Method			
Female sterilization	63.4	64.5	61.2
Male sterilization	3.4	3.6	2.9
IUD	27.7	26.7	29.9
Pills	4.0	3.8	4.4
Condom	1.2	1.2	1.2
Rhythm/periodic abstinence	0.1	0.1	0.2
Withdrawal	0.1	0.0	0.1
Other	0.1	0.1	0.2
Total percent	100.0	100.0	100.0
Number of women	1,630	1,112	517

Total includes 8 cases with missing information on advise to adopt family planning method who were not shown separately.

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, Karnataka, 2002-04

Method/residence	Percentage who had a problem getting supply	Number of users
Condom		
Rural	9.8	70
Urban	12.4	145
Total	11.5	215
Pills		
Rural	5.8	87
Urban	3.5	229
Total	4.1	317

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 39 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 Thirty nine percent of sterilized women received such information by a ANM or health worker in the government health facilities compared to around 42 percent of women who were sterilized in private health facilities, and about 53 percent of such women were informed about alternative methods by others but not by a health worker working in government or private health sector.38 percent of women received this information in the family planning or RCH camp or out reach/ MCH clinic in village at the time of accepting the sterilization.

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, Karnataka, 2002-04

Source of sterilization	Total	Rural	Urban	Number of users
Government health facility	38.6	39.5	35.6	10,021
Family planning or RCH camp/ village session	37.8	37.1	41.1	490
Private health facility	42.1	45.1	40.2	1,291
Other	53.2	62.7	50.3	72
Total	39.0	39.7	37.1	11,902

Note: Total includes 6, 13 and 8 women who said that they got sterilized at 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 residence, Karnataka, 2002-04

Information/follow-up	Total	Rural	Urban
Told about side effects			
Sterilization	49.8	47.6	55.7
Other modern method	52.1	47.0	54.4
Any modern method	50.0	47.6	55.4
Received follow-up			
Sterilization	47.5	53.1	32.6
Other modern method	30.3	45.1	23.4
Any modern method	46.0	52.8	30.8

Another important facet of informed contraceptive choice is being fully informed about any side effects and any other problems associated with the method. In Karnataka, only 52 percent of users of other modern method were informed about possible side effects or health problems associated with their current method. Forty seven percent of other modern method acceptors in rural area and 54 percent in urban area reported that they were informed about side effects. Among users of other modern method other than sterilization, 48 percent of

rural users and 55 percent of urban users were informed about side effects. It is clear from the result that ANM or health workers in Karnataka 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 higher than user of modern methods. About fifty-three percent of sterilization users in rural area and about 33 percent in urban area reported that they received follow-up services by ANM or health worker. Only 30 percent of the users of other modern method received follow-up services. In all, only 53 percent of the users of any modern method in rural area and only 31 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.

The percentage of sterilization-users who were told about alternate method is lowest in Mysore (1 percent) but it is highest in Raichur (67 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 9 percent in Haveri to a high of 89 percent in Bangalore rural, 87 percent in Bangalore and 82 percent in Kolar. For other modern contraceptive methods, more than 79 percent users in Bangalore rural, Dharwad and Gadag and a minimum of 24 percent of users in Mysore 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 Karnataka. 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 8 percent in Davanagere to a high of 35 percent in Kodagu.

Overall, the quality of care for family planning and health services is far from satisfactory in many of the district of Karnataka; 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.

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, Karnataka, 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
		Sterilizat-ion	Other modern method	Sterilizat-ion	Other modern method	
Bagalkot	27.5	32.0	(37.2)	34.2	(10.4)	12.0
Bangalore	37.5	86.8	63.6	46.3	27.1	24.1
Bangalore Rural	38.6	89.2	79.1	71.8	34.5	28.2
Belgaum	52.4	33.0	48.8	39.1	18.1	22.4
Bellary	17.9	35.3	(46.0)	33.4	(26.6)	9.3
Bidar	42.4	29.6	(28.9)	33.1	(19.2)	16.4
Bijapur	25.4	26.6	36.0	32.8	11.2	13.0
Chamarajanagar	37.7	50.8	72.9	49.1	44.2	10.6
Chikmagalur	64.1	28.9	43.0	48.9	30.0	25.6
Chitradurga	16.0	44.5	53.9	47.4	45.2	13.0
Dakshina Kannada	32.4	35.7	36.0	28.2	20.2	15.5
Davanagere	61.1	54.1	37.6	41.1	25.8	8.2
Dharwad	41.2	61.4	79.7	38.5	39.0	18.0
Gadag	28.6	41.6	(80.5)	45.1	(45.1)	15.6
Gulbarga	43.5	29.1	(28.1)	29.2	(22.2)	20.6
Hassan	32.9	65.4	39.1	59.8	42.5	26.5
Haveri	12.7	9.4	(53.5)	40.7	(11.3)	17.5
Kodagu	40.3	50.8	50.7	57.4	34.9	35.5
Kolar	28.0	82.4	63.5	68.6	33.6	26.7
Koppal	62.2	38.3	(39.8)	61.4	(4.2)	12.3
Mandya	33.2	60.5	57.2	64.6	50.4	23.7
Mysore	1.2	30.4	(23.5)	28.0	(21.0)	10.9
Raichur	67.0	36.6	(47.1)	51.4	(3.8)	8.7
Shimoga	62.0	55.6	48.5	45.5	35.1	14.8
Tumkur	66.5	28.5	45.1	53.1	45.6	20.6
Udupi	59.4	53.3	41.3	38.5	31.2	12.4
Uttara Kannada	58.5	39.9	35.5	59.0	34.9	28.7
Karnataka	39.0	49.8	52.1	47.5	30.3	18.5

[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 number of cases.

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, Karnataka, 2002-04

Advise/follow-up service	Total	Rural	Urban
Percentage of women who were advised to have delivery at health facility	55.6	48.2	71.2
Percentage of women who were visited within 2 weeks of delivery	28.1	35.5	12.5
Percentage of women who were visited at least once within 6 weeks of delivery	29.9	37.4	14.0
Number of women	7,597	5,163	2,434

* Women who had live birth/still birth after 1.1.1999/2001

Total includes 4 missing cases in women who were visited within 2 weeks of delivery and 4 missing cases in women who were visited at least once within 6 weeks of delivery

About three-fifths 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 (71 percent) were more likely than rural areas (48 percent) to get advised to deliver their child at health facility.

With regard to district wise variation, the percentage varies from as low as 22 percent in Raichur to as high as 91 percent in Bangalore (Table 7.14). In six of the 27 districts, more than 70 percent of the women were advised to deliver their child in health facility.

Table 7.14 QUALITY OF CARE INDICATORS FOR MATERNAL CARE

Among currently married women* who are given live/still birth three years preceding the survey, quality of care indicators related to delivery care by district, Karnataka, 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
Bagalkot	33.8	24.5	25.8
Bangalore	91.1	10.1	12.4
Bangalore Rural	74.2	29.7	31.4
Belgaum	57.0	32.8	33.0
Bellary	32.3	29.7	30.7
Bidar	50.4	18.3	18.6
Bijapur	37.2	20.2	21.3
Chamarajanagar	61.5	11.1	11.6
Chikmagalur	45.9	44.8	49.4
Chitradurga	62.4	32.6	32.9
Dakshina Kannada	63.9	9.6	10.4
Davanagere	50.0	28.5	30.0
Dharwad	60.9	24.4	24.7
Gadag	35.5	35.3	35.5
Gulbarga	41.5	21.0	21.9
Hassan	68.4	43.0	48.8
Haveri	52.8	31.0	31.0
Kodagu	74.2	48.4	55.8
Kolar	70.9	39.8	45.4
Koppal	26.9	32.2	34.5
Mandya	52.8	41.8	45.5
Mysore	47.4	26.7	27.2
Raichur	21.9	13.8	13.8
Shimoga	74.4	38.3	39.1
Tumkur	46.0	38.7	40.6
Udupi	75.7	34.6	36.5
Uttara Kannada	58.3	42.0	46.6
Karnataka	55.6	28.1	29.9

* Women who had live birth/still birth after 1.1.1999/2001

Twenty eight percent of the women reported that they were visited by an ANM within two weeks of delivery; such visit was only 13 percent in urban areas and 36 percent in rural areas. Only 37 percent of the women in rural area and 14 percent in urban areas received at least one follow-up service within six weeks of delivery. More than one quarter women were received postpartum check-up within 2 weeks of delivery in 19 district of Karnataka, and the proportion of women who had at least one postpartum check-up within six weeks of delivery varied from a low of 10 percent in Dakshina Kannada to high of 56 percent in Kodagu (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 way of avoiding AIDS were also collected.

8.1.1 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 tract 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 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.

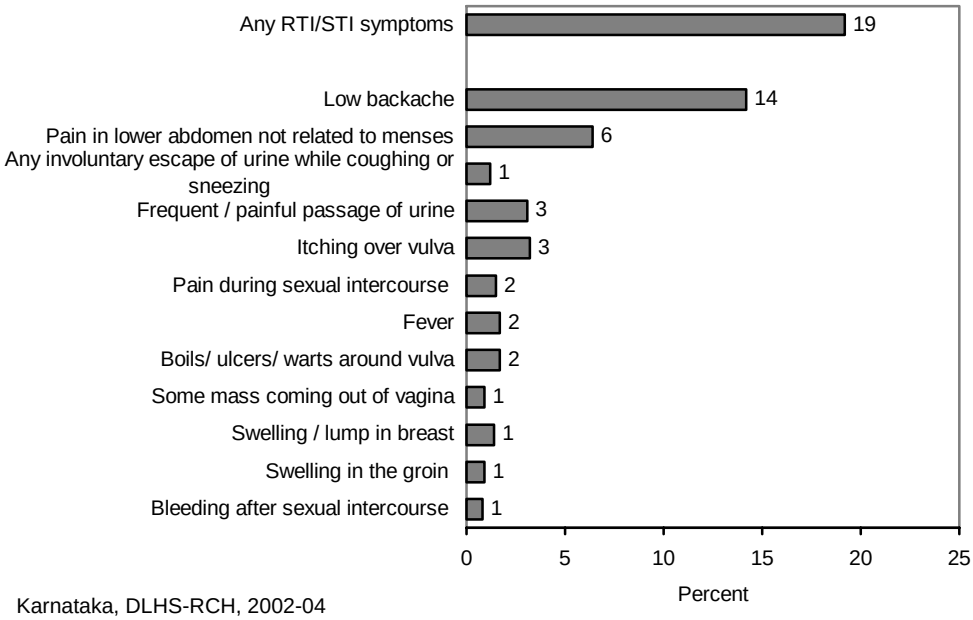
Table 8.1 and Figure 8.1 show that around one-fifth of currently married women (19 percent) reported at least one reproductive health problem. The problems reported by women were ‘low backache’ (14 percent), ‘pain in lower abdomen not related to menses (6 percent). Other symptoms of reproductive health reported by women were ‘itching over vulva’ and ‘frequent / painful passage of urine’ (3 percent each), ‘boils/ulcers/warts around vulva’, ‘fever’ and ‘painful sexual intercourse (2 percent each). Very few women reported ‘swelling/lump in breast’, ‘any involuntary escape of urine while coughing or sneezing’ (1 percent), ‘swelling in the groin’, ‘some mass coming out of vagina’ and ‘bleeding after sexual intercourse’ (less than 1 percent). The prevalence of reproductive health problems is common among rural and urban women.

Table 8.1 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, Karnataka, 2002-04

Symptoms	Total	Residence	
		Rural	Urban
Percentage of women reported any RTI/STI symptoms	19.2	19.9	17.8
Symptoms			
Itching over vulva	3.2	3.1	3.3
Boils/ ulcers/ warts around vulva	1.7	1.9	1.4
Pain in lower abdomen not related to menses	6.4	6.7	5.7
Low backache	14.2	14.6	13.4
Pain during sexual intercourse	1.5	1.8	0.9
Bleeding after sexual intercourse	0.8	1.1	0.4
Swelling in the groin	0.9	1.0	0.6
Frequent / painful passage of urine	3.1	3.4	2.5
Fever	1.7	2.0	0.9
Some mass coming out of vagina	0.9	1.2	0.3
Any involuntary escape of urine while coughing or sneezing	1.2	1.5	0.6
Swelling / lump in breast	1.4	1.7	0.8
Number of women	22,655	15,327	7,329

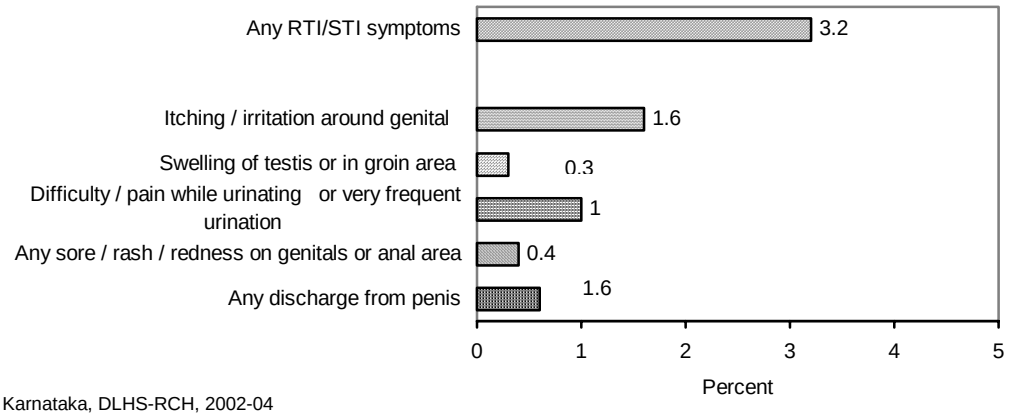
Figure 8.1
Symptomps of RTI/STI among Women



Karnataka, DLHS-RCH, 2002-04

Table 8.2 and Figure 8.2 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. Only three 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 rural men (4 percent) than among urban men (2 percent). The specific problem of reproductive health experienced by men is 'itching / irritation around genital' (2 percent), 'difficulty / pain while urinating or very frequent urination, 'discharge from penis' (1 percent), 'sore / rash / redness on genitals or anal area' and 'swelling of testes or in groin area' (less than 1 percent).

Figure 8.2
Symptomps of RTI/STI among Husbands



Karnataka, DLHS-RCH, 2002-04

Among men who reported reproductive health problems, 36 percent of them sought treatment. There is no major rural-urban differential in seeking treatment for reproductive health problems. Among them only 38 percent visited a government health facility, including a primary health centre (3 percent) and sub-centre (8 percent) and 46 percent visited a private health facility. Seven percent of men were treated by the Indian system of medicine, 9 percent obtained treatment from a chemist or medical shop, and 4 percent of the men reported that they were treated at other sources. A large proportion of men saw a doctor (82 percent), 80 percent in rural areas. Five percent of men were seen by a male health worker, 4 percent by a traditional healer, 1 percent by relative or friends, and 1 percent by an ISM practitioner. Nine percent of the men went to a chemist. Another 3 percent of the men obtained treatment from other sources.

Table 8.2 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, Karnataka, 2002-04

Symptoms and treatment	Total	Residence	
		Rural	Urban
Percentage of men reported any RTI/STI symptoms	3.2	3.9	1.6
Symptoms			
Any discharge from penis	0.6	0.7	0.1
Any sore / rash / redness on genitals or anal area	0.4	0.5	0.1
Difficulty / pain while urinating or very frequent urination	1.0	10.3	0.3
Swelling of testis or in groin area	0.3	0.4	0.1
Itching / irritation around genital	1.6	1.9	1.0
Number of men	13,904	9,548	4,355
Percentage of men sought treatment for any RTI/STI[1]	35.9	36.2	34.4
Number of men	443	374	69
Percentage sought treatment at health facility[2]			
Government health facility[3]	38.2	40.4	*
Primary health centre	2.6	1.7	*
Sub centre	7.7	9.1	*
Private health facility[4]	46.1	45.1	*
ISM[5] facility	7.3	5.1	*
Chemist/ medical shop	9.0	9.4	*
Other	4.4	5.1	*
Percentage obtained treatment from[2]			
Doctor	82.1	79.9	*
Male health worker	5.1	5.1	*
Traditional healer	3.7	3.4	*
Relative/friends	0.6	0.7	*
ISM practitioner	0.6	0.5	*
Home remedy	0.4	0.5	*
Chemist medical shop	9.1	10.7	*
Other	3.1	3.5	*
Number of men	159	136	24

[1] Based on men with any symptoms of RTI/STI
[2] Percentage may add more than 100.0 due to multiple responses
[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.
* Percentage not shown: based on few cases

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 8.3 shows the asymptotic prevalence of vaginal discharge related problems among currently married women in Karnataka during the three months preceding the survey according to residence. Seven percent of the women reported problems related to vaginal

discharge. The prevalence of vaginal discharge problem is slightly higher among rural women (8 percent) than among urban women (7 percent).

Table 8.3 ABNORMAL VAGINAL DISCHARGE

Percentage of currently married women aged 15-44 who reported had abnormal vaginal discharge during three months prior to survey and percentage who sought treatment and source of treatment according to residence, Karnataka, 2002-04

Symptoms and treatment	Total	Residence	
		Rural	Urban
Percentage of women reported abnormal vaginal discharge	7.3	7.6	6.6
Number of Women	22,655	15,327	7,329
Percentage of women sought treatment for vaginal discharge[1]	46.1	44.0	51.4
Number of Women	1,651	1,168	483
Percentage sought treatment at health facility [2]			
Government health facility[3]	41.6	50.1	24.0
Primary health centre	6.7	9.6	0.7
Sub centre	1.5	2.2	0.0
Private health facility[4]	57.0	49.9	71.7
ISM[5] facility	2.7	1.6	5.0
Home remedy	1.7	2.0	1.0
Other	0.8	1.0	0.6
Percent distribution of women who obtained treatment from [2]			
Doctor	91.1	88.1	97.1
ANM/nurse/midwife/LHV	6.0	8.3	1.3
Other health professionals[6]	1.8	2.2	0.8
Other	0.8	0.8	0.8
Total percent	100.0	100.0	100.0
Number of women	762	513	248

[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 *dai* (trained or untrained), relative or friends and chemist/ medical shop.
Note: Total include one woman with missing information on vaginal discharge

Among the women who had reported symptoms of vaginal discharge, 46 percent went for treatments, higher percentage (51 percent) from urban areas compared to their rural counterparts (44 percent). A considerable proportion (57 percent) visited private health facilities. About 42 percent went to a government health facility, including 7 percent to the Primary Health Centre and 2 percent to Sub Centre. About two percent took home remedies and 1 percent of the women visited other places for treatment. The proportion of women who visited a private health facility is higher in urban areas (72 percent) than in rural areas (50 percent), and the proportion of women who visited a facility rendering the Indian system of

medicine, is higher in urban areas (5 percent) than in rural areas (2 percent). A significantly higher proportion (91 percent) of women in the state of Karnataka obtained treatment from doctors for their problems. Six percent women were treated by ANM/Nurse/Midwife /LHV and 2 percent by other health professionals.

8.2 Menstruation Related Problems

Table 8.4 shows the percentage of women who had menstruation problems and who sought treatment during the three months preceding the survey. The table shows that around 16 percent women in Karnataka had menstruation problems, and the figures are 16 percent and 14 percent in the rural and urban areas respectively.

Table 8.4 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, Karnataka, 2002-04

Symptoms and treatment	Total	Residence	
		Rural	Urban
Percentage of women with any menstruation related problem	15.5	16.3	14.0
Number of women	18,076	12,010	6,066
Symptoms[1]			
No period	7.1	7.5	6.2
Painful period	52.1	53.9	48.1
Frequent or short period	15.8	15.6	16.3
Delayed period	25.4	24.6	27.2
Prolonged bleeding	4.5	4.6	4.3
Excessive bleeding	16.8	16.9	16.3
Continuous bleeding	2.7	3.0	2.1
Scanty bleeding	11.4	10.9	12.5
Inter-menstrual bleeding	2.5	2.7	2.2
Percentage of women sought treatment who had any menstruation related problems	44.7	42.2	50.3
Number of women	2,810	1,958	852
Percentage sought treatment at health facility[6]			
Government health facility[2]			
Primary health centre	38.5	45.1	25.8
Sub centre	8.8	11.8	2.9
Private health facility[3]	1.6	2.4	0.0
ISM[4] facility	57.8	52.1	68.8
Other	5.4	4.3	6.7
Percentage of women obtained treatment from[6]	1.1	0.7	1.7
Doctor			
ANM/nurse/midwife/LHV	93.8	91.8	97.6
Other health professionals[5]	6.1	8.2	2.1
Other	0.6	0.7	0.6
Number of women who are currently menstruating	0.2	0.1	0.3
	1,256	827	428

[1] Based on women who reported any menstruation 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, [6] Includes *dai* (trained or untrained), relative or friends and chemist/ medical shop. [6] Multiple responses.

Among the women who had reported menstrual problems in Karnataka, 52, 25, 17, and 16 percent reported painful periods, delayed periods, excessive bleeding and frequent or short periods as symptoms respectively. The magnitude of these symptoms is more or less the same among urban as well as rural women. Painful periods and delayed periods are the main menstrual problems prevalent in Karnataka. Among the women who had menstrual problems, forty-five percent sought treatment in the state, and the figures for urban and rural areas are 50 percent and 42 percent respectively. The private and government health facilities are the main sources of treatment for menstrual problems. Around 58 percent of women sought treatment at a private facility and 39 percent sought treatment at a government health facility. Five percent of the women were traded treatment at an ISM facility, which holds true for both urban and rural areas. Most of the women went to a doctor for treatment (94 percent). The figures for urban and rural areas are 98 and 92 percent respectively.

8.3 Prevalence of RTIs/STIs by District

Table 8.5 presents the prevalence of RTIs/STIs among currently married women and their husbands by districts. The reported symptoms of RTIs/STIs among women is lowest in Chamarajnagar (3 percent) and highest in Chitradurga (36 percent). The problems related to abnormal vaginal discharge ranges from less than 1 percent each in Dakshina Kannada and Chamarajnagar to 16 percent in Koppal.

In comparison to women, fewer men from all districts of Karnataka except Haveri reported symptoms of RTIs/STIs. Men from Dakshina Kannada, Bangalore, Darwad, Gadag, Davanagere, Shimoga and Kolar (less than 1 percent) reported the lowest prevalence of symptoms of RTIs/STIs and men from Haveri (29 percent) reported the highest prevalence.

The percentage of women who have sought treatment for RTIs (abnormal vaginal discharge) ranges from 3 percent in Koppal to 74 percent in Haveri, and for men who have sought treatment; it ranges from 0 percent each in Bangalore, Dakshina Kannada, Davanagere, Haveri and Shimoga to 100 percent each in Bangalore Rural and Dharwad.

Table 8.5 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, Karnataka, 2002-04

	Percentage of women			Percentage of men	
District	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
Bagalkot	17.0	4.4	40.7	10.2	4.5
Bangalore	16.4	7.7	54.8	0.4	(0.0)
Bangalore Rural	19.6	7.5	48.5	1.0	(100.0)
Belgaum	25.3	9.3	40.0	6.8	61.4
Bellary	24.2	6.9	44.7	0.0	-
Bidar	28.4	6.3	43.5	6.7	38.6
Bijapur	23.4	3.1	(57.9)	2.6	(83.8)
Chamarajanagar	2.6	0.9	(48.3)	0.0	-
Chikmagalur	32.8	8.5	48.1	2.8	(68.4)
Chitradurga	36.0	2.6	(50.5)	0.0	-
Dakshina Kannada	5.3	0.8	(46.8)	0.2	(0.0)
Davanagere	10.7	3.4	68.0	0.6	(0.0)
Dharwad	24.4	4.9	57.6	0.5	(100.0)
Gadag	16.6	6.5	48.9	0.6	(90.3)
Gulbarga	31.3	9.2	41.4	6.0	49.4
Hassan	10.5	8.0	54.2	1.0	(43.8)
Haveri	7.1	3.5	74.2	28.9	0.0
Kodagu	17.9	6.3	61.4	2.1	(79.9)
Kolar	18.6	13.1	57.3	0.8	(72.9)
Koppal	23.6	15.9	3.3	3.6	(74.4)
Mandya	7.8	9.2	37.8	1.0	(81.5)
Mysore	17.7	4.6	23.5	0.0	-
Raichur	23.0	11.8	41.4	2.2	(59.0)
Shimoga	13.5	4.6	69.8	0.6	(0.0)
Tumkur	21.9	10.9	48.4	3.0	(38.6)
Udupi	5.6	1.1	(26.9)	0.0	-
Uttara Kannada	24.9	11.9	55.9	7.6	43.6
Karnataka	19.2	7.3	46.1	3.2	35.9

( ) Based on less number of cases. - Not Applicable.

8.4 Awareness of RTI/STI

An attempt was made to asses 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.

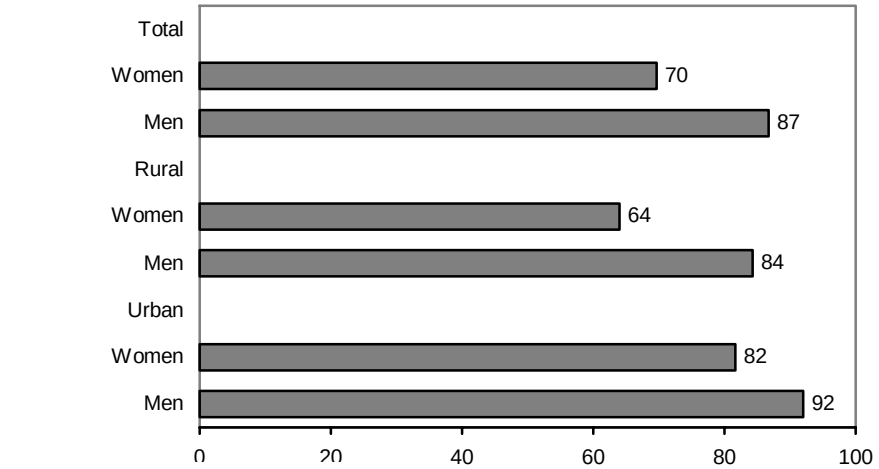
Table 8.6 shows the percentage of women aware of RTI/STI by background characteristics. About twenty-one percent of the women in Karnataka were aware of RTI/STI. The proportion of women who were aware of RTI/STI is much higher in urban areas (28 percent) than in rural areas (18 percent) Figure 8.3. Awareness of RTI/STI is much lower among younger women, non-literate women, women from Muslim religions, scheduled caste

and scheduled tribe women and women from households with a low standard of living. Awareness of RTI/STI increases from 12 percent among non-literate women to 40 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 14 percent among women with a low standard of living to 35 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 presented in Table 8.6. Almost three-fifth of the women reported that they received information of RTI/STI from friends or relatives. Other sources of information of RTI/STI as reported by women were television (48 percent), radio and newspaper or books or magazines ((31 percent each), slogans or posters or pamphlets or wall hoardings (9 percent). Sixteen percent of women received this information both from doctors and health workers, 14 percent of women from community meetings, 7 percent of women from school teacher and about 3 percent of the women reported that they had heard of RTI/STI from another source.

Table 8.7 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 Karnataka, the percentage of men who heard of RTI/STI is higher than that of women (Figure 8.3). Thirty percent of the men heard of RTI/STI. Men from urban areas and 25-34 years of men were relatively more aware of RTI/STI. Men who belong to Muslim religion and mainly from scheduled tribes are less likely to report awareness of RTI/STI. The awareness of RTI/STI is high among men in Karnataka. The level of awareness of RTI/STI increases with an increase in education level and standard of living. Fourteen percent of non-literate men were aware of RTI/STI as compared to 51 percent of men who had completed 10 or more years of schooling. Twenty-one percent of men from households with a low standard of living were aware of RTI/STI as compared to 45 percent of men with a high standard of living.

Figure 8.3
Awarness of RTI/STI by Sex According to Residence



Karnataka, DLHS-RCH, 2002-04

Televisions are the most prominent source of RTI/STI for men in Karnataka. Sixty percent of men who knew about RTI/STI received information from televisions. Other important sources of information about RTI/STI are the relatives or friends (54 percent) followed by newspaper or books or magazines (52 percent), radio (45 percent), slogans or posters or pamphlets or wall hoardings (29 percent). Nineteen percent of the men received this information from a doctor, 9 percent from health workers, 8 percent from community meetings and 4 percent mentioned that they had received information about RTI/STI from schoolteachers. About 2 percent of the men reported that they heard of RTI/STI from other sources. Televisions and relatives or friends are the most important source of information of RTI/STI in all the groups. Men from urban areas, men from 10 or more years of schooling, Christian men, Men from 'other caste category', men with a high standard of living and 25-34 years old of men are more prone to receive information from televisions. The differences in the knowledge of RTI/STI from newspaper or books or magazines as a source of information by educational level and standard of living household are quite visible. Only eighteen percent of non-literate men had heard of RTI/STI from newspaper or books or magazines, which increased to 70 percent for men who have completed 10 or more years of schooling.

Table 8.6 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, Karnataka, 2002-04.

			Among those who have heard about RTI/STI, percentage who received information from.										
Background Characteristics	Percentage who have heard about RTI/STI	Number of Women	Radio	Television	Newspaper/ Books/ Magazines	Slogan/ Pamphlets/ Posters/ Wall Hoardings	Doctor	Health worker	School teacher	Community Meeting	Relative/ Friends	Others	Number of women who have heard about RTI/STI
Age group (years)													
15-19	14.9	2,261	36.0	46.2	22.4	5.0	11.4	10.3	7.0	11.3	63.5	1.1	336
20-24	19.5	4,690	32.3	46.9	29.8	9.8	14.0	13.5	6.4	13.1	59.7	2.6	915
25-29	22.0	4,905	30.6	47.7	31.1	8.4	16.8	17.1	7.2	11.9	57.7	2.9	1,081
30-34	23.2	4,347	27.8	46.3	32.4	9.4	18.6	17.1	7.1	15.0	58.3	3.1	1,011
35-39	23.2	3,633	32.0	50.5	33.9	9.4	17.3	14.8	5.6	13.1	58.0	3.3	844
40-44	21.9	2,819	34.2	47.9	34.5	10.1	16.2	17.4	8.2	17.8	58.7	4.8	617
Residence													
Rural	18.2	15,327	34.7	36.4	19.9	8.2	14.3	17.1	6.9	14.7	61.6	3.0	2,785
Urban	27.6	7,329	26.9	63.2	47.3	10.2	18.9	13.5	6.8	12.2	54.8	3.1	2,020
Education													
Non-literate	11.5	10,352	26.5	23.4	10.3	2.0	10.1	11.4	2.4	12.2	67.8	3.6	1,193
0-9@ years	21.8	7,179	32.2	41.1	22.9	7.0	12.8	15.6	5.6	14.0	62.5	1.9	1,567
10 and above	39.9	5,119	33.7	66.9	50.3	14.7	22.5	18.0	10.4	14.3	50.7	3.6	2,045
Religion													
Hindu	21.6	19,189	31.6	46.4	30.4	9.1	15.4	15.5	6.6	13.9	59.1	3.2	4,136
Muslim	16.5	2,879	27.5	55.1	40.5	8.0	20.0	15.5	9.0	12.6	55.8	2.1	474
Christian	28.8	390	35.4	56.8	38.2	14.7	32.8	24.3	9.7	14.8	54.0	1.1	112
Jain	43.1	181	41.6	59.2	25.0	4.7	17.4	9.6	4.3	5.9	66.6	2.7	78
Caste/tribe[#]													
Scheduled caste	14.2	4,038	25.6	35.2	21.7	6.6	9.8	13.3	2.6	11.8	62.2	2.0	574
Scheduled tribe	15.9	1,788	30.1	34.5	15.4	3.1	12.3	13.3	4.2	11.7	66.2	4.0	284
Other backward class	21.2	11,203	29.3	44.5	30.9	8.3	13.8	14.4	6.7	12.1	59.4	3.6	2,378
Other	28.2	5,459	37.2	60.0	38.9	12.2	23.2	18.7	9.1	17.4	55.5	2.4	1,541
Standard of living index													
Low	13.7	9,289	30.1	21.6	10.2	4.6	11.8	14.2	3.7	14.3	66.0	2.5	1,269
Medium	20.8	7,980	30.0	46.8	28.0	6.7	13.1	14.4	5.9	13.3	61.5	3.3	1,660
High	34.8	5,386	33.5	66.0	48.8	14.1	22.1	17.5	9.8	13.6	51.5	3.3	1,876
Total	21.2	22,655	31.4	47.7	31.4	9.0	16.3	15.6	6.9	13.7	58.8	3.1	4,804

Note: Total includes 4 women with missing information on education, 1 in religion who were not shown separately. Total includes 15 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.

Table 8.7 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, Karnataka, 2002-04.

			Among those who have heard about RTI/STI, percentage who received information from.										
Background characteristics	Percentage who have heard about RTI/STI	Number of men	Radio	Televi-sion	Newspaper/ Books/ Magazines	Slogan/ Pamphlets/ Posters/ Wall Hoardings	Doctor	Health worker	School teacher	Community Meeting	Relative/ Friends	Others	Number of men who have heard about RTI/STI
Age group (years)													
< 25	27.2	618	40.7	48.6	39.9	24.4	12.6	8.6	2.8	6.8	60.6	2.9	168
25-34	32.4	4,477	45.5	61.3	54.5	28.8	18.1	7.5	2.4	6.5	57.7	1.8	1,449
35-44	29.2	5,418	43.5	60.8	53.1	28.9	18.6	8.9	3.8	7.7	52.9	2.4	1,581
45+	29.5	3,390	46.0	57.7	50.1	29.0	22.5	9.9	5.0	9.0	47.6	2.5	998
Residence													
Rural	26.1	9,548	40.1	46.1	38.7	21.1	15.1	7.9	3.2	7.4	52.2	2.1	2,491
Urban	39.1	4,355	51.3	79.8	72.3	39.7	25.0	9.8	4.1	7.7	55.7	2.5	1,704
Education													
Non-literate	13.5	4,791	24.1	29.7	17.9	12.5	14.7	7.1	6.0	9.8	51.9	2.1	648
0-9@ years	28.0	4,780	42.8	51.9	40.1	19.8	12.5	8.0	2.4	7.3	58.5	1.5	1,340
10 and above	51.0	4,332	51.9	73.4	70.0	38.9	24.4	9.5	3.5	7.0	51.1	2.8	2,208
Religion													
Hindu	30.3	11,846	44.3	58.8	51.9	28.1	18.6	7.9	3.6	6.9	54.1	2.1	3,587
Muslim	26.3	1,667	43.3	63.4	50.7	26.5	17.6	12.8	2.0	10.7	49.8	2.4	438
Christian	40.2	247	65.8	72.5	69.2	50.2	34.1	19.1	11.4	21.5	42.2	3.2	99
Jain	51.0	137	43.3	70.8	61.5	40.7	33.2	6.7	1.6	1.7	68.4	8.3	70
Caste/tribe#													
Scheduled caste	23.9	2,462	39.3	54.3	48.4	21.6	15.3	5.6	3.6	5.5	56.7	1.9	588
Scheduled tribe	21.3	1,100	34.4	44.8	38.9	22.0	12.8	6.1	3.7	6.1	54.1	2.3	234
Other backward class	30.5	6,873	43.0	58.2	48.4	24.8	16.4	7.0	3.4	6.5	55.6	2.2	2,097
Other	37.2	3,380	51.8	67.8	63.7	39.5	26.5	13.1	3.8	10.2	49.3	2.6	1,256
Standard of living index													
Low	21.3	5,790	33.0	32.9	29.4	13.9	13.8	7.0	4.2	7.4	55.3	1.9	1,231
Medium	30.7	4,902	42.1	62.5	50.7	25.9	15.7	8.7	3.2	7.5	53.0	2.4	1,507
High	45.4	3,211	57.2	79.7	73.5	44.0	27.1	10.0	3.3	7.7	52.8	2.3	1,459
Total	30.2	13,904	44.7	59.8	52.4	28.7	19.1	8.6	3.5	7.5	53.6	2.2	4,196

Note: Total includes 1 man with missing information on education who was not shown separately. Total includes 6 men in other religion who were not shown separately

@ Literate men with no year of schooling are also included. # Total figure may not add to N due to don't know and missing cases.

8.4.1 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 8.8. Among women who reported knowledge of RTI/STI, 36 percent of them did not know anything further about the mode of transmission of this disease. This proportion is relatively higher among rural women, non-literate women, women from other than Christian religion, women from scheduled-castes and women coming from households with low standard of living. Thirty-nine percent of rural women do not know about the mode of transmission of RTI/STI compared to 32 percent of urban women. Heterosexual intercourse and lack of personnel hygiene were mentioned by 41 and 31 percent of women respectively as mode of transmission of RTI/STI. Only 9 percent of women reported homosexual intercourse and 7 percent reported other modes of transmission of RTI/STI.

Table 8.8 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, Karnataka, 2002-04

Background characteristics	Percentage by knowledge of mode of transmission				Do not know	Number of women who have heard of RTI/STI
	Homosexual intercourse	Heterosexual intercourse	Lack of personnel hygiene	Other		
Age						
15-19	8.5	41.1	23.2	5.3	32.8	336
20-24	6.8	40.4	25.4	5.2	38.9	915
25-29	8.6	40.1	28.3	6.8	38.9	1,081
30-34	8.1	41.4	33.0	6.4	37.8	1,011
35-39	10.0	42.2	34.7	6.5	31.9	844
40-44	5.9	39.4	36.8	9.0	31.9	617
Residence						
Rural	7.8	36.2	26.5	3.6	38.9	2,785
Urban	8.5	47.1	36.2	10.5	32.2	2,020
Education						
Non-literate	4.9	25.5	18.3	5.2	47.6	1,193
0-9@ years	5.9	37.8	26.5	7.0	41.9	1,567
10 years and above	11.5	52.0	40.9	6.9	25.0	2,045
Religion						
Hindu	8.2	40.1	30.5	5.9	36.3	4,136
Muslim	5.7	41.3	31.3	8.5	37.1	474
Christian	14.6	53.9	41.3	17.0	21.4	112
Jain	3.5	56.8	18.7	11.3	37.4	78
Caste/tribe[#]						
Scheduled caste	4.5	29.9	22.5	5.8	46.6	574
Scheduled tribe	6.1	36.8	26.0	5.7	36.7	284
Other backward class	8.7	39.9	25.0	6.2	38.0	2,378
Other	8.9	46.8	42.7	7.5	29.0	1,541
Standard of living index						
Low	5.3	30.8	20.0	3.7	46.8	1,269
Medium	8.5	39.7	27.1	7.4	37.7	1,660
High	9.6	48.5	40.9	7.7	27.4	1,876
Total	8.1	40.8	30.6	6.5	36.1	4,804

Note: Total includes 3 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.

Table 8.9 presents the knowledge of mode of transmission of RTI/STI among men. Among men who had heard of RTI/STI, 10 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 and older men, non-literate men, Hindu and other religion men, men from scheduled tribes, and men from households with a low standard of living. Among the men who new the modes of transmission of RTI/STI, 74 percent mentioned heterosexual intercourse, twenty percent reported lack of personnel hygiene, and more than 6 percent mentioned homosexual intercourse, and 8 percent reported other modes of transmission.

Table 8.9 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, Karnataka, 2002-04

Background characteristics	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	6.8	75.3	16.2	6.7	12.0	168
25-34	5.7	76.0	18.6	8.8	8.4	1,449
35-44	6.5	74.4	20.8	7.4	9.8	1,581
45+	7.0	71.7	22.0	6.8	11.5	998
Residence						
Rural	5.4	71.1	17.8	8.0	12.2	2,491
Urban	7.8	79.1	23.6	7.2	6.4	1,704
Education						
Non-literate	8.0	61.4	15.8	8.1	21.8	648
0-9@ years	6.6	74.9	14.7	6.3	11.0	1,340
10 years and above	5.7	77.8	24.8	8.5	5.6	2,208
Religion						
Hindu	6.1	74.7	19.3	7.6	10.4	3,587
Muslim	7.6	69.5	25.8	7.2	7.8	438
Christian	13.3	75.0	30.7	7.5	4.4	99
Buddhist	3.1	84.2	15.0	12.9	0.0	70
Other	6.3	71.9	20.0	7.8	11.9	588
Caste/tribe#						
Scheduled caste	4.2	67.6	20.9	7.4	15.8	234
Scheduled tribe	4.8	76.4	17.1	8.4	11.2	2,097
Other backward class	8.8	73.8	25.3	6.5	5.6	1,256
Standard of living index						
Low	6.6	69.2	14.4	8.6	16.1	1,231
Medium	5.8	74.2	18.8	7.9	8.8	1,507
High	6.8	78.8	26.4	6.8	5.6	1,459
Total	6.4	74.3	20.2	7.7	9.8	4,196

Note: Total includes 1 man in other religion and 20 in other caste who were not shown separately.
Total figure may not add to N due to do not know and missing cases.
@ Literate men with no years of schooling are also included.

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 needle (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, 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. Sixty-nine percent of currently married women in Karnataka have heard of HIV/AIDS, which is higher than RCH Round – I. In Round-I only 61 percent of currently married women were aware of HIV/AIDS.

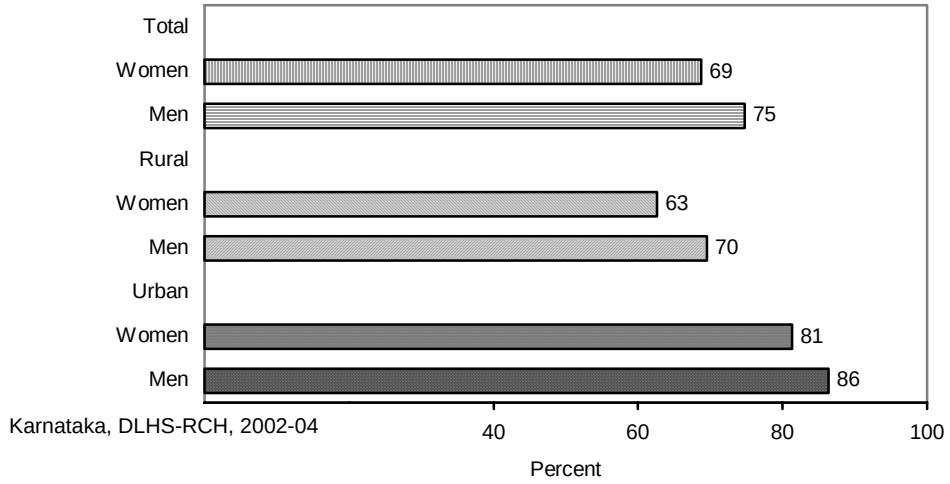
Knowledge of HIV/AIDS is lower among rural women, non-literate women, Muslim women, women from scheduled tribes, women from households with a low standard of living, and younger women. Eighty-one percent of urban women had heard about HIV/AIDS compared to 63 percent of rural women. Knowledge of HIV/AIDS steadily increased with increase in educational level and household standard of living. A little more than half of non-literate women (52 percent) had heard of HIV/AIDS against 93 percent of women who had completed 10 or more years of schooling. Similarly a little more than two-quarter of the women (56 percent) with a low standard of living had heard of HIV/AIDS against 88 percent of women with a high standard of living. Except younger women (below the age of 20) more than 50 percent of the women from other age groups have knowledge of HIV/AIDS. Muslim women (64 percent) were less aware of HIV/AIDS compared to women from Hindu (69 percent), Christian (82 percent) and Jain religions (89 percent). Women from ‘other caste’ category were more knowledgeable about of HIV/AIDS (76 percent) than women belonging to other backward classes (71 percent), scheduled-caste (59 percent) and scheduled tribe women (57 percent).

The government has been using mass media, such as television, radio, and newspaper 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 relatives or friends. About 71 percent of women reported that relatives or friends was their source of information about HIV/AIDS, followed by television (61 percent), radio (26 percent), newspapers, books or magazines (22 percent), and slogans or pamphlets, posters or wall

hoardings (13 percent). Eleven percent of the women reported that a doctor had informed them about HIV/AIDS and 10 percent of the women received information of HIV/AIDS from a health worker. A comparatively high proportion of urban women received information about HIV/AIDS from the radio, television, doctor, and relatives or friends.

Table 8.11 shows the percentage of husbands of currently married women who had heard about HIV/AIDS. In Karnataka, the proportion of men who had heard about HIV/AIDS is much higher than that of women. Seventy-five percent of men had heard of HIV/AIDS as compared to 69 percent of women (Figure 8.4).

Figure 8.4
Awarness of HIV/AIDS by Sex According to Residence



About eighty-six percent of urban men had heard about HIV/AIDS as compared 70 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, Hindu men, men from scheduled tribes, and men who belong to households with a low standard of living. Except Muslim women, a similar trend is observed in the case of women. About 55 percent of non-literate men had heard of HIV/AIDS, and it increased up to 79 percent for literate men and up to 93 percent of men who had completed 10 or more years of schooling. Thus, it is 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 Karnataka, the most prominent source of information of HIV/AIDS were relatives or friends and televisions (62 percent each) followed by the radio (41 percent) newspapers, books or magazines (40 percent). Other important sources of HIV/AIDS are the slogans or pamphlets, posters or wall hoardings (20 percent). Sixteen percent of men reported that a doctor had informed them about HIV/AIDS and 6 percent men had received information of HIV/AIDS from a health worker.

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, Karnataka, 2002-04.

Background characteristics	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	Televi-sion	Newspaper / Books/ Magazines	Slogan/ Pamphlets/ Posters/ Wall Hoardings	Doctor	Health worker	School teacher	Community Meeting	Relative/ Friends	Others	
Age group (years)													
15-19	58.6	2,261	24.8	48.5	15.3	8.4	8.3	7.4	5.5	6.5	74.8	2.5	1,324
20-24	68.3	4,690	23.7	60.3	20.4	12.1	10.2	9.3	5.1	7.2	71.8	1.8	3,203
25-29	72.0	4,905	27.1	63.8	23.6	14.5	12.1	9.6	4.3	7.8	67.5	2.5	3,532
30-34	70.3	4,347	28.8	62.5	24.5	14.4	12.0	10.1	4.9	9.2	69.3	1.9	3,055
35-39	69.8	3,633	27.6	61.8	22.9	13.7	11.6	9.9	5.1	9.3	71.7	1.9	2,534
40-44	67.8	2,819	25.7	61.5	21.8	14.2	10.7	9.5	5.7	10.0	72.8	2.2	1,911
Residence													
Rural	62.6	15,327	24.9	47.3	12.9	8.4	9.4	10.0	4.6	9.4	76.9	2.1	9,602
Urban	81.3	7,329	29.0	82.9	36.9	21.2	13.9	8.6	5.6	6.7	60.7	2.1	5,958
Education													
Non-literate	51.7	10,352	15.1	32.4	1.8	2.3	4.3	5.2	1.5	7.1	82.9	2.1	5,357
0-9@ years	75.6	7,179	28.0	65.0	16.7	12.8	10.2	9.7	4.0	7.4	69.7	2.0	5,428
10 and above	93.2	5,119	37.4	88.2	51.0	26.3	19.7	14.0	9.9	10.9	58.0	2.2	4,773
Religion													
Hindu	68.9	19,189	26.8	59.4	21.9	13.4	11.0	9.7	5.2	8.7	71.6	2.1	13,225
Muslim	63.9	2,879	20.8	66.1	18.1	9.4	9.9	7.0	2.9	6.0	67.3	2.2	1,840
Christian	81.9	390	40.4	84.2	46.9	31.3	19.4	15.2	8.7	9.5	58.0	1.9	319
Jain	88.7	181	33.6	79.4	31.2	15.1	12.8	5.4	2.9	2.9	58.4	1.4	165
Caste/tribe[#]													
Scheduled caste	58.7	4,038	19.0	48.4	12.9	8.4	7.6	7.6	3.6	6.9	74.7	1.9	2,369
Scheduled tribe	57.2	1,788	21.1	47.4	11.8	11.3	10.1	8.2	4.4	8.1	76.2	2.4	1,023
Other backward class	70.6	11,203	27.9	60.5	22.3	12.4	9.0	8.6	4.7	7.5	69.6	1.9	7,906
Other	76.4	5,459	29.5	71.7	29.4	18.4	17.0	12.6	6.5	11.0	69.6	2.5	4,173
Standard of living index													
Low	54.5	9,289	19.7	28.2	5.9	4.8	6.1	8.1	3.0	9.0	82.0	2.1	5,062
Medium	72.3	7,980	25.5	66.3	17.5	10.9	10.0	8.5	4.2	7.1	71.6	2.1	5,768
High	87.8	5,386	34.8	89.3	44.9	25.4	17.8	12.2	8.0	9.1	57.5	2.2	4,730
Total	68.7	22,655	26.4	60.9	22.1	13.3	11.1	9.5	5.0	8.4	70.7	2.1	15,559

Note: Total includes 4 women with missing information on education, 1 on religion who were not shown separately.
Total includes 15 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.

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, Karnataka, 2002-04.

Background Characteristics	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	Televi-sion	Newspaper / Books/ Magazines	Slogan/ Pamphlets/ Posters/ Wall Hoardings	Doctor	Health worker	School teacher	Commun -ity Meeting	Relative/ Friends	Others	
Age group (years)													
< 25	74.9	618	35.2	49.9	28.2	16.3	13.8	6.6	1.1	5.2	64.0	5.2	463
25-34	79.1	4,477	41.3	64.5	41.7	20.2	15.0	5.8	2.5	5.5	63.7	4.2	3,543
35-44	74.5	5,418	41.2	61.4	40.3	20.8	15.7	5.8	3.2	6.6	62.4	3.6	4,036
45+	69.4	3,390	39.3	61.8	40.8	19.7	17.5	6.6	3.5	7.3	59.4	3.9	2,352
Residence													
Rural	69.5	9,548	35.1	50.0	28.4	13.5	13.7	5.3	2.4	6.1	63.4	4.9	6,632
Urban	86.4	4,355	50.2	83.3	61.4	31.9	19.5	7.3	3.9	6.7	60.2	2.2	3,762
Education													
Non-literate	54.6	4,791	22.6	38.4	12.6	5.8	9.9	3.1	2.0	6.3	66.6	4.4	2,614
0-9@ years	78.7	4,780	38.1	58.5	33.9	14.7	10.7	4.4	1.5	4.9	65.7	4.0	3,760
10 and above	92.8	4,332	54.4	80.8	64.4	34.6	24.4	9.5	4.9	7.6	56.1	3.5	4,020
Religion													
Hindu	74.2	11,846	40.6	61.1	40.0	19.9	15.6	6.2	2.9	6.3	62.4	4.1	8,785
Muslim	76.8	1,667	37.0	64.7	37.1	17.5	14.0	4.8	3.0	6.6	60.3	2.8	1,280
Christian	82.8	247	61.3	78.2	62.8	39.9	26.5	8.7	6.9	7.8	61.9	1.9	205
Jain	87.3	137	40.5	72.6	59.8	32.5	27.1	3.8	0.0	1.4	70.5	5.2	119
Caste/tribe[#]													
Scheduled caste	67.2	2,462	35.9	56.3	35.1	14.1	11.9	5.4	2.6	6.7	64.0	3.2	1,653
Scheduled tribe	66.1	1,100	29.7	51.6	30.0	11.4	11.8	4.1	2.2	6.6	64.3	4.6	728
Other backward class	76.0	6,873	40.2	60.1	39.2	19.7	14.1	6.0	3.1	5.8	64.6	4.8	5,224
Other	80.7	3,380	46.9	71.7	48.3	27.1	22.5	6.9	3.1	7.1	56.2	2.6	2,728
Standard of living index													
Low	63.7	5,790	27.2	39.5	20.2	8.8	10.4	4.3	2.0	5.2	66.9	5.4	3,686
Medium	77.5	4,902	42.1	66.6	40.8	18.4	14.7	5.3	2.6	6.9	61.0	3.7	3,798
High	90.6	3,211	55.3	84.7	65.3	36.8	24.0	9.2	4.7	6.9	57.8	2.4	2,910
Total	74.8	13,904	40.5	62.1	40.3	20.2	15.8	6.0	2.9	6.3	62.2	3.9	10,394

Note: Total includes 1 man with missing information on education who was not shown separately.
Total includes 6 men in other religion who were not shown separately
Total figure may not add to N due to do not know and missing cases.
@ Literate men with no year of schooling are also included.

About 6 percent reported that they were informed through community meetings and 3 percent received such information from a school teacher. Comparatively, a higher proportion of urban men received information about HIV/AIDS from the radio, doctor, health worker, schoolteacher and relative or friends than rural men. The information on awareness of HIV/AIDS through mass media, such as television and newspapers, and books or magazines, was received more by younger men (aged 25-34 years), urban men, and men from Christian and 'other castes' category, with at least 10 years of schooling, and men from households with a high standard of living. On the other hand, relative or friends were the main source of information for rural men, younger men below age 25, non-literate men, Hindu men, men from a other backward class 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, 27 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, Karnataka, 2002-04

Background characteristics	Percentage by knowledge of mode of transmission							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	Do not know	
Age								
15-19	13.1	54.7	31.2	10.8	24.5	3.0	35.2	1,324
20-24	13.9	63.3	43.5	13.2	33.4	2.6	27.3	3,203
25-29	12.7	68.1	48.3	15.7	36.3	2.2	23.7	3,532
30-34	14.7	66.7	48.1	15.6	35.6	2.4	25.1	3,055
35-39	14.1	63.4	46.8	14.9	36.7	2.9	27.7	2,534
40-44	10.5	65.0	48.0	16.6	35.7	2.2	25.6	1,911
Residence								
Rural	12.3	58.5	36.9	11.8	26.1	2.4	32.4	9,602
Urban	14.9	74.3	59.5	19.4	48.3	2.6	17.2	5,958
Education								
Non-literate	9.0	45.9	22.7	6.3	14.4	1.4	45.3	5,357
0-9@ years	12.5	66.0	45.8	12.4	32.6	2.4	25.4	5,428
10 years and above	19.2	83.8	70.8	26.8	59.5	3.8	6.9	4,773
Religion								
Hindu	13.8	64.5	45.0	14.6	34.8	2.5	26.5	13,225
Muslim	10.3	61.8	44.2	12.8	27.9	2.0	30.0	1,840
Christian	12.3	83.2	72.0	22.8	57.8	1.6	10.1	319
Jain	10.8	63.1	49.5	25.8	45.4	6.3	24.8	165
Caste/tribe#								
Scheduled caste	8.8	57.4	32.7	9.8	24.1	1.6	35.5	2,369
Scheduled tribe	11.9	56.7	39.6	9.8	30.5	1.7	33.8	1,023
Other backward class	13.7	64.4	42.7	11.9	32.0	2.5	26.9	7,906
Other	15.4	70.9	59.5	23.8	46.2	3.2	19.0	4,173
Standard of living index								
Low	10.1	49.0	26.3	7.6	18.0	1.8	41.8	5,062
Medium	12.7	65.2	45.1	13.6	32.3	2.3	25.9	5,768
High	17.5	80.3	66.7	23.7	55.1	3.5	11.1	4,730
Total	13.3	64.6	45.5	14.7	34.6	2.5	26.6	15,559

Note: Total includes 2 women with missing information on education, 1 on religion who were not shown separately.
Total includes 9 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.

This proportion is relatively higher among rural women, younger women, non-literate women, Muslim women, women from scheduled castes and women with a low standard of living. Thirty-two percent of the rural women do not know about the mode of transmission of HIV/AIDS compared to 17 percent of urban women.

Among women who reported different ways of transmission of HIV/AIDS, a large proportion (65 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 needle or blade or skin puncture (46 percent), transfusion of infected blood (35 percent), mother to

child, if pregnancy occurs during a stage of HIV (15 percent); About 13 percent of the women mentioned that homosexual intercourse could also be a mode of transmission. Only three percent 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, Karnataka, 2002-04

Background characteristics	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	6.4	76.5	42.4	13.4	24.2	7.9	17.0	463
25-34	6.8	84.8	58.7	19.9	37.0	6.7	9.4	3,543
35-44	8.0	81.5	56.1	20.2	34.5	6.8	11.8	4,036
45+	8.2	82.2	56.3	20.7	34.4	6.5	11.6	2,352
Residence								
Rural	7.9	78.9	49.5	17.3	27.7	7.2	14.0	6,632
Urban	7.0	89.1	68.6	24.5	47.5	5.9	6.2	3,762
Education								
Non-literate	7.4	68.6	37.0	17.3	19.3	5.4	22.6	2,614
0-9@ years	7.0	82.2	51.0	14.6	27.8	6.2	11.3	3,760
10 years and above	8.2	92.0	74.1	26.6	51.6	8.1	3.6	4,020
Religion								
Hindu	7.8	82.3	55.9	20.0	35.1	6.8	11.5	8,785
Muslim	6.6	81.9	56.6	19.0	30.6	5.9	10.6	1,280
Christian	6.4	89.6	70.3	23.3	50.3	4.5	7.1	205
Jain	4.3	94.1	69.5	18.1	35.3	13.7	1.0	119
Caste/tribe#								
Scheduled caste	7.4	79.1	49.7	21.3	34.3	6.6	14.4	1,653
Scheduled tribe	8.0	78.4	49.2	19.3	31.0	6.1	14.8	728
Other backward class	6.1	83.6	54.1	15.4	33.1	7.0	11.6	5,224
Other	10.2	84.0	66.7	27.9	40.1	6.3	7.5	2,728
Standard of living index								
Low								
Medium	7.5	74.0	39.8	15.7	21.5	7.1	18.5	3,686
High	6.8	83.7	58.8	19.5	35.1	6.7	9.2	3,798
	8.6	91.9	74.3	25.7	51.6	6.2	4.3	2,910
Total	7.6	82.6	56.4	19.9	34.9	6.7	11.2	10,394

Note: Total includes 5 men in other religion who were not shown separately.

Total figure may not add to N due to do not know and missing cases.

@ Literate men with no year of schooling are also included.

Table 8.13 presents the knowledge about mode of transmission of HIV/AIDS among men. Eleven 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 younger men, rural men, non-literate men, Hindu men and men from scheduled-tribes, and men from households with a low standard of living. Among whom reported ways of transmission of HIV/AIDS, 83 percent of them 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 (56 percent), transfusion of infected blood (35 percent), mother to child, if pregnancy occurs during a stage of HIV (20 percent), and only 8 percent of men mentioned that homosexual intercourse could also be a mode of transmission of HIV/AIDS. Eight percent 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 35 percent of them did not know how to avoid becoming infected by HIV/AIDS. This percentage is higher among rural women than among urban 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. Fifty-three percent of non-literate women reported that they did not know of any way to avoid infection as compared to 13 percent of women who had completed ten or more years of schooling. Similarly, 49 percent of women with low a standard of living stated that they did not know of any way to avoid infection as compared to 19 percent of women with a high standard of living. The percentage of women who did not know ways to avoid infection is also high among Muslim women, scheduled-caste women and younger women.

Among women who mentioned ways to avoid HIV/AIDS, a higher proportion of women (61 percent) said that “sex with only one partner is the way to avoid it”. Other ways to prevent HIV/AIDS mentioned by women were ‘sterilizing needles and syringe before injecting’(41 percent), ‘checking blood prior to transfusion’ (33 percent), ‘using a condom correctly during each sexual intercourse’ (16 percent), and 10 percent of the women reported that the pregnancy should be avoided if couples were infected by HIV/AIDS. All the specific ways to avoid becoming infected by HIV/AIDS reported by women are proportionally higher in urban areas, among Christian women, women who belong to ‘other castes’ category, women with a high level of education and 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, 12 percent of them did not know of any method to avoid infection, compared to 35 percent women in the state.

In Karnataka, a higher proportion of men reported that ‘sex with only one partner’ is the way to avoid HIV/AIDS, a majority of men (83 percent) also reported the same, and this was the most commonly reported way to avoid HIV/AIDS in all the groups.

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, Karnataka, 2002-04

Background characteristics	Percentage reported HIV/AIDS can be avoided by:							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	Do not know To avoid HIV/AIDS	
Age								
15-19	51.0	9.8	22.7	27.5	6.7	2.0	43.4	1,324
20-24	59.6	14.6	31.9	38.5	9.4	2.6	35.4	3,203
25-29	63.1	18.9	34.8	42.7	10.6	2.7	31.4	3,532
30-34	63.3	17.4	34.8	42.9	11.1	2.3	33.7	3,055
35-39	62.3	15.0	32.9	42.9	11.7	2.8	34.5	2,534
40-44	61.7	16.0	36.3	43.0	11.7	2.2	34.4	1,911
Residence								
Rural	55.5	12.0	24.9	33.4	8.2	2.6	40.0	9,602
Urban	70.1	22.3	46.2	52.3	14.1	2.4	25.8	5,958
Education								
Non-literate	44.0	4.6	13.3	20.4	4.1	1.7	52.7	5,357
0-9@ years	59.9	12.2	31.9	39.8	8.7	2.1	35.8	5,428
10 years and above	81.6	33.0	56.6	64.4	19.5	3.9	12.8	4,773
Religion								
Hindu	61.2	16.1	33.0	40.4	10.4	2.5	34.5	13,225
Muslim	57.2	12.2	28.1	36.6	7.9	1.8	38.3	1,840
Christian	76.9	29.5	55.4	68.8	21.1	4.7	17.4	319
Other	61.5	22.0	47.4	52.0	19.6	7.9	30.0	165
Caste/tribe#								
Scheduled caste	49.7	9.3	22.4	28.2	7.5	2.6	44.9	2,369
Scheduled tribe	54.8	9.3	27.2	34.1	8.6	2.1	42.0	1,023
Other backward class	59.0	15.8	30.0	37.4	8.3	2.2	36.6	7,906
Other	73.1	21.6	46.2	55.4	16.6	3.1	22.9	4,173
Standard of living index								
Low	47.4	6.8	16.5	23.5	5.4	1.9	48.7	5,062
Medium	60.5	13.1	31.2	40.4	9.5	2.5	34.8	5,768
High	76.5	29.2	53.0	59.3	17.0	3.1	19.1	4,730
Total	61.1	16.0	33.1	40.7	10.4	2.5	34.6	15,559

Note: Total includes 2 women with missing information on education, 1 on religion who were not shown separately.
Total includes 9 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.

Other ways to prevent by HIV/AIDS mentioned by men are 'sterilizing needles and syringe before injecting' (48 percent), 'checking blood prior to transfusion' (35 percent) and 'using a condom correctly during each sexual intercourse' (30 percent). All the specific ways to avoid becoming infected by HIV/AIDS reported by men are proportionally higher in urban areas than in rural areas, and among men who belong to 'other caste' category, men with a high level of education and men with a high standard of living. Christian men were more likely to report using a condom correctly during each sexual intercourse.

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, Karnataka, 2002-04

Background characteristics	Percentage reported HIV/AIDS can be avoided by: 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	Number of men
Age								
<25	77.1	21.0	21.9	34.5	5.5	8.0	16.6	463
25-34	84.3	31.1	36.5	49.4	8.2	8.2	10.3	3,543
35-44	82.9	30.0	35.8	46.9	10.3	8.8	12.0	4,036
45+	81.2	30.8	34.6	48.4	10.6	8.7	13.0	2,352
Residence								
Rural	79.2	22.6	25.8	42.8	8.1	9.3	15.1	6,632
Urban	89.0	43.5	51.7	55.9	11.7	7.2	6.1	3,762
Education								
Non-literate	69.6	18.1	19.0	28.6	7.6	7.6	24.5	2,614
0-9@ years	81.5	22.9	27.2	40.8	6.5	8.3	12.9	3,760
10 years and above	92.4	44.8	53.0	66.1	13.4	9.4	2.8	4,020
Religion								
Hindu	82.4	29.3	34.7	47.4	9.6	8.5	12.3	8,785
Muslim	82.7	32.8	32.9	45.1	8.3	8.3	10.8	1,280
Christian	88.7	46.6	55.3	55.7	8.3	8.0	7.4	205
Jain	97.3	37.1	52.1	64.7	7.1	14.6	1.1	119
Caste/tribe[#]								
Scheduled caste	79.2	27.8	30.6	42.3	9.7	8.8	15.5	1,653
Scheduled tribe	78.2	20.9	25.6	41.2	7.9	7.9	16.0	728
Other backward class	82.6	28.0	33.9	44.6	8.0	9.5	12.3	5,224
Other	86.3	38.5	43.0	57.9	12.6	7.0	7.9	2,728
Standard of living index								
Low	73.7	16.7	19.1	33.1	6.6	9.4	20.5	3,686
Medium	84.6	30.0	34.1	49.4	9.4	8.3	10.2	3,798
High	91.8	47.4	56.9	63.4	13.0	7.8	3.2	2,910
Total	82.7	30.2	35.1	47.5	9.4	8.5	11.9	10,394

Note: Total includes 5 men in other religion who were not shown separately.
Total figure may not add to N due to do not know and missing cases
@ Literate men with no year of schooling are also included.

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 with 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. Being bitten by mosquitoes, fleas or bedbugs is commonly reported as the way of getting HIV/AIDS infection by

women in all the groups, and this percentage is higher among rural areas (33 percent) than in urban areas (29 percent). Women who have completed nine years of schooling, women from households with a medium standard of living, Hindu women, and women from scheduled caste and other backward class mentioned this method of transmission more often. Other misconceptions about the spreading of HIV/AIDS were 'stepping on urine/stool' (23 percent), 'kissing', 'sharing eating utensils' (21 percent each), 'sharing clothes' (20 percent 'hugging' (18 percent), and 'shaking hands' (17 percent). The percentage of all these misconceptions is also higher among women who belong to scheduled castes, scheduled tribes, among Hindu 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, Karnataka, 2002-04

Background characteristics	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	19.9	20.9	23.4	22.8	23.8	25.5	33.1	9,602
Urban	13.4	14.0	16.2	14.2	15.3	18.9	29.4	5,958
Education								
Non-literate	22.0	23.3	25.0	24.7	25.8	26.6	31.7	5,357
0-9@ years	18.2	19.1	21.8	20.7	21.6	24.8	33.3	5,428
10 years and above	11.4	11.7	14.4	12.4	13.4	16.8	29.8	4,773
Religion								
Hindu	18.2	19.0	21.4	20.4	21.4	23.7	32.5	13,225
Muslim	13.4	14.1	16.8	14.7	15.6	17.9	26.4	1,840
Christian	8.8	11.8	13.0	12.2	13.6	19.7	29.7	319
Jain	18.0	18.0	17.3	16.7	17.6	21.7	26.0	165
Caste/tribe#								
Scheduled caste	21.3	22.3	24.3	24.0	24.9	27.1	33.9	2,369
Scheduled tribe	20.0	21.3	22.0	21.8	22.8	25.5	32.2	1,023
Other backward class	19.3	19.9	22.7	21.0	22.1	24.8	33.9	7,906
Other	11.0	12.2	14.4	13.8	14.7	16.6	26.3	4,173
Standard of living index								
Low	22.4	23.5	25.6	25.2	26.3	27.0	32.7	5,062
Medium	18.1	18.6	21.1	20.0	21.0	24.1	33.7	5,768
High	11.2	12.2	14.7	12.9	13.8	17.2	28.2	4,730
Total	17.4	18.3	20.6	19.5	20.5	23.0	31.7	15,559

Note: Total includes 2 women with missing information on education and 1 on religion who were not shown separately.
Total includes 9 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.

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 all the groups reported that HIV/AIDS is transmitted through insect bites, mosquitoes, through flea or bedbugs. Forty-six percent of the men in Karnataka felt so. The percentage who reported that HIV/AIDS could be transmitted through the biting by mosquitoes or flees or bedbugs was much higher among rural men (50 percent) than among urban men (39

percent). Literate men who have completed nine years of schooling, men from households with a low standard of living, Muslim men, and scheduled tribe men are of the impression that HIV/AIDS spreads when one is bitten by mosquitoes, fleas or bedbugs. Other misconceptions about the spread of HIV/AIDS are 'kissing', 'sharing eating utensils' and 'stepping on urine/stool' (28 percent each), 'sharing clothes' (23 percent), 'hugging' (19 percent), and 'shaking hands' (18 percent). All the misconceptions reported by men are relatively higher than those reported by women. The percentage of all these misconceptions is also higher among men who belong to scheduled-tribe or caste, Hindu men, non-literate men and men with a low standard of living.

Table 8.17 MISCONCEPTION ABOUT TRANSMISSION OF HIV/AIDS AMONG MEN
Among husbands of 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, Karnataka, 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	22.4	23.9	34.4	28.1	33.4	31.5	49.9	6,632
Urban	8.8	10.0	17.6	13.1	17.3	20.4	38.5	3,762
Education								
Non-literate	25.2	27.1	36.4	31.0	35.8	32.8	45.8	2,614
0-9@ years	20.3	21.8	31.9	25.9	31.4	30.9	52.8	3,760
10 years and above	9.8	10.8	19.7	14.2	18.6	20.8	39.2	4,020
Religion								
Hindu	18.0	19.3	28.7	23.1	28.1	27.7	46.1	8,785
Muslim	14.6	16.7	27.1	21.2	26.3	28.0	46.2	1,280
Christian	15.5	16.6	25.4	19.0	17.3	18.4	32.8	205
Jain	10.6	13.6	19.8	15.9	23.0	20.6	42.9	119
Caste/tribe#								
Scheduled caste	24.1	25.3	35.8	30.1	34.6	34.7	48.7	1,653
Scheduled tribe	20.7	22.2	32.7	24.8	31.3	29.3	49.5	728
Other backward class	19.0	20.3	28.4	24.3	29.2	30.5	48.5	5,224
Other	9.7	11.3	22.1	14.3	19.1	16.7	38.0	2,728
Standard of living index								
Low	26.3	28.0	38.5	32.5	37.7	34.6	50.7	3,686
Medium	16.3	18.0	27.4	21.8	26.9	28.4	48.3	3,798
High	7.6	8.4	16.5	11.4	15.7	17.2	36.3	2,910
Total	17.5	18.9	28.3	22.7	27.6	27.5	45.8	10,394

Note: Total includes 5 men in other religion who were not shown separately.
Total figure may not add to N due to do not know and missing cases
@ Literate men with no year of schooling are also included.

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. It is just 7 percent of women and 9 percent of men have the notion that HIV/AIDS is curable, whereas 71 percent women and 80 percent men replied that the disease is not curable. Twenty-two percent women and 10 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 area having high level of education, belonging to Hindu and Jain religion, scheduled tribe and 'other caste' category and from households of low and medium 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, Karnataka, 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	5.9	69.7	24.4	9,602	11.0	76.1	12.9	6,632
Urban	7.4	73.8	18.8	5,958	6.2	88.1	5.7	3,762
Education								
Non-literate	5.1	61.8	33.1	5,357	11.7	69.1	19.3	2,614
0-9@ years	6.7	71.4	21.9	5,428	8.6	80.2	11.3	3,760
10 years and above	7.8	81.6	10.6	4,773	8.4	88.1	3.5	4,020
Religion								
Hindu	6.4	71.6	22.0	13,225	9.4	79.9	10.7	8,785
Muslim	7.4	66.2	26.4	1,840	9.0	82.7	8.2	1,280
Christian	4.5	85.1	10.5	319	7.9	84.2	7.9	205
Jain	9.0	71.4	19.6	165	6.3	89.3	4.5	119
Caste/tribe#								
Scheduled caste	6.1	66.3	27.6	2,369	9.5	78.8	11.6	1,653
Scheduled tribe	4.8	68.3	26.9	1,023	9.7	74.7	15.7	728
Other backward class	6.6	70.0	23.3	7,906	9.0	80.7	10.3	5,224
Other	6.9	77.0	16.2	4,173	9.5	82.7	7.8	2,728
Standard of living index								
Low	5.2	65.1	29.6	5,062	11.8	71.5	16.7	3,686
Medium	7.3	70.2	22.5	5,768	9.3	81.7	9.0	3,798
High	6.8	79.0	14.2	4,730	6.2	90.1	3.8	2,910
Total	6.5	71.2	22.3	15,559	9.3	80.4	10.3	10,394

Total includes 2 women with missing information on education, 1 on religion who were not shown separately
Total includes 9 women and 5 men in other religion who were not shown separately
Total figure may not add to N due to do not know and missing cases
@ Literate persons with no year of schooling are also included.

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

Table 8.19 shows the percentage distribution of currently married women were and their husbands who are aware of RTI/STI and HIV/AIDS by districts.

According to DLHS, 21 percent and 69 percent of women ware aware of RTI/STI and HIV/AIDS respectively and the corresponding figures for husbands of eligible women are 30 and 75 percent respectively. The awareness of RTI/STI and HIV/AIDS among men is higher than that among women by 9 and 6 percentage points.

In general, in all of the districts men are more aware of RTI/STI and HIV/AIDS than women. The highest level of awareness about RTI/STI among women was reported in Kodagu

(52 percent), followed by Uttara Kannada (50 percent), Davanagere (34 percent), Begaum and Dakshina Kannada (33 percent each) to the lowest in Raichur (5 percent). Among men the highest level of awareness of RTI/STI was reported in Uttara Kannada (57 percent), followed by Chikmagalur (54 percent) and Kodagu (51 percent) and to the lowest in Raichur (10 percent).

The proportion of husbands of eligible women for currently married women ages 15-44 who are aware of HIV/AIDS in the districts of state Karnataka are also presented Table 8.19. Among women the awareness about HIV/AIDS ranges from the highest of 89 percent each in Kodagu and Udupi to the lowest of 38 percent in Raichur. With the exception of Raichur, Koppal and Haveri in every district more than 50-89 percent of women reported awareness of HIV/AIDS. A high level of awareness of HIV/AIDS among men exceeding 75 percent was reported in Uttara Kannada, Kodagu, Belgaum, Bangalore, Chikmagalur, Gulbarga, Bidar, Koppal, Udupi, Shimoga, Dakshina Kannada, Bijapur, Davanagere, and Dharwad.

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, Karnataka, 2002-04

	Percentage of women		Percentage of men	
District	Aware of RTI/STI	Aware of HIV/AIDS	Aware of RTI/STI	Aware of HIV/AIDS
Bagalkot	16.9	76.8	29.6	70.3
Bangalore	21.8	83.2	31.5	84.9
Bangalore Rural	15.6	66.7	21.6	64.7
Belgaum	33.3	81.4	44.7	87.0
Bellary	8.7	66.3	15.0	64.0
Bidar	17.2	56.7	43.1	83.1
Bijapur	19.0	74.0	34.2	77.9
Chamarajanagar	22.2	60.0	18.5	52.2
Chikmagalur	32.1	77.7	53.5	83.8
Chitradurga	16.9	65.8	20.2	66.5
Dakshina Kannada	32.8	74.7	45.1	79.6
Davanagere	33.6	83.6	32.9	77.3
Dharwad	24.5	59.2	29.1	76.3
Gadag	18.2	74.1	23.1	64.2
Gulbarga	10.8	50.1	42.8	83.2
Hassan	21.4	76.4	20.9	71.3
Haveri	23.0	44.2	26.6	53.4
Kodagu	52.2	89.2	50.8	89.2
Kolar	18.5	57.7	19.5	61.6
Koppal	5.5	41.4	19.2	80.6
Mandya	19.6	72.2	27.8	73.9
Mysore	16.0	71.3	20.6	73.5
Raichur	4.9	37.7	9.7	69.7
Shimoga	25.2	77.2	28.9	80.1
Tumkur	19.9	62.0	35.4	68.0
Udupi	30.9	88.5	24.5	80.4
Uttara Kannada	49.9	80.3	57.3	90.0
Karnataka	21.2	68.7	30.2	74.8

Appendix A

Estimation Sampling Error

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

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

where the cell (h, j, i) stands for i^{th} observational unit in j^{th} primary sampling unit (PSU) in h^{th} stratum, basically rural-urban areas of a district are taken as strata. W_{hij} 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

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

$$var(y) = \sum_h \frac{n_h}{n_h - 1} \left[\sum_j \sum_i (w_{hji} y_{hij})^2 - \frac{\left(\sum_j \sum_i w_{hji} y_{hji} \right)^2}{n_h} \right] \quad \ldots\ldots\ldots\ldots\ldots (3)$$

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

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 12-35 months
Measles	Proportion	Children age 12-35 months
BO3+	Proportion	Currently married women age 15-44 years with births in past three years

Sampling errors, Karnataka, 2002-04

	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	0.593	0.004	22656	22656	1.717	0.7	0.585	0.602
Rural	0.598	0.005	15327	15327	1.399	0.8	0.589	0.607
Urban	0.583	0.009	7329	7329	2.373	1.5	0.566	0.601
Unmet Need (Currently Married Women age 15-44)								
Total	0.151	0.003	22656	22656	1.828	2.1	0.145	0.158
Rural	0.140	0.003	15327	15327	1.421	2.4	0.133	0.146
Urban	0.175	0.007	7329	7329	2.525	4.0	0.162	0.189
Received Any Antenatal Check up (last live/still birth of past 3 years)								
Total	0.915	0.004	7547	7598	1.233	0.4	0.908	0.922
Rural	0.889	0.005	5147	5163	1.217	0.5	0.880	0.899
Urban	0.968	0.004	2400	2435	1.140	0.4	0.961	0.976
Received 3+ Antenatal Check up (last live/still birth of past 3 years)								
Total	0.801	0.006	7547	7598	1.467	0.7	0.790	0.812
Rural	0.759	0.007	5147	5163	1.321	0.9	0.745	0.772
Urban	0.890	0.009	2400	2435	1.898	1.0	0.873	0.907
Institutional Delivery (last live/still birth of past 3 years)								
Total	0.580	0.007	7547	7597	1.615	1.2	0.566	0.594
Rural	0.456	0.008	5147	5163	1.395	1.8	0.440	0.473
Urban	0.841	0.009	2400	2434	1.577	1.1	0.823	0.859
Safe Delivery (last live/still birth of past 3 years)								
Total	0.666	0.007	7547	7598	1.530	1.0	0.653	0.679
Rural	0.559	0.008	5147	5163	1.379	1.5	0.543	0.575
Urban	0.895	0.007	2400	2435	1.440	0.8	0.880	0.909
Received BCG Vaccination (last and last but one living children (age 12-35 months)								
Total	0.925	0.004	4942	5129	1.374	0.5	0.916	0.933
Rural	0.911	0.006	3392	3493	1.398	0.6	0.900	0.922
Urban	0.954	0.006	1550	1636	1.180	0.6	0.943	0.965
Received Measles (last and last but one living children (age 12-35 months)								
Total	0.804	0.007	4942	5128	1.604	0.9	0.791	0.818
Rural	0.776	0.009	3392	3492	1.530	1.1	0.759	0.793
Urban	0.865	0.011	1550	1636	1.647	1.3	0.844	0.886
Birth order 3+ (birth in last three years)								
Total	0.296	0.006	7901	8004	1.574	2.2	0.284	0.309
Rural	0.325	0.007	5455	5523	1.398	2.3	0.310	0.339
Urban	0.233	0.012	2446	2481	1.933	5.1	0.210	0.256

Sampling errors, Karnataka, 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)							
Bagalkot	0.497	0.017	897	897	3.4	0.463	0.531
Bangalore Rural	0.676	0.018	761	761	2.7	0.640	0.711
Bangalore Urban	0.607	0.020	632	632	3.3	0.568	0.647
Belgaum	0.574	0.019	892	892	3.3	0.537	0.610
Bellary	0.475	0.017	985	985	3.6	0.442	0.508
Bidar	0.486	0.018	917	917	3.7	0.451	0.522
Bijapur	0.494	0.019	745	755	3.8	0.456	0.532
Chamarajnagar	0.693	0.017	826	835	2.5	0.660	0.726
Chikamagalur	0.706	0.018	718	717	2.5	0.671	0.742
Chitradurg	0.595	0.017	908	909	2.9	0.561	0.629
Dakhina Kannada	0.538	0.019	787	787	3.5	0.502	0.575
Davanegere	0.662	0.016	1012	1015	2.4	0.631	0.693
Dharwad	0.609	0.017	877	876	2.8	0.575	0.643
Gadag	0.506	0.018	888	890	3.6	0.472	0.541
Gulbarga	0.417	0.018	848	848	4.3	0.381	0.452
Hassan	0.710	0.017	783	783	2.4	0.676	0.743
Haveri	0.574	0.018	849	852	3.1	0.540	0.608
Kodagu	0.646	0.019	736	736	2.9	0.609	0.683
Kolar	0.653	0.017	876	877	2.6	0.620	0.686
Koppal	0.430	0.018	965	978	4.2	0.395	0.465
Mandya	0.737	0.016	844	845	2.2	0.705	0.769
Mysore	0.675	0.015	958	958	2.2	0.644	0.705
Raichur	0.422	0.019	872	872	4.5	0.384	0.459
Shimoga	0.722	0.017	879	879	2.4	0.688	0.756
Tumkur	0.605	0.018	758	758	3.0	0.569	0.641
Udupi	0.690	0.020	653	653	2.9	0.651	0.728
Uttara Kannada	0.589	0.018	790	837	3.1	0.553	0.625

Sampling errors, Karnataka, 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)							
Bagalkot	0.159	0.013	897	897	8.2	0.134	0.184
Bangalore Rural	0.140	0.013	761	761	9.3	0.114	0.166
Bangalore Urban	0.178	0.016	632	632	9.0	0.146	0.209
Belgaum	0.152	0.013	892	892	8.6	0.126	0.178
Bellary	0.165	0.013	985	985	7.9	0.140	0.191
Bidar	0.196	0.014	917	917	7.1	0.168	0.223
Bijapur	0.184	0.016	745	755	8.7	0.153	0.215
Chamarajnagar	0.085	0.010	826	835	11.8	0.065	0.105
Chikamagalur	0.131	0.013	718	717	9.9	0.105	0.157
Chitradurg	0.151	0.014	908	909	9.3	0.124	0.178
Dakhina Kannada	0.197	0.015	787	787	7.6	0.168	0.227
Davanegere	0.063	0.008	1012	1015	12.7	0.047	0.079
Dharwad	0.180	0.014	877	876	7.8	0.153	0.207
Gadag	0.167	0.013	888	890	7.8	0.142	0.193
Gulbarga	0.254	0.016	848	848	6.3	0.222	0.285
Hassan	0.098	0.011	783	783	11.2	0.077	0.119
Haveri	0.137	0.012	849	852	8.8	0.113	0.161
Kodagu	0.177	0.015	736	735	8.5	0.148	0.206
Kolar	0.160	0.013	876	876	8.1	0.134	0.185
Koppal	0.157	0.013	965	977	8.3	0.132	0.182
Mandya	0.099	0.011	844	844	11.1	0.077	0.121
Mysore	0.095	0.010	958	958	10.5	0.076	0.114
Raichur	0.165	0.015	872	872	9.1	0.137	0.194
Shimoga	0.086	0.010	879	879	11.6	0.067	0.106
Tumkur	0.152	0.013	758	758	8.6	0.125	0.178
Udupi	0.127	0.014	653	653	11.0	0.099	0.155
Uttara Kannada	0.173	0.014	790	837	8.1	0.146	0.201

Sampling errors, Karnataka, 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)							
Bagalkot	0.880	0.019	310	317	2.2	0.843	0.916
Bangalore Rural	0.928	0.019	226	223	2.0	0.890	0.966
Bangalore Urban	0.995	0.005	217	214	0.5	0.985	1.000
Belgaum	0.956	0.013	306	307	1.4	0.930	0.982
Bellary	0.799	0.022	356	361	2.8	0.755	0.843
Bidar	0.873	0.019	379	389	2.2	0.837	0.910
Bijapur	0.841	0.022	282	288	2.6	0.797	0.884
Chamarajnagar	0.963	0.011	239	231	1.1	0.941	0.985
Chikamagalur	0.983	0.010	197	190	1.0	0.962	1.000
Chitradurg	0.927	0.017	272	280	1.8	0.895	0.960
Dakhina Kannada	0.997	0.003	228	236	0.3	0.990	1.000
Davanegere	0.940	0.014	298	299	1.5	0.912	0.968
Dharwad	0.954	0.012	331	335	1.3	0.931	0.977
Gadag	0.850	0.021	302	309	2.5	0.809	0.891
Gulbarga	0.800	0.021	397	391	2.6	0.758	0.841
Hassan	0.987	0.007	191	191	0.7	0.973	1.000
Haveri	0.896	0.018	301	300	2.0	0.861	0.932
Kodagu	0.991	0.007	232	235	0.7	0.978	1.000
Kolar	0.944	0.014	291	295	1.5	0.915	0.972
Koppal	0.811	0.022	387	399	2.7	0.768	0.853
Mandya	0.974	0.012	207	213	1.2	0.952	0.997
Mysore	0.956	0.013	281	278	1.4	0.931	0.981
Raichur	0.697	0.026	397	398	3.7	0.645	0.748
Shimoga	0.977	0.011	261	266	1.1	0.956	0.998
Tumkur	0.942	0.014	255	246	1.5	0.914	0.970
Udupi	0.996	0.004	157	159	0.4	0.987	1.000
Uttara Kannada	0.988	0.007	247	260	0.7	0.975	1.000

Sampling errors, Karnataka, 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)							
Bagalkot	0.668	0.028	310	317	4.2	0.614	0.723
Bangalore Rural	0.883	0.024	226	223	2.7	0.836	0.931
Bangalore Urban	0.937	0.018	217	215	1.9	0.902	0.972
Belgaum	0.856	0.023	306	307	2.7	0.811	0.902
Bellary	0.580	0.028	356	361	4.8	0.525	0.634
Bidar	0.718	0.025	379	389	3.5	0.668	0.768
Bijapur	0.632	0.030	282	288	4.7	0.573	0.691
Chamarajnagar	0.901	0.021	239	231	2.3	0.860	0.942
Chikamagalur	0.921	0.021	197	189	2.3	0.881	0.962
Chitradurg	0.787	0.026	272	282	3.3	0.736	0.839
Dakhina Kannada	0.947	0.016	228	237	1.7	0.915	0.978
Davanegere	0.860	0.020	298	299	2.3	0.821	0.900
Dharwad	0.838	0.021	331	335	2.5	0.796	0.879
Gadag	0.674	0.028	302	309	4.2	0.619	0.729
Gulbarga	0.618	0.026	397	389	4.2	0.567	0.670
Hassan	0.914	0.021	191	191	2.3	0.872	0.956
Haveri	0.807	0.023	301	299	2.9	0.761	0.853
Kodagu	0.898	0.021	232	235	2.3	0.856	0.941
Kolar	0.869	0.021	291	295	2.4	0.828	0.910
Koppal	0.614	0.027	387	400	4.4	0.561	0.667
Mandya	0.953	0.015	207	213	1.6	0.924	0.983
Mysore	0.850	0.022	281	278	2.6	0.806	0.893
Raichur	0.509	0.029	397	399	5.7	0.452	0.565
Shimoga	0.901	0.021	261	267	2.3	0.860	0.942
Tumkur	0.836	0.024	255	245	2.9	0.789	0.882
Udupi	0.990	0.006	157	159	0.6	0.978	1.000
Uttara Kannada	0.953	0.013	247	259	1.4	0.927	0.979

Sampling errors, Karnataka, 2002-04							
	Estimate	Sampling	Number of cases		Relative	95% Conf. Interval	
District	(R)	error (SE)	Unweighted	Weighted	Error (%)	R-1.96 SE	R+1.96 SE
Institutional Delivery (last live/still birth of past 3 years)							
Bagalkot	0.486	0.029	310	319	6.0	0.428	0.544
Bangalore Rural	0.694	0.034	226	223	4.9	0.628	0.760
Bangalore Urban	0.924	0.020	217	213	2.2	0.885	0.963
Belgaum	0.613	0.031	306	307	5.1	0.552	0.675
Bellary	0.254	0.025	356	361	9.8	0.205	0.302
Bidar	0.456	0.028	379	389	6.1	0.401	0.511
Bijapur	0.572	0.031	282	287	5.4	0.511	0.632
Chamarajnagar	0.715	0.030	239	230	4.2	0.656	0.775
Chikamagalur	0.700	0.034	197	190	4.9	0.633	0.767
Chitradurg	0.536	0.032	272	280	6.0	0.473	0.599
Dakhina Kannada	0.939	0.018	228	234	1.9	0.903	0.975
Davanegere	0.555	0.030	298	299	5.4	0.496	0.614
Dharwad	0.601	0.028	331	335	4.7	0.546	0.656
Gadag	0.445	0.030	302	309	6.7	0.386	0.505
Gulbarga	0.311	0.025	397	391	8.0	0.262	0.361
Hassan	0.659	0.036	191	190	5.5	0.589	0.729
Haveri	0.430	0.030	301	300	7.0	0.372	0.487
Kodagu	0.758	0.030	232	235	4.0	0.699	0.816
Kolar	0.532	0.031	291	296	5.8	0.471	0.593
Koppal	0.206	0.023	387	399	11.2	0.161	0.252
Mandya	0.702	0.034	207	213	4.8	0.636	0.768
Mysore	0.649	0.029	281	279	4.5	0.591	0.707
Raichur	0.206	0.022	397	398	10.7	0.162	0.250
Shimoga	0.692	0.033	261	266	4.8	0.627	0.757
Tumkur	0.639	0.031	255	246	4.9	0.579	0.699
Udupi	0.941	0.020	157	158	2.1	0.901	0.981
Uttara Kannada	0.746	0.030	247	260	4.0	0.687	0.804

Sampling errors, Karnataka, 2002-04							
	Estimate	Sampling	Number of cases		Relative	95% Conf. Interval	
District	(R)	error (SE)	Unweighted	Weighted	Error (%)	R-1.96 SE	R+1.96 SE
Safe Delivery (last live/still birth of past 3 years)							
Bagalkot	0.591	0.029	310	318	4.9	0.534	0.648
Bangalore Rural	0.763	0.032	226	222	4.2	0.701	0.825
Bangalore Urban	0.949	0.018	217	213	1.9	0.914	0.983
Belgaum	0.705	0.030	306	307	4.3	0.647	0.764
Bellary	0.390	0.027	356	361	6.9	0.336	0.444
Bidar	0.503	0.028	379	389	5.6	0.448	0.558
Bijapur	0.640	0.030	282	288	4.7	0.582	0.698
Chamarajnagar	0.778	0.028	239	231	3.6	0.724	0.833
Chikamagalur	0.787	0.031	197	191	3.9	0.725	0.848
Chitradurg	0.644	0.031	272	280	4.8	0.584	0.705
Dakhina Kannada	0.957	0.015	228	236	1.6	0.927	0.987
Davanegere	0.666	0.029	298	299	4.4	0.610	0.722
Dharwad	0.703	0.026	331	335	3.7	0.652	0.755
Gadag	0.583	0.030	302	309	5.1	0.525	0.641
Gulbarga	0.375	0.026	397	390	6.9	0.324	0.427
Hassan	0.790	0.030	191	190	3.8	0.731	0.850
Haveri	0.525	0.030	301	300	5.7	0.466	0.583
Kodagu	0.797	0.028	232	235	3.5	0.742	0.852
Kolar	0.642	0.030	291	296	4.7	0.583	0.701
Koppal	0.366	0.027	387	398	7.4	0.313	0.419
Mandya	0.862	0.025	207	213	2.9	0.812	0.911
Mysore	0.689	0.029	281	279	4.2	0.633	0.745
Raichur	0.366	0.028	397	398	7.7	0.311	0.421
Shimoga	0.784	0.029	261	266	3.7	0.727	0.841
Tumkur	0.757	0.027	255	246	3.6	0.704	0.811
Udupi	0.970	0.015	157	159	1.5	0.941	0.999
Uttara Kannada	0.810	0.027	247	260	3.3	0.756	0.864

Sampling errors, Karnataka, 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 12-35 months)							
Bagalkot	0.942	0.016	220	226	1.7	0.911	0.972
Bangalore Rural	1.000	0.000	161	161	0.0	1.000	1.000
Bangalore Urban	1.000	0.000	158	160	0.0	1.000	1.000
Belgaum	0.899	0.021	238	251	2.3	0.857	0.940
Bellary	0.931	0.017	220	222	1.8	0.898	0.965
Bidar	0.898	0.020	252	257	2.2	0.859	0.937
Bijapur	0.857	0.026	183	190	3.0	0.806	0.908
Chamarajnagar	1.000	0.000	144	141	0.0	1.000	1.000
Chikamagalur	0.988	0.012	115	111	1.2	0.964	1.000
Chitradurg	0.961	0.015	164	168	1.6	0.931	0.990
Dakhina Kannada	1.000	0.000	130	136	0.0	1.000	1.000
Davanegere	0.993	0.007	192	196	0.7	0.979	1.000
Dharwad	0.934	0.018	220	223	1.9	0.899	0.969
Gadag	0.942	0.016	204	209	1.7	0.910	0.973
Gulbarga	0.732	0.029	265	260	4.0	0.675	0.789
Hassan	0.984	0.011	114	117	1.1	0.962	1.000
Haveri	0.922	0.020	197	196	2.2	0.883	0.960
Kodagu	0.959	0.018	152	154	1.9	0.924	0.995
Kolar	0.945	0.017	187	188	1.8	0.913	0.977
Koppal	0.772	0.028	258	266	3.6	0.717	0.828
Mandya	1.000	0.000	140	146	0.0	1.000	1.000
Mysore	0.989	0.008	170	168	0.8	0.973	1.000
Raichur	0.671	0.034	267	269	5.1	0.605	0.736
Shimoga	0.984	0.009	169	171	0.9	0.966	1.000
Tumkur	0.981	0.009	152	150	0.9	0.963	1.000
Udupi	0.988	0.012	104	104	1.2	0.965	1.000
Uttara Kannada	0.980	0.010	166	172	1.0	0.962	0.999

Sampling errors, Karnataka, 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 12-35 months)							
Bagalkot	0.643	0.034	220	226	5.3	0.577	0.709
Bangalore Rural	0.896	0.026	161	161	2.9	0.844	0.947
Bangalore Urban	0.957	0.016	158	160	1.7	0.926	0.989
Belgaum	0.639	0.035	238	251	5.5	0.571	0.707
Bellary	0.794	0.029	220	223	3.7	0.737	0.851
Bidar	0.697	0.031	252	257	4.4	0.636	0.758
Bijapur	0.681	0.036	183	191	5.3	0.610	0.752
Chamarajnagar	0.850	0.032	144	140	3.8	0.788	0.913
Chikamagalur	0.902	0.029	115	110	3.2	0.845	0.959
Chitradurg	0.836	0.030	164	168	3.6	0.778	0.895
Dakhina Kannada	0.957	0.018	130	136	1.9	0.922	0.992
Davanegere	0.895	0.023	192	196	2.6	0.849	0.940
Dharwad	0.787	0.029	220	224	3.7	0.729	0.844
Gadag	0.785	0.029	204	209	3.7	0.727	0.843
Gulbarga	0.570	0.033	265	259	5.8	0.506	0.634
Hassan	0.924	0.025	114	118	2.7	0.876	0.973
Haveri	0.778	0.031	197	197	4.0	0.717	0.838
Kodagu	0.967	0.015	152	154	1.6	0.938	0.997
Kolar	0.943	0.017	187	190	1.8	0.909	0.978
Koppal	0.589	0.033	258	267	5.6	0.523	0.655
Mandya	0.889	0.029	140	146	3.3	0.831	0.946
Mysore	0.965	0.013	170	168	1.3	0.939	0.991
Raichur	0.511	0.036	267	269	7.0	0.442	0.581
Shimoga	0.949	0.017	169	172	1.8	0.915	0.983
Tumkur	0.914	0.022	152	149	2.4	0.870	0.957
Udupi	0.974	0.018	104	105	1.8	0.938	1.000
Uttara Kannada	0.969	0.014	166	172	1.4	0.943	0.996

Sampling errors, Karnataka, 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)							
Bagalkot	0.350	0.028	328	340	8.0	0.296	0.404
Bangalore Rural	0.215	0.028	233	231	13.0	0.159	0.270
Bangalore Urban	0.122	0.023	222	222	18.9	0.077	0.166
Belgaum	0.329	0.029	337	343	8.8	0.272	0.386
Bellary	0.417	0.028	359	369	6.7	0.363	0.471
Bidar	0.455	0.027	410	423	5.9	0.402	0.508
Bijapur	0.416	0.029	330	337	7.0	0.360	0.473
Chamarajnagar	0.218	0.028	225	220	12.8	0.162	0.273
Chikamagalur	0.175	0.028	207	206	16.0	0.120	0.231
Chitradurg	0.263	0.028	278	285	10.6	0.208	0.318
Dakhina Kannada	0.277	0.034	202	209	12.3	0.211	0.343
Davanegere	0.240	0.026	300	305	10.8	0.190	0.291
Dharwad	0.338	0.027	340	345	8.0	0.286	0.390
Gadag	0.312	0.027	337	343	8.7	0.260	0.364
Gulbarga	0.511	0.027	410	406	5.3	0.459	0.563
Hassan	0.120	0.024	205	202	20.0	0.073	0.168
Haveri	0.334	0.028	308	310	8.4	0.279	0.390
Kodagu	0.199	0.028	237	239	14.1	0.145	0.253
Kolar	0.259	0.027	296	300	10.4	0.206	0.311
Koppal	0.506	0.026	430	436	5.1	0.454	0.558
Mandya	0.147	0.024	231	239	16.3	0.100	0.194
Mysore	0.198	0.025	276	275	12.6	0.150	0.247
Raichur	0.487	0.027	450	457	5.5	0.434	0.540
Shimoga	0.257	0.030	265	276	11.7	0.198	0.317
Tumkur	0.216	0.025	265	257	11.6	0.166	0.265
Udupi	0.186	0.036	150	151	19.4	0.115	0.257
Uttara Kannada	0.265	0.028	270	277	10.6	0.210	0.320

APPENDIX B

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Appendix – C

Insert bilingual questionnaire
Households, Women, Husbands and Village

NOTES