

DLHS -2

# Orissa

## Reproductive and Child Health

District Level Household Survey 2002-04



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



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



TNS India Private Limited  
New Delhi – 110 016

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 As a first step, family planning target has been withdrawn and an effort is being made to provide a package of reproductive services at different levels of health care centres.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

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

The DLHS-RCH could not have been successfully completed without cooperation and support from innumerable sources at various stages of the project. Although, it is not possible to acknowledge everyone involved in the survey, several organizations and individuals deserve special mention.

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We would be failing in our duty if we do not thank our respondents who spent their valuable time with tremendous patience.

Dr U V Somayajulu  
Vice President & Head, Social Research

New Delhi

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**KEY INDICATORS, ORISSA**

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

<b>Sample size</b>			
Households surveyed .....	31,909	Adequate Iron folic acid tablets/syrup <sup>3</sup> .....	24.3
Currently married women age 15-44 .....	24,972	Full antenatal check-up <sup>4</sup> .....	15.7
Husband's of eligible women .....	19,339	<b>Delivery characteristics<sup>2</sup></b>	
<b>Characteristics of households</b>		Delivery at home .....	64.4
Percent rural .....	71.0	Delivery at government health institutions .....	25.6
Percent Hindu .....	95.5	Delivery at private health institutions .....	8.7
Percent Muslim .....	2.3	Delivery attendant by skilled persons <sup>5</sup> .....	43.5
Percent other religion (Christian) .....	1.9	<b>Child health</b>	
Percent scheduled caste .....	18.3	Percent of children whose mother squeezed out milk from her breast <sup>6</sup> .....	48.1
Percent scheduled tribe .....	21.3	Percent of children <sup>7</sup> with diarrhoea <sup>8</sup> who received ORS .....	48.4
Percent with electricity .....	47.3	Percent of children <sup>7</sup> with pneumonia <sup>8</sup> who were taken to a health facility or provider .....	68.8
Percent with flush toilet .....	6.5	<b>Percent of children who received vaccinations<sup>9</sup></b>	
Percent with no toilet facility .....	74.4	BCG .....	90.4
Percent living in <i>Kachcha</i> houses .....	58.2	DPT (3 injections) .....	70.0
Percent living in <i>Pucca</i> houses .....	23.1	Polio (3 drops) .....	68.6
Percent with low standard of living .....	62.4	Measles .....	67.8
Percent with high standard of living .....	14.7	All vaccinations <sup>10</sup> .....	53.6
Percent with iodized salt (15+ppm) .....	36.6	No vaccination at all. ....	5.5
<b>Characteristics of currently married women age 15-44 years</b>		<b>Percentage of women who had</b>	
Percent below age 30 .....	49.0	Pregnancy complication <sup>2</sup> .....	41.6
Percent with age at first cohabitation below age 18 .....	53.3	Delivery complication <sup>2</sup> .....	44.0
Percent illiterate .....	48.6	Post delivery complication <sup>2</sup> .....	42.0
Percent having 10 or more years of schooling .....	14.9	Symptoms of RTI/STI .....	32.3
Percent with illiterate husband .....	28.9	Problems of vaginal discharge .....	8.2
Percent with husband 10+ years of schooling .....	24.3	Menstruation related problem .....	18.4
<b>Marriage</b>		<b>Awareness of RTI/STI and HIV/AIDS</b>	
Mean age at marriage for boys .....	25.4	Percent of women who have heard of RTI/STI .....	48.0
Mean age marriage for girls .....	20.5	Percent of women who have heard of HIV/AIDS .....	57.9
Percent of boys married below age 21 .....	14.7	<b>Utilization of government health services</b>	
Percent of girls married below age 18 .....	23.1	Antenatal care .....	44.7
<b>Fertility</b>		Treatment for pregnancy complication .....	56.8
Mean children ever born women age 40-44 years .....	3.9	Treatment for post-delivery complication .....	53.3
Percent of births of order 3 and above <sup>1</sup> .....	42.1	Treatment for vaginal discharge .....	37.1
<b>Current use of family planning method</b>		Treatment for children with diarrhoea .....	50.2
Any method .....	54.7	Treatment for children with pneumonia .....	41.4
Any modern method .....	41.9	<b>Quality of family planning services</b>	
Pill .....	8.4	Percent non-users ever advised to adopt the family planning method .....	13.9
IUD .....	0.9	Percent users told about side effects of method .....	25.5
Condom .....	2.7	Percent users who received follow-up services .....	45.6
Female sterilization .....	28.9	<b>Characteristics of husband of eligible women</b>	
Male sterilization .....	0.5	Percent of husband knowing NSV .....	31.9
Any traditional method .....	12.8	Percent of men who have heard of RTI/STI .....	62.8
Rhythm/safe period .....	4.9	Percent of men who have heard of HIV/AIDS .....	74.1
Withdrawal .....	6.4	Percentage who had any symptoms of RTI/STI .....	8.7
<b>Unmet need for family planning</b>		Sought treatment for RTI/STI .....	36.7
Percent with unmet need for spacing .....	6.0		
Percent with unmet need for limiting .....	13.1		
Percent with total unmet need .....	19.1		
<b>Maternal care<sup>2</sup></b>			
Percent of women received antenatal check-ups .....	75.9		
Antenatal check-up at home .....	7.7		
Antenatal check-up in first trimester .....	38.7		
Three or more visit for ANC .....	47.3		
Two or more tetanus toxoid injections .....	76.6		

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

## SALIENT FINDINGS

For the assessment of district level Reproductive and Child Health indicators, Government of India proposed to undertake district level household surveys through non-governmental agencies on an annual basis. The District Level Household Survey (DLHS) was the result of government's initiative. In Orissa, TNS, India was entrusted the work of carrying out of the survey. The survey for Phase-1 of the DLHS covering 15 districts of the state was conducted during May 2002 to September 2002. The survey for Phase-2 covering the remaining districts of the state was carried out during Feb 2004 to June 2004. The focus of the survey was on: i) Coverage on ante natal care (ANC) and immunization services, ii) Extent of safe deliveries, iii) Contraceptive prevalence rate and unmet need for family planning, iv) Awareness about RTI/STI and HIV/AIDS and v) Utilization of government health services and users' satisfaction. The salient findings of the survey are presented here.

For both the phases together, the data was collected from 31,909 households in Orissa. From these households, 24,972 eligible women (usual resident or visitors who stayed in the sample household the night before the interview, currently married aged 15-44 years whose marriage was consummated) and 19,339 husbands of eligible women were interviewed.

Of the total households interviewed in Orissa, nearly 36 percent were from urban areas. There were 77 percent Hindu households, 21 percent Muslim and two percent came under other category in the sample. Twenty-eight percent of the households belonged to either scheduled castes or scheduled tribes. Fifty-two percent of the households lived in *Kachcha* and about 20 percent are in *Semi-pacca* and 28 percent are in *pucca* houses. Majority of the households belonged to low economic status (52 percent in low SLI)

More than half of the population aged seven and above is literate. Percent literate among females is 75 where as it is 63 percent for male. Proportion of non-literate is much higher among the older cohort compared to the younger ones. Nearly 50 percent of eligible women in the state are non-literate, and 15 percent have completed 10 or more years of schooling. In Orissa the level of literacy among the eligible women and their husbands are low. As regards distribution of non-literate women, lesser proportion of younger women's below age 30 are illiterate compared to older women age 30 and above, but in case of non-literate husbands across age is more or less uniform, though it is marginally more for husbands below 30 years.

The reporting of the marriages during three years prior to survey gives the mean age at marriage among the boys and girls in the state as 24.7 and 18.5 years respectively. Twenty-four percent of boys and 46 percent of girls in the state got married before attaining the minimum legal age at marriage of 21 and 18 years respectively. In all the districts, except Balangir, Kandhamal, Koraput, Malkangiri and Nabarangapur less than

one-fourth of boys got married below the legal minimum age at marriage. Regarding age at marriage of girls except Bhadrak, Cuttack, Jagatsinghapur, Jajapur, Jharsuguda, Kendrapara, Khordha, Puri and Sambalpur, in all the districts more than one-fifth of the girls got married below the legal minimum age at marriage.

About half of the households (37 percent) use cooking salt that is iodized at the recommended level of 15 parts per million or higher level of iodine content whereas nearly one-third of households used salts that are not iodized at all. Lowest proportion of households (4 percent) in Kendrapara is using non-iodized salt whereas in Ganjam the highest proportion of households (66 percent) used non-iodized salt. While more than one-fourth of households except in districts Gajapati, Ganjam, Malkangiri, Nayagarh and Sonapur consume adequately iodized salt, only 11 percent of households in Malkangiri do so.

On an average, women on the verge of completion of reproductive period have given birth to 3.9 children. The completed fertility in the states varies from the lowest of 3.5 children ever born per women in a Anugul to the highest of 4.5 children in Bhadrak, Gajapati, and Jajapur districts.

The share of births of order 3 and above in the total births that occurred three years prior to survey is 42 percent. In most of the district, proportion of higher order births is quite high, ranging from the lowest of around 26 percent in Dhenkanal, to the highest of about 52 percent in Malkangiri.

The data collected on the utilization of ANC services for the women who had their last live/ still birth during three years prior to survey shows that the ANC coverage in the state is high as 76 percent of the women received at least one ante-natal care during pregnancy. About eight percent of the women during their pregnancy were visited by health worker at their residence for providing ANC. Fourteen percent of the women visited private health facilities and 45 percent received ANC from government health facilities. The percent of women who got some kind of ANC during pregnancy range between 54 percent in Malkangiri to 88 percent in Balangir and Bargarh. In 16 districts out of 30, 75 percent or more women got some antenatal care.

Though 76 percent of the women in Orissa received ANC, only 52, 53 and 64 percent women had check-up of weight, blood pressure and abdomen respectively. Seventy seven percent women received Iron and Folic Acid (IFA) tablets and 85 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 16 percent of women.

Minimum three ANC and timing of first check up is crucial for maternal and childcare. In Orissa nearly 39 percent of women got ANC in the first trimester and nearly 47 percent had minimum three antenatal check-ups. Coverage of ANC in first trimester varies from minimum of 21 percent in Malkangiri to the maximum of 57 percent in

Sambalpur. In Malkangiri, only 25 percent of women had minimum three ANC whereas in Sambalpur more than 66 percent women had got minimum three ANC.

Nearly 34 percent of the total deliveries in Orissa were conducted in the health institutions; 11 percentages point up from RCH Round I. The majority of the institutional deliveries were conducted in government institutions (25 percent of total deliveries) as against in private institutions (9 percent of total deliveries). Fourteen 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, 44 percent of the deliveries, slightly up from RCH Round I (33 percent), in the state were assisted by skilled personnel. The extent of institutional deliveries varies from the highest of 62 percent in Jagatsinghapur to the lowest of 11 percent in Malkangiri. 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 woman's education and economic status, though the variation in the institutional deliveries by woman's education is much conspicuous than that by woman's economic status.

In Orissa, 42, 44 and 42 percent of the women experienced pregnancy, delivery and post delivery complications respectively. About 43 percent of the women sought treatment for the pregnancy and 42 percent for the post-delivery complications. The proportion who had pregnancy complication varies from the lowest of 26 percent in Ganjam to the highest of 57 percent in Baleshwar. The incidence of all the three types of complications seems to be linked with each other. In the districts where the incidence of pregnancy complications is high, the incidence of delivery and post-delivery complications is also high.

In most of the districts and the state as a whole, the practice of breast-feeding is almost universal. However, the practice of initiation of breastfeeding within two hours of birth of the child is not common. In Orissa, only 45 percent women started breastfeeding the child within two hours of birth and nearly 35 percent started after one day of birth. There is great deal of variation in the pattern of breastfeeding across the districts. In Sambalpur district only twenty-six percent of the women breastfed the child within two hours of birth. In Gajapati and Puri district, the percentage is highest (57 and 61 percent respectively).

In Orissa 90, 70, 69 and 68 percent of the children received the BCG vaccine, three doses of DPT, Polio and measles vaccine respectively. There is 22 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 54 percent of the children, whereas 6 percent of the children did not receive a single vaccination under routine programme. About 53 percent of the children received supplementation of at least one dose of vitamin A and only 6 percent children received IFA tablets/liquid for iron supplementation.



The coverage of full immunization consisting of BCG, three injections of DPT, three doses of Polio and measles is the lowest in Koraput (31 percent) and highest in Cuttack (83 percent). In 6 districts (Baleshwar, Bargarh, Baudh, Cuttack, Jharsuguda and Puri) more than two-third of the children received complete immunization.

In Orissa, 74 percent of the women were aware of diarrhoea management and 49 percent were aware of Oral Rehydration Salt (ORS). During the two-week period prior to survey, children of 15 percent of the women had diarrhoea. And 48 percent women gave ORS to the children with diarrhoea. In comparison to awareness about diarrhoea management, the awareness about danger signs of pneumonia is quite low. Only 12 percent of the women reported awareness about danger signs of pneumonia. Twenty-six percent of the women reported that their children suffered from cough, cold and difficulty in breathing in two-week period prior to survey and 69 percent sought treatment.

The knowledge of family planning methods is universal in all districts of Orissa, with over 99 percent women reporting knowledge of one method or the other. However, the knowledge of any spacing method is marginally low, but the proportion *per se* is quite high (88 percent). The knowledge of any modern methods is also universal in all the districts, though the knowledge of all modern methods is only 46 percent. The proportion knowing all modern methods (males and females' sterilization, IUD, oral pills and condom) varies from about 17 percent in Malkangiri to 76 percent in Khordha.

In DLHS, knowledge about No-scalpel vasectomy has been asked to husbands of eligible women. About one-third of the husbands were aware of no-scalpel vasectomy in the state. The proportion of husbands knowing No-scalpel vasectomy varies from about 15 percent in Gajapati to 61 percent in Cuttack.

The contraceptive prevalence rate (any methods) in the state is 55 percent, 6 percentage point up from RCH Round I, comprising of prevalence of about 42 percent of modern methods and 13 percent of traditional methods. Twenty-nine percent of the couples adopted sterilization. The use of the two male methods - sterilization and condom is only 3 percent. There has been positive association between contraceptive use and female education, economic development and availability of health facility. The highest contraceptive prevalence is in Cuttack (75 percent) followed by Dhenkanal (71 percent) and lowest is in Rayagada (44 percent).

In Orissa, a total of 19 percent of women are found to have unmet need for family planning, with 13 percent for limiting and 6 percent for spacing. There are no inter-district differences in the pattern of unmet need. The total unmet need varies from 9 percent in Cuttack to 26 percent in Mayurbhanj and Ganjam followed by Anugul (25 percent).

Only 6 percent of the women in the state reported that either ANM/LHV or health worker visited them at their residence at least once in the past three months. Less than two-third of women who were visited by ANM felt that ANM had given them sufficient time to discuss health-related matters.

In nearly 60 percent of the districts, less than 5 percent of the women reported the visit of ANM/LHV to their residence. In the 11 districts (Baleshwar, Bhadrak, Ganjam, Jharsuguda, Kendujhar, Koraput, Malkangiri, Mayurbhanj, Nuapada, Sonapur and Sundargarh) 5-10 percent of the women reported visits of ANM/LHV and in the remaining more than 10 percent of the women reported visit of ANM/LHV.

It has been observed that in three months period prior to survey, 54 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 27 percent of the women who did not visit the government health facility reported government health facility “non-conveniently located” or “time is not suited” as reason.

The district level variation in the utilization of the government health facilities ranges from 46 percent in Khordha to 79 percent in Kandhamal. Two fifth of the women visited private health facilities (42 percent) and this proportion ranges from 18 percent in Kandhamal and Malkangiri, to 50 and more in Ganjam, Jharsuguda and Khordha.

In Orissa 48 and 58 percent of women are aware of RTI/STI and HIV/AIDS respectively. The corresponding level of awareness among husbands of eligible women is 63 and 74 percent respectively. The percent of women who are aware of RTI/STI and HIV/AIDS is lowest in Gajapati (12 percent) and highest in Cuttack (90 percent). Similarly awareness level of husbands of eligible women of RTI/STI and HIV/AIDS is lowest in Malkangiri (26 percent) and highest in Cuttack (83 percent). Out of 30, in 19 districts the awareness of HIV/AIDS is below state figure for women and in 16 districts for husbands of eligible women.

About 32 percent of women and 9 percent of husbands of eligible women in the state reported having at least one symptom 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 Sambalpur (16 percent) for women and in Gajapati (2 percent) for husbands and highest in Jajapur (50 percent) for women and in Jajapur (24 percent) for husbands. About 8 percent of women reported vaginal discharge with lowest proportion recorded in Nuapada (1 percent) and highest in Baleshwar (23 Percent). Twenty-eight percent of women sought treatment for vaginal discharge problem and 37 percent of husbands sought treatment with at least one symptom of RTI/STI. It may be noted that in 4 out of 30 districts higher proportion of women compared to husbands sought treatment for their reproductive health problems.

# CHAPTER I

## INTRODUCTION

### 1.1 Background and Objectives of the Survey

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

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

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

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

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

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

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

## **1.2 Survey Design**

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

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

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

## **1.3 House Listing and Sample Selection**

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

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

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

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

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

#### 1.4 Questionnaire

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

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

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

The Details of questionnaires are as follows:

**Household Questionnaire:** The household questionnaire lists all usual residents in each sample household including visitors who stayed in the household the night before the interview. For each listed household member, the survey collected

basic information on age, sex, and marital status, relationship to the head of the household, education and the prevalence /incidence of tuberculosis, blindness and malaria. Information was also collected on the main source of drinking water, type of toilet facility, source of lighting, type of cooking fuel, religion and caste of household head and ownership of other durable goods in the household. In addition, a test was conducted to assess whether the household used cooking salt that has been fortified with iodine. Besides, details of marriages and deaths which happen to usual residents within reference period were collected. Efforts were also made to get information about maternal deaths.

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

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

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

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

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

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

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

Source of knowledge, aware of mode of transmission and prevention etc were canvassed.

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

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

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

## **1.5 Fieldwork and Sample Coverage**

The fieldwork for RCH Round II was done in two phases. During Phase I, 15 districts were covered from May 2002 to September 2002 and remaining 15 districts were covered during Phase II from February 2004 to June 2004.

During Round II, a total of 31,909 thousand households were covered. From these surveyed households, 24,972 currently married women (aged 15-44 years) and 19,339 husbands of eligible women were interviewed.

## **1.6 Data processing**

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

## **1.7 Sample Weights**

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

$$\begin{aligned} f_1^i &= \text{Probability of selection of } i^{\text{th}} \text{ PSU in a district} \\ &= \frac{(n_r * H_i)}{H} \end{aligned}$$

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

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

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

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

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

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

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

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

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

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

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

The non-normalized household weight for the  $i^{\text{th}}$  PSU of the district is,  $w^i = \frac{1}{f^i}$ ,

while the normalized weight used in the generation of district indicators as



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

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

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

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

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

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

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

## 1.8 Sample Implementation

Table 1.1 shows the period of fieldwork, number of households interviewed and household's response rates. A total of 31,909 households are interviewed, about two-thirds were rural. The overall household response rate – the number of households interviewed per 100 occupied households – was 99 percent. The household response rate was more than 98 percent in every district.

<b>Table 1.1 NUMBER OF HOUSEHOLDS INTERVIEWED</b>						
Month and year of fieldwork and number of households interviewed by district, Orissa, 2002-04						
State/District	Month and year of field work		Number of households interviewed			Response rate
	From	To	Total	Rural	Urban	
<b>State</b>	-	-	31,909	22,669	9,240	99.4
<b>State-phase I</b>	05/2002	09/2002	-	-	-	-
<b>State-phase II</b>	02/2004	06/2004	-	-	-	-
Anugul	05/2002	06/2002	1,039	768	271	98.9
Bargarh	06/2002	09/2002	1,049	756	293	99.6
Bhadrak	05/2002	06/2002	1,079	758	321	99.2
Ganjam	06/2002	09/2002	1,072	749	323	99.2
Jajapur	05/2002	06/2002	1,047	738	309	99.1
Kandhamal	06/2002	09/2002	1,062	742	320	99.3
Kendujhar	05/2002	06/2002	1,077	769	308	99.1
Khordha	07/2002	09/2002	1,063	741	322	98.9
Malkangiri	07/2002	09/2002	1,062	979	83	100.0
Mayurbhanj	05/2002	08/2002	1,075	761	314	98.6
Nuapada	06/2002	08/2002	1,075	771	304	99.8
Rayagada	07/2002	09/2002	1,070	748	322	98.9
Sambalpur	06/2002	09/2002	1,066	753	313	99.1
Sonapur	06/2002	09/2002	1,093	762	331	99.9
Sundargarh	06/2002	07/2002	1,059	696	363	99.8
Balangir	02/2004	04/2004	1,055	731	324	99.6
Baleshwar	02/2004	02/2004	1,068	759	309	99.0
Baudh	02/2004	03/2004	1,056	736	320	99.2
Cuttack	02/2004	02/2004	1,077	757	320	99.5
Debagarh	02/2004	03/2004	1,075	751	324	100.0
Dhenkanal	02/2004	02/2004	1,090	765	325	99.9
Gajapati	04/2004	06/2004	1,036	725	311	99.7
Jagatsinghapur	04/2004	06/2004	1,037	768	269	99.4
Jharsuguda	02/2004	03/2004	1,051	692	359	99.4
Kalahandi	03/2004	04/2004	1,060	748	312	99.6
Kendrapara	02/2004	02/2004	1,087	760	327	99.5
Koraput	05/2004	06/2004	1,048	733	315	99.9
Nabarangapur	04/2004	06/2004	1,064	749	315	99.6
Nayagarh	03/2004	04/2004	1,062	752	310	99.8
Puri	05/2004	06/2004	1,055	752	303	99.5

Note: Table based on unweighted cases

In the interviewed households, interviews were completed with 24,972 currently married women who are the usual member of the household or stayed night before the household interview and 19,339 husbands of eligible women were also interviewed (Table 1.2). The number of completed interviews per 100 identified eligible women and husbands in the households with completed interviews were 89 and 77 percent respectively. The variation in the women's response rate by district was highest in Malkangiri (92 percent) and lowest in Gajapati (81 percent), similarly husband's response rate was found to be highest in Sonapur (86 percent) and lowest in Puri (68 percent).

<b>Table 1.2 NUMBER OF WOMEN AND HUSBANDS INTERVIEWED</b>								
Number of women and husbands interviewed by district, Orissa, 2002-04								
State/District	Number of women interviewed			Response rate	Number of husbands interviewed			Response rate
	Total	Rural	Urban		Total	Rural	Urban	
State	24,972	17,761	7,211	89.2	19,339	13,934	5,405	77.1
Anugul	852	627	225	89.4	675	502	173	79.3
Bargarh	868	619	249	90.9	688	527	161	79.1
Bhadrak	936	677	259	89.2	642	465	177	75.1
Ganjam	858	602	256	82.3	573	367	206	73.1
Jajapur	875	624	251	89.1	613	468	145	76.3
Kandhamal	772	522	250	87.8	634	440	194	83.8
Kendujhar	787	574	213	87.1	637	485	152	78.1
Khordha	868	616	252	89.0	648	489	159	79.0
Malkangiri	856	784	72	92.2	740	683	57	85.1
Mayurbhanj	811	588	223	87.1	696	499	197	83.3
Nuapada	828	610	218	89.8	709	554	155	85.0
Rayagada	746	498	248	86.3	609	443	166	81.2
Sambalpur	802	531	271	91.8	605	446	159	77.1
Sonapur	843	586	257	92.0	728	524	204	85.8
Sundargarh	771	492	279	89.8	608	404	204	78.7
Balangir	791	532	259	90.7	624	405	219	74.5
Baleshwar	972	699	273	90.8	706	506	200	74.4
Baudh	767	524	243	89.7	649	451	198	78.7
Cuttack	863	603	260	90.4	667	456	211	75.0
Debagarh	842	596	246	91.8	678	466	212	77.8
Dhenkanal	867	616	251	91.5	632	444	188	72.7
Gajapati	740	527	213	81.3	586	406	180	71.5
Jagatsinghapur	803	606	197	91.9	582	434	148	77.7
Jharsuguda	781	530	251	90.6	597	412	185	72.9
Kalahandi	821	565	256	92.1	658	450	208	77.9
Kendrapara	888	634	254	89.5	581	385	196	69.7
Koraput	799	548	251	86.9	661	449	212	74.6
Nabarangapur	842	583	259	89.8	687	458	229	77.5
Nayagarh	854	596	258	91.0	600	425	175	72.0
Puri	869	652	217	85.6	626	491	135	68.3

Note: Table based on unweighted cases

## 1.9 Basic Demographic Profile of the State

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

The state of Orissa, located in the eastern part of the country with 37 million populations in 2001, is the eleventh largest state in India in terms of population. It is bounded by Jharkhand in the north Chhattisgarh in the west, Andhra Pradesh in the south, West Bengal in the north-east and Bay of Bengal in the south-east. The state is consisted of 30 districts, 397 sub-districts, 314 CD Blocks and 51,349 villages. The urban areas of the state comprise 397 towns during 2001. Bhubaneshwar is the capital of the state.

According to 2001 census the population of Orissa is 36.8 million out of which 18.6 millions are males and 18.1 millions are females. The rural and urban breakup of the population shows that 85.0 percent of the population was enumerated in rural areas and 15.0 percent in urban areas. Keeping pace with the national average, Orissa has recorded a sharp decline in the decadal growth rate from 20.1 per cent in 1981-91 to 15.9 percent during 1991-2001. Among the districts, Khordha with 24.8 percent has the highest

decadal growth rate whereas Balangiri with 8.5 percent has the lowest decadal growth rate of total population during 1991-2001.

Percentage of both Scheduled Caste and Scheduled Tribe population have experienced a marginal decline during 1991-2001 and the proportion of scheduled tribe population and marginal increase in schedule caste in total population of 2001 are 16.5 percent and 22.1 percent respectively. Highest proportion of Scheduled Caste population has been recorded in Sonapur district (23.6 per cent) and that of Scheduled Tribe in Mayurbhanj and Malkangiri (5.7 per cent each) and Mayurbhanj and Gajapati (8.1 percent) has the lowest proportion of scheduled caste and Kendrapara and Jagatisinghapur (1 percent) have the lowest proportion of scheduled tribe followed by Puri (less than 1 percent). With a population density of 236 per sq. km., Orissa ranks 22<sup>nd</sup> among the states and union territories in India and this figure is lesser than the all India density of 325 persons per square km. Among the districts, Khordha has the highest density (666 person/sq. km.) and Kandhamal has the lowest (81 person/sq. km).

The sex ratio of the total population in the state has slightly improved since 1991 Census from 971 to 972 per 1000 males. Rayagada has recorded the highest sex ratio (1028) and Khordha has the lowest (902) within the state.

The literacy rate in the state has improved from 49.1 percent in 1991 to 63.1 percent in 2001 and it is slightly lower than the national average of 64.8 percent. The literacy rate in urban (19.78 percent) is considerably lower in the state than that in rural areas (80.2 percent). Among the districts, Jagatisinghapur has the highest literacy rate of 69.3 percent. Wabarangapur has the lowest literacy rate of 20.7 percent. The male literacy for the state is 63.1 percent and the female literacy rate is 75.3 percent. Both the rates have increased from 1991 census to 2001 census.

<b>Table 1.3 BASIC DEMOGRAPHIC INDICATOR</b>							
Basic demographic indicator of India, state and districts, Census 2001							
India/state/district	Population (in thousand)	Percentage urban	Percentage decadal growth rate <sup>1</sup>	Sex ratio <sup>2</sup>	Percentage literate 7+		
					Male	Female	Persons
<b>India</b>	1,028,737	27.82	21.34	933	75.30	53.70	64.80
<b>State</b>	36,805	14.99	15.94	972	75.30	50.50	63.10
Bargarh	1,346	7.65	11.47	976	77.41	50.26	63.99
Jharsuguda	510	36.47	15.12	946	82.16	58.48	70.65
Sambalpur	936	27.14	14.17	969	78.99	55.16	67.25
Debagarh	274	7.30	17.02	980	73.33	47.18	60.36
Sundargarh	1,831	34.41	16.26	957	75.34	53.88	64.84
Kendujhar	1,562	13.64	16.79	977	71.99	46.22	59.24
Mayurbhanj	2,223	6.97	17.89	980	65.76	37.84	51.91
Baleshwar	2,025	10.91	19.24	953	81.69	58.90	70.56
Bhadrak	1,334	10.57	20.47	974	84.65	62.85	73.86
Kendrapara	1,302	5.68	13.25	1,014	87.11	66.76	76.81
Jagatsinghapur	1,058	9.92	13.15	963	88.55	69.28	79.08
Cuttack	2,341	27.38	14.00	938	85.82	66.90	76.66
Jajapur	1,624	4.50	17.08	972	81.89	60.76	71.44
Dhenkanal	1,067	8.72	12.46	961	80.57	57.89	69.42
Anugul	1,140	13.86	18.55	941	81.43	55.37	68.79
Nayagarh	865	4.39	10.39	938	82.66	57.64	70.52
Khordha	1,877	42.89	24.79	902	87.90	70.36	79.59
Puri	1,503	13.57	14.80	968	88.08	67.57	77.96
Ganjam	3,161	17.62	16.01	998	75.22	46.44	60.77
Gajapati	519	10.21	14.02	1,031	54.71	28.42	41.26
Kandhamal	648	6.79	18.60	1,008	69.79	35.86	52.68
Baudh	373	4.83	17.45	984	76.23	39.02	57.73
Sonapur	542	7.38	13.39	966	78.94	46.17	62.84
Balangir	1,337	11.52	8.52	984	71.67	39.51	55.70
Nuapada	531	5.65	13.00	1,007	58.46	25.79	42.00
Kalahandi	1,335	7.49	17.99	1,001	62.66	29.28	45.94
Rayagada	833	13.84	19.27	1,028	48.18	24.56	36.15
Nabarangapur	1,026	5.85	20.26	991	47.04	20.67	33.93
Koraput	1,181	16.85	14.41	999	47.20	24.26	35.72
Malkangiri	504	6.75	13.71	997	40.14	20.91	30.53

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

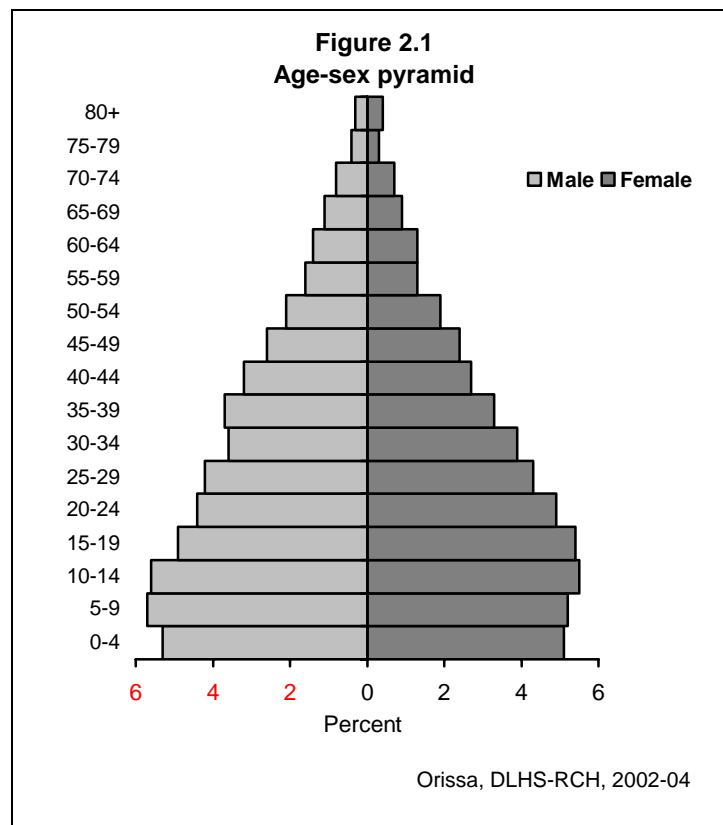
## CHAPTER II

### BACKGROUND CHARACTERISTICS OF HOUSEHOLD

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

#### 2.1 Age –Sex Structure

The age-sex distribution of sampled household population classified by residence is presented in Table 2.1. The percent distribution is based on sampled *de facto* population of 1,58,584 persons of whom 71 percent lived in the rural areas of Orissa. The state of Orissa depicts a young and growing population with 32 percent below the age of 15 years (Figure 2.1). There are more children below 15 years recorded in rural areas (34 percent) compared to those in urban areas (29 percent).



The overall sex ratio of 98 males per 100 females is recorded for the *de facto* population. The sex ratio is more skewed, 103 in favour of males in urban areas compared to 96 in rural areas.

<b>Table 2.1 HOUSEHOLD POPULATION BY AGE AND SEX</b>									
Percent distribution of the household population by age and by residence and sex, Orissa, 2002-04									
Age	Total			Rural			Urban		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
< 1	2.2	2.3	2.0	2.3	2.5	2.2	1.8	2.0	1.7
1-4	8.5	8.5	8.4	9.0	9.1	8.9	7.2	7.0	7.3
5-9	10.8	10.9	10.7	11.4	11.6	11.2	9.4	9.3	9.6
10-14	10.8	10.9	10.7	10.8	10.9	10.7	10.7	10.7	10.8
15-19	10.0	9.2	10.7	9.7	8.9	10.4	10.6	10.0	11.3
20-24	9.1	8.4	9.8	8.7	7.7	9.7	10.1	9.9	10.2
25-29	8.5	8.1	8.8	8.1	7.8	8.5	9.3	9.0	9.5
30-34	7.3	7.2	7.5	7.2	7.0	7.3	7.7	7.6	7.9
35-39	6.7	7.2	6.2	6.3	6.9	5.8	7.5	7.9	7.0
40-44	5.4	5.8	5.1	5.3	5.6	5.0	5.7	6.2	5.2
45-49	4.7	4.7	4.6	4.5	4.6	4.3	5.2	5.0	5.3
50-54	4.1	4.1	4.1	4.0	3.9	4.2	4.2	4.5	3.9
55-59	3.0	3.1	2.9	3.1	3.1	3.0	2.9	3.1	2.6
60-64	3.4	3.5	3.3	3.6	3.7	3.5	2.8	3.0	2.6
65-69	2.0	2.1	1.9	2.2	2.3	2.0	1.7	1.6	1.7
70-74	1.9	2.1	1.7	2.0	2.3	1.7	1.6	1.6	1.7
75-79	0.8	0.9	0.7	0.8	0.9	0.7	0.8	0.7	0.8
80+	0.9	1.0	0.8	0.9	1.1	0.8	0.9	0.9	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	1,58,584	78,442	80,133	1,12,092	54,907	57,176	46,492	23,535	22,957
Sex ratio <sup>1</sup>	98	NA	NA	96	NA	NA	103	NA	NA

Note: Table is based on the *de facto* population, i.e. persons who stayed in the household the night before the interview (including both usual resident and visitors)  
NA: Not applicable  
<sup>1</sup> Male per 100 females

## 2.2 Household Characteristics

The percent distribution of 31,909 households surveyed in the state of Orissa by selected characteristics of the household head and the number of usual household members are shown in Table 2.2. This is based on *de jure*, the usual resident population. More than 90 percent of household heads are male invariant of place of resident while only 8 and 9 percent are female-headed households in rural and urban respectively. Nearly 69 percent of household heads are in the 30-59 years age group. The median age of household heads is 45 years for the state as a whole, while it is 45 years in rural areas and 46 years in urban areas. About 10 percent of household heads are younger than 30 years and 21 percent are at least 60 years old. Majority of the household heads are Hindu (96 percent), only about 2 percent each are Muslim and Christian. Hindus constitute a higher proportion of population in urban areas (97 percent) than in rural areas (92 percent). Only 1 percent of the rural households are Muslim, but 5 percent of urban households.

<b>Table 2.2 HOUSEHOLD CHARACTERISTICS</b>			
Percent distribution of the household head by selected characteristics of the household head and household size, according to residence, Orissa, 2002-04			
Characteristic	Total	Residence	
		Rural	Urban
<b>Sex of the household head</b>			
Male	91.3	91.5	90.8
Female	8.7	8.4	9.2
<b>Age of the household head</b>			
< 30	10.2	11.1	7.9
30-44	39.4	39.0	40.2
45-59	29.7	28.3	33.0
60+	20.8	21.6	18.9
Median age of the household head	45.0	44.8	45.5
<b>Religion of the household head</b>			
Hindu	95.5	97.0	92.0
Muslim	2.3	1.1	5.1
Christian	1.9	1.8	2.2
Sikh	0.1	0.0	0.3
Buddhist	0.0	0.0	0.1
Jain	0.0	0.0	0.0
Zoroastrian	0.0	0.0	0.0
No Religion	0.0	0.0	0.0
Other	0.1	0.0	0.2
<b>Caste/tribe of the household head</b>			
Scheduled caste	18.3	19.7	14.8
Scheduled tribe	21.3	26.1	9.4
Other backward class	35.4	37.1	31.2
Other #	24.5	16.7	43.6
Don't know	0.6	0.4	0.9
<b>Number of usual members</b>			
1	2.4	2.4	2.6
2	7.9	8.7	6.1
3	12.9	12.8	13.3
4	20.1	19.4	21.9
5	20.1	20.1	20.1
6	15.1	15.2	14.8
7	8.9	9.1	8.4
8	5.0	5.0	5.0
9+	7.4	7.3	7.8
Mean household size	5.0	5.0	5.0
Total percent	100.0	100.0	100.0
Number of households	31,909	22,669	9,240
Note: Table is based on the <i>de jure</i> population			
Total includes 29 household heads who are not a usual member of the households			
# Higher caste (Not belonging to a scheduled caste, a scheduled tribe and an other backward class)			

Eighteen percent of the households in Orissa belong to schedule caste, 21 percent to schedule tribe and 35 percent to other backward classes while the remaining 25 percent of the households are headed by other castes not under schedule caste, schedule tribe and other backward classes. About half (47 percent) of the household head belong to schedule caste or tribe in rural areas and it is only 24 percent in urban areas. The overall state average household size is 5 persons and the same household size holds good for rural and urban areas well.

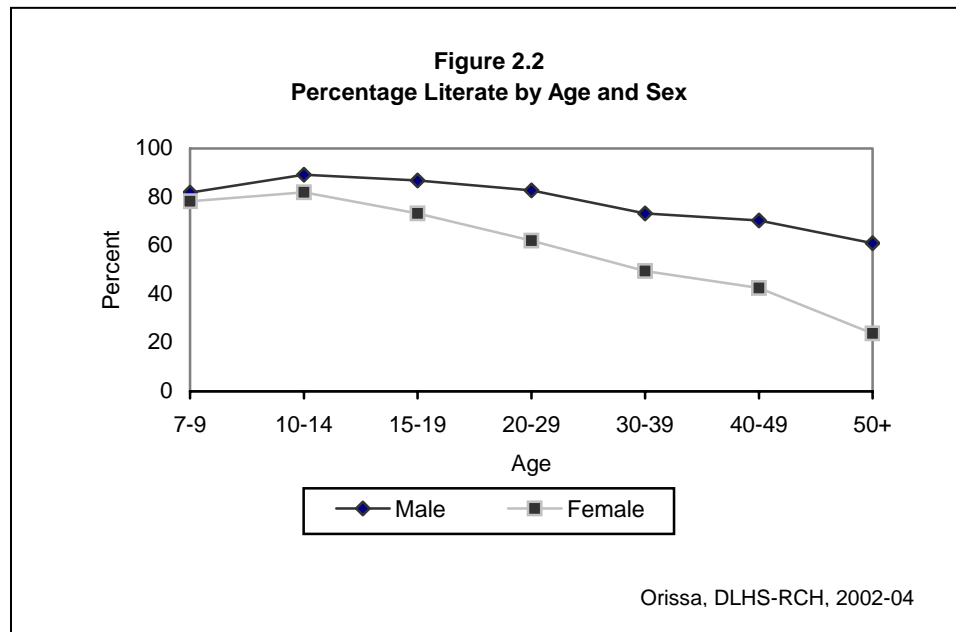


## 2.3 Educational Level

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

<b>Table 2.3 EDUCATIONAL LEVEL OF THE HOUSEHOLD POPULATION</b>									
Percent distribution of household population age 7 and above by literacy level and years of schooling, according to age, residence and sex, Orissa, 2002-04									
Age	Non-literate	Literate but no schooling	Years of schooling				Missing	Total Percent	Number of persons
			1-5	6-8	9-10	11 or more			
<b>TOTAL</b>									
Male									
7-9	17.4	4.3	76.9	0.6	0.0	0.0	0.8	100.0	5,084
10-14	10.6	0.6	40.5	40.3	7.8	0.0	0.2	100.0	8,528
15-19	13.1	0.7	12.2	20.5	45.9	7.5	0.1	100.0	7,227
20-29	17.3	0.7	13.6	13.1	29.5	25.9	0.0	100.0	12,962
30-39	26.8	1.1	17.9	12.3	22.0	19.9	0.0	100.0	11,276
40-49	29.6	1.9	21.8	13.2	17.5	15.9	0.0	100.0	8,240
50+	39.0	5.5	25.3	9.7	10.7	9.9	0.0	100.0	13,166
Total	23.4	2.1	25.8	15.6	19.7	13.2	0.1	100.0	66,483
Female									
7-9	21.2	3.1	74.3	0.8	0.0	0.0	0.6	100.0	5,060
10-14	17.9	0.6	38.3	35.3	7.7	0.0	0.1	100.0	8,609
15-19	26.7	0.5	14.4	16.0	35.8	6.7	0.0	100.0	8,563
20-29	38.0	0.6	12.5	11.2	21.8	15.9	0.0	100.0	14,891
30-39	50.4	0.8	16.0	10.7	12.9	9.0	0.0	100.0	10,942
40-49	57.5	1.2	18.6	10.8	7.1	4.8	0.0	100.0	7,793
50+	76.1	2.2	13.0	4.9	2.4	1.3	0.0	100.0	12,350
Total	43.9	1.2	21.9	12.8	13.5	6.6	0.1	100.0	68,208
Total									
7-9	19.3	3.7	75.6	0.7	0.0	0.0	0.7	100.0	10,144
10-14	14.2	0.6	39.4	37.8	7.8	0.0	0.2	100.0	17,137
15-19	20.5	0.6	13.4	18.1	40.4	7.1	0.1	100.0	15,791
20-29	28.4	0.6	13.0	12.1	25.3	20.6	0.0	100.0	27,855
30-39	38.4	1.0	17.0	11.5	17.5	14.6	0.0	100.0	22,220
40-49	43.2	1.5	20.3	12.0	12.5	10.5	0.0	100.0	16,033
50+	57.0	3.9	19.3	7.4	6.7	5.7	0.0	100.0	25,521
Total	33.8	1.6	23.8	14.2	16.6	9.8	0.1	100.0	134,700
Note: Table is based on <i>de facto</i> population									
									Contd.

Table 2.3 indicates that, 34 percent of the population aged seven and above are non-literate. The proportion of non-literates is 44 percent for females compared to 23 percent for males. The proportion of non-literate is much higher among the older cohorts compared to the younger ones. For both males and females, going by expected trend, the level of literacy is higher in the younger population than in the older age groups with the exception of the youngest age group of 7-9 years (Figure 2.2).



**Table 2.3 EDUCATIONAL LEVEL OF THE HOUSEHOLD POPULATION (Contd..)**  
Percent distribution of household population age 7 and above by literacy level and years of schooling, according to age, residence and sex, Orissa, 2002-04

Age	Non-literate	Literate but no schooling	Years of schooling				Missing	Total Percent	Number of persons
			1-5	6-8	9-10	11 or more			
<b>RURAL</b>									
<b>Male</b>									
7-9	20.2	5.3	73.3	0.5	0.0	0.0	0.8	100.0	3,735
10-14	12.7	0.8	42.3	37.4	6.5	0.0	0.1	100.0	6,009
15-19	15.9	0.5	14.2	22.0	42.2	5.2	0.0	100.0	4,870
20-29	22.1	0.9	15.9	13.9	28.4	18.7	0.0	100.0	8,498
30-39	34.6	1.4	20.3	12.3	19.8	11.6	0.0	100.0	7,625
40-49	37.4	2.2	25.5	13.2	14.5	7.1	0.0	100.0	5,623
50+	45.7	5.9	27.4	9.1	7.8	4.1	0.0	100.0	9,544
Total	28.9	2.5	28.2	15.4	17.3	7.7	0.1	100.0	45,904
<b>Female</b>									
7-9	25.5	3.7	69.6	0.6	0.0	0.0	0.6	100.0	3,760
10-14	21.9	0.7	41.0	30.4	5.9	0.0	0.1	100.0	6,134
15-19	33.1	0.5	15.6	16.8	30.5	3.4	0.0	100.0	5,973
20-29	46.7	0.5	13.8	10.8	19.0	9.1	0.0	100.0	10,362
30-39	61.3	0.8	16.3	9.7	9.1	2.8	0.0	100.0	7,519
40-49	67.0	1.1	18.8	8.7	3.6	0.8	0.0	100.0	5,366
50+	83.2	1.8	11.3	2.7	0.8	0.3	0.0	100.0	9,104
Total	51.7	1.1	22.3	11.3	10.6	3.0	0.1	100.0	48,218
<b>Total</b>									
7-9	22.9	4.5	71.4	0.5	0.0	0.0	0.7	100.0	7,495
10-14	17.4	0.8	41.6	33.9	6.2	0.0	0.1	100.0	12,143
15-19	25.4	0.5	15.0	19.1	35.8	4.2	0.0	100.0	10,844
20-29	35.7	0.6	14.8	12.2	23.2	13.4	0.0	100.0	18,863
30-39	47.9	1.1	18.3	11.0	14.5	7.2	0.0	100.0	15,145
40-49	51.9	1.7	22.2	11.0	9.2	4.0	0.0	100.0	10,988
50+	64.0	3.9	19.5	6.0	4.4	2.2	0.0	100.0	18,653
Total	40.6	1.8	25.2	13.3	13.8	5.3	0.1	100.0	94,132

Contd.

About three-fourths of males as well females in this age group had 1-5 years of schooling. Nearly 26 percent of males have had education for 1-5 years. Females are also not far behind compared to their male counterparts in this category with a corresponding share of 24 percent. Lesser proportion of females are found in higher education of 9-10 years (14 percent) and 11 or more years (7 percent) compared to the males having corresponding figures of 20 percent and 13 percent respectively. Just about two percent of the total population, two percent of males and one percent of females are found to be literate without any formal schooling.

<b>Table 2.3 EDUCATIONAL LEVEL OF THE HOUSEHOLD POPULATION</b> (Contd..)									
Percent distribution of household population age 7 and above by literacy level and years of schooling, according to age, residence and sex, Orissa, 2002-04									
Age	Non-literate	Literate but no schooling	Years of schooling				Missing	Total Percent	Number of persons
			1-5	6-8	9-10	11 or more			
<b>URBAN</b>									
Male									
7-9	9.5	1.6	86.9	0.8	0.0	0.0	1.1	100.0	1,349
10-14	5.3	0.2	36.1	47.1	10.9	0.0	0.4	100.0	2,519
15-19	7.5	1.0	8.1	17.5	53.5	12.2	0.2	100.0	2,357
20-29	8.1	0.3	9.3	11.4	31.5	39.5	0.0	100.0	4,464
30-39	10.6	0.5	12.7	12.3	26.6	37.3	0.0	100.0	3,652
40-49	13.0	1.1	14.0	13.1	24.0	34.9	0.0	100.0	2,617
50+	21.3	4.5	19.6	11.2	18.2	25.2	0.0	100.0	3,621
Total	11.2	1.3	20.5	16.1	25.3	25.4	0.1	100.0	20,579
Female									
7-9	8.6	1.6	87.8	1.3	0.0	0.0	0.7	100.0	1,300
10-14	7.8	0.5	31.8	47.5	12.2	0.0	0.1	100.0	2,474
15-19	11.8	0.5	11.6	14.0	47.8	14.2	0.0	100.0	2,590
20-29	18.0	0.8	9.4	12.3	28.1	31.5	0.0	100.0	4,528
30-39	26.4	1.0	15.5	13.0	21.3	22.7	0.0	100.0	3,423
40-49	36.4	1.3	18.3	15.6	14.8	13.7	0.0	100.0	2,427
50+	56.4	3.3	18.0	11.1	7.0	4.2	0.0	100.0	3,246
Total	25.2	1.3	21.1	16.5	20.6	15.2	0.1	100.0	19,989
Total									
7-9	9.1	1.6	87.3	1.1	0.0	0.0	0.9	100.0	2,649
10-14	6.6	0.3	34.0	47.3	11.6	0.0	0.3	100.0	4,993
15-19	9.7	0.8	9.9	15.7	50.6	13.2	0.1	100.0	4,947
20-29	13.1	0.5	9.3	11.8	29.8	35.5	0.0	100.0	8,992
30-39	18.2	0.8	14.1	12.6	24.0	30.2	0.0	100.0	7,075
40-49	24.2	1.2	16.1	14.3	19.5	24.7	0.0	100.0	5,044
50+	37.9	3.9	18.8	11.2	12.9	15.3	0.0	100.0	6,868
Total	18.1	1.3	20.8	16.3	23.0	20.4	0.1	100.0	40,568

An examination of the educational attainment by place of residence revealed that the urban-rural differential was quite pronounced. In urban areas, only 18 percent of the total population is non-literate in comparison to 40 percent of the rural population. The numbers of non-literate females live in rural areas of Orissa accruing a share as high as 52 percent, while non-literate rural males is 29 percent. Prevalence of illiterate is much less in urban areas with figures of 25 percent and 11 percent non-literate females and males respectively. A contrasting feature of rural-urban difference in educational level is that in rural areas most people had 1-5 years of schooling (25 percent), and those who had more than 10 years of schooling was just 5 percent, whereas in urban areas a significant proportion of people (21 percent) had this level of education.

## 2.4 Marital Status of the Household Population

The DLHS, collected information on the marital status of all household members aged 10 years and above. Table 2.4 shows the percent distribution of household population by marital status distribution of *de facto* household population by age and sex. Twenty-one percent of females in the age group 15-19 years, followed by 87 percent in the age group 25-29 years, and 91 percent in the age group 30-44 years, are currently married. The proportion of never married for both males and female is 35 percent in the state, and it is higher for males (39 percent) than for females (30 percent). The proportion of never married among males declines with increasing age and reaches the lowest by the time they are in the age group 45-59 years. A similar pattern has been observed in the case of females, with the lowest never married proportion for the age group 45-49 years. The proportions of divorced, separated or widowed are negligible and limited to the older ages. Fifty-seven percent of women aged 60 years or above are widowed /divorced /separated. Among the *de facto* population aged 10 years and above, 58 percent of males and 59 percent of females are currently married.

<b>Table 2.4 MARITAL STATUS OF THE HOUSEHOLD POPULATION</b>						
Percent distribution of the household population aged 10 years and above by marital status, according to age and sex, Orissa, 2002-04						
Age	Marital status				Total Percent	Number of persons
	Never married	Currently married	Married, gaunna not performed	Widowed/divorced/ Separated		
Male						
10-14	97.1	2.4	0.3	0.1	100.0	8,528
15-19	96.5	3.1	0.2	0.1	100.0	7,227
20-24	78.6	20.3	0.3	0.8	100.0	6,577
25-29	41.6	57.0	0.2	1.2	100.0	6,385
30-44	4.9	93.5	0.0	1.5	100.0	15,813
45-59	0.7	95.0	0.2	4.1	100.0	9,334
60+	0.7	82.5	0.3	16.5	100.0	7,535
Total	39.1	57.5	0.2	3.3	100.0	61,399
Female						
10-14	96.9	2.1	0.7	0.2	100.0	8,609
15-19	78.5	20.8	0.3	0.4	100.0	8,563
20-24	35.1	63.4	0.0	1.5	100.0	7,862
25-29	9.9	87.4	0.1	2.6	100.0	7,029
30-44	2.3	91.3	0.1	6.4	100.0	15,026
45-59	0.8	80.9	0.3	18.0	100.0	9,292
60+	1.0	41.2	1.1	56.7	100.0	6,768
Total	30.1	58.8	0.3	10.8	100.0	63,147
Total						
10-14	97.0	2.2	0.5	0.1	100.0	17,137
15-19	86.8	12.7	0.2	0.3	100.0	15,791
20-24	54.9	43.8	0.2	1.2	100.0	14,441
25-29	25.0	72.9	0.1	1.9	100.0	13,414
30-44	3.6	92.4	0.0	3.9	100.0	30,840
45-59	0.8	88.0	0.2	11.0	100.0	18,629
60+	0.8	62.9	0.7	35.5	100.0	14,305
Total	34.5	58.1	0.3	7.1	100.0	1,24,556
Note: Table is based on <i>de facto</i> population						

## 2.5 Marriage

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

<b>Table 2.5 MARRIAGE</b>				
Mean age at marriage and percentage of marriages below legal at marriage by sex and by districts, Orissa, 2002-04				
Place of residence/ District	Mean age at marriage		Percentage of marriage below legal age at marriage	
	Boy	Girl	Boy (<21)	Girl (<18)
<b>State – Total</b>	25.4	20.5	14.7	23.1
<b>State – Rural</b>	25.0	19.9	16.7	27.7
<b>State – Urban</b>	26.6	21.9	9.1	12.0
<b>District</b>				
Anugul	26.1	20.0	13.3	32.1
Balangir	23.6	19.3	26.5	29.7
Baleshwar	25.6	20.0	10.7	24.5
Bargarh	24.8	19.0	16.9	34.8
Baudh	26.6	18.9	7.7	43.0
Bhadrak	26.3	21.5	6.2	10.3
Cuttack	27.2	21.5	4.1	12.7
Debagarh	25.2	19.8	14.4	26.1
Dhenkanal	25.7	19.7	14.8	25.8
Gajapati	24.8	19.4	21.8	40.1
Ganjam	25.5	19.2	9.5	31.5
Jagatsinghapur	27.4	22.7	2.9	6.8
Jajapur	25.6	22.0	10.9	9.7
Jharsuguda	25.3	20.0	9.6	17.3
Kalahandi	24.3	19.7	24.2	25.9
Kandhamal	24.5	19.4	25.7	26.2
Kendrapara	27.2	22.2	4.9	7.7
Kendujhar	24.9	19.8	16.2	28.9
Khordha	26.1	22.1	7.3	8.5
Koraput	23.0	18.4	41.9	43.9
Malkangiri	22.3	18.0	42.7	49.3
Mayurbhanj	26.2	19.2	15.9	34.0
Nabarangapur	22.8	19.0	40.5	44.0
Nayagarh	26.0	19.6	9.0	35.0
Nuapada	24.3	18.6	20.1	33.0
Puri	26.7	22.8	7.1	5.8
Rayagada	24.5	19.7	23.5	28.8
Sambalpur	25.4	20.6	13.4	14.1
Sonapur	25.1	19.4	14.6	38.2
Sundargarh	25.1	20.5	9.2	20.5

Note: Table based on *de jure* population.  
Reference period: - January 1<sup>st</sup>, 1999 to survey date for phase-1, and January 1<sup>st</sup>, 2001 to survey date for phase-2.

Mean age at marriage for boys and girls in urban areas of Orissa are about 27 years and 22 years respectively. The corresponding figures in rural areas are 25 years and 20 years. On the whole, as far as Orissa is concerned, both boys and girls seem to oblige the legal age marriage, the average age at marriage being about 26 years for boys and 21 years for girls. However, about fifteen percent of boys and nearly one in four girls got married below the corresponding specified legal age marriage. The proportion is much higher in the rural areas compared to the urban areas of the state.

When it comes to district level variation in mean age at marriage, it is highest in Cuttack, Jagatsinghapur and Kendrapara (27 years) for boys and 22 years for girls. The lowest mean age at marriage for boys and girls is 22 and 18 years respectively recorded for the district of Malkangiri.

It is also found that, the percentage of girls who were married below the legal age at marriage was the highest in Koraput and Nabarangpur (44 percent) and the lowest in Puri (6 percent). In 5 out of 30 districts more than two-fifth of girls were marrying below the legal age at marriage (see Map-1). In the case of boys, marriages below the legal age at marriage are the highest in Malkangiri district (43 percent) and lowest in Cuttack (4 percent).

## **2.6 Morbidity Rates**

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

<b>Table 2.6 MORBIDITY RATES</b>			
Prevalence of blindness, tuberculosis, and malaria, according to place of residence, Orissa, 2002-04.			
Morbidity	Total	Residence	
		Rural	Urban
<b>Prevalence rate of blindness</b>			
Male			
Partial	2,706	3,146	1,662
Complete	632	681	520
Night blindness	622	742	338
Female			
Partial	2,981	3,259	2,284
Complete	644	721	450
Night blindness	500	561	347
Persons			
Partial	2,843	3,203	1,967
Complete	638	700	485
Night blindness	561	650	343
<b>Prevalence rate of tuberculosis</b>			
Male	472	516	371
Female	340	364	278
Person	406	439	324
<b>Prevalence rate of malaria<sup>1</sup></b>			
Male	2,008	2,587	658
Female	1,780	2,252	598
Person	1,894	2,417	628
Note: All the rates refer to <i>de jure</i> population. Prevalence rate per 100, 000 population Reference period: - January 1 <sup>st</sup> , 1999 to survey date for phase-1, and January 1 <sup>st</sup> , 2001 to survey date for phase-2. <sup>1</sup> Last two weeks prior to the survey			

### Partial, Complete and Night Blindness

The overall prevalence of partial blindness is 2,843 per 100,000 population in the state and is higher in rural areas (3,203 per 100,000) than in urban areas (1,967 per 100,000). It is more among females. The prevalence of complete blindness is 638 per 100,000 population with a rural-urban differential of 700 against 485 per 100,000. The overall Sex differential in complete blindness is not significant. The prevalence of night blindness due to vitamin A deficiency is 561 per 100,000 population, and is much higher in rural areas (650) than in urban areas (343).

### Tuberculosis

The prevalence of tuberculosis is 406 per 100,000 population, with rural areas having a higher prevalence of 439 compared to 324 per 100,000 in urban areas. The prevalence of TB is higher among males (472 per 100,000) than among females (340 per 100,000).

### Malaria

In the DLHS-RCH, household respondents were asked to state whether any member of their household suffered from malaria (characterized by recurrent fever with shivering) any time during the two weeks prior the survey. In the state of Orissa, a whopping

numbers of 1894 persons per 100,000 population were reported to have suffered from malaria. Rural residents are almost 4 times more likely to suffer from malaria (per 100,000) than urban residents (628 per 100,000). The reported prevalence of malaria is higher for males than for females.

## 2.7 Morbidity Rates by Districts

Table 2.7 shows the prevalence of blindness, tuberculosis and malaria in the districts of Orissa. The prevalence of partial blindness varies considerably among the districts the lowest being 649 per 100,000 in Kordha and the highest, 7,616 per 100,000 in Jagatsinghapur

<b>Table 2.7 MORBIDITY RATES BY DISTRICTS</b>				
Prevalence of blindness, tuberculosis, and malaria, by district, Orissa, 2002-04				
District	Prevalence <sup>1</sup> of morbidity			
	Partial blindness	Complete blindness	Tuberculosis	Malaria <sup>2</sup>
Anugul	4,123	803	403	4,143
Balangir	3,233	150	528	1,783
Baleshwar	5,488	1,045	601	749
Bargarh	2,590	977	285	1,742
Baudh	1,371	321	243	2,986
Bhadrak	2,599	1,045	475	1,019
Cuttack	3,791	275	226	572
Debagarh	4,329	988	555	3,439
Dhenkanal	3,582	1,133	546	2,078
Gajapati	2,028	684	916	4,007
Ganjam	988	397	458	1,555
Jagatsinghapur	7,616	504	161	619
Jajapur	3,571	905	382	1,010
Jharsuguda	3,957	50	449	731
Kalahandi	3,843	536	593	4,045
Kandhamal	2,937	1,530	864	5,458
Kendrapara	2,991	1,051	301	895
Kendujhar	1,052	409	382	4,048
Khordha	649	421	273	908
Koraput	3,992	567	354	4,634
Malkangiri	1,846	347	422	4,681
Mayurbhanj	1,571	617	451	1,408
Nabarangapur	3,769	683	304	1,135
Nayagarh	2,279	201	224	2,802
Nuapada	1,196	374	302	3,102
Puri	4,418	911	301	1,032
Rayagada	2,590	798	467	3,751
Sambalpur	2,705	426	444	1,908
Sonapur	1,154	718	251	1,407
Sundargarh	1,327	984	334	1,719
Orissa	2,843	638	406	1,894

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



The districts with a prevalence rate below 1,000 per 100,000 are Kordha and Ganjam. The prevalence rate of complete blindness ranges from 649 per 100,000 in Kordha to 7616 per 100,000 in Jagatsinghapur.

The prevalence of Tuberculosis varies from 161 per 100,000 in Jagatsinghapur to 916 per 100,000 in Gajapati. Inter-district variations are substantial for malaria. The prevalence rate is highest in Kandhamal (5,458 per 100,000) and lowest in Cuttack (572 per 100,000).

## 2.8 Housing Characteristics

This section describes the availability of basic amenities in the state. Table 2.8 presents the percent distribution of households by selected housing characteristics. Forty-seven percent of the households in Orissa have electricity connection and it is much more in urban areas (84 percent) than in rural areas (32 percent).

As regards household source of drinking water one-fifth (20 percent) of the households get drinking water through taps, while 51 percent drink water from hand pumps/ bore-wells, and one-fourth drink water from wells. About 53 percent of households in urban areas get piped water for drinking, whereas in rural areas only 7 percent of the households have such provision.

When it comes to sanitation facility, only 7 percent of the households have flush toilets, while 18 percent have pit based toilets or latrines, only one percent depend on shared toilets and nearly 74 percent of the households have no toilet facility at all. There is a large rural-urban difference; 90 percent of rural households have no toilet facility, compared to just 36 percent of urban households.

DLHS-RCH has also collected data on type of fuel used in the households for cooking. Twenty percent of the households used liquid petroleum/gas or electricity for cooking in Orissa. More than two-third of households rely on firewoods, 4 percent on kerosene, and a small proportion of households (13 percent) use other types of fuel for cooking. The use of liquid petroleum gas/electricity for cooking is reported more in urban areas (48 percent), and firewood or other sources for cooking are reported more in rural areas.

There is considerable variation in the quality of housing. On the basis of building material, type of floor, walls and roof, households are categorised into *kachcha*, *semi-pucca* and *pucca*. More than half of the households are living in *kachcha* houses, 19 percent in semi *pucca* houses and 23 percent in *pucca* houses. Forty-seven percent of urban households live in *pucca* houses compared to 13 percent of rural households.

The possession of consumer durable goods is an indication of a household's socio-economic status. Table 2.8 shows that majority of the households in the state own bicycles (66 percent), an electric fan (42 percent), television (32 percent) and radio/transistor (26 percent).

<b>Table 2.8 HOUSING CHARACTERISTICS</b>			
Percent distribution of the household by housing characteristics and percentage of households owing selected durable goods, according to residence, Orissa, 2002-04			
Housing characteristic	Total	Residence	
		Rural	Urban
<b>Electricity</b>			
Yes	47.3	32.3	84.2
No	52.7	67.7	15.8
<b>Source of drinking water</b>			
Tap inside	8.8	1.3	27.2
Tap shared public	11.6	5.8	26.1
Hand pump/ bore well	50.7	60.7	26.3
Well covered	1.8	1.4	2.9
Well uncovered	22.9	25.4	16.8
River	1.7	2.3	0.3
Pond	0.4	0.5	0.1
Spring	1.2	1.7	0.1
Other	0.7	0.9	0.3
<b>Sanitation facility</b>			
Own flush toilet	6.5	1.8	18.2
Own pit toilet / latrine	17.5	7.2	42.8
Shared toilet of any type	1.3	0.6	2.7
Public / community toilet	0.2	0.2	0.4
No toilet facility	74.4	90.2	35.9
<b>Main type of fuel used for cooking</b>			
Liquid petroleum gas/ electricity	16.2	3.4	47.6
Kerosene	3.7	1.6	8.7
Wood	67.1	79.0	38.1
Other	13.0	16.0	5.6
<b>Type of house</b>			
Kachcha	58.2	71.7	25.2
Semi - pucca	18.7	15.2	27.4
Pucca	23.1	13.1	47.4
<b>Household assets</b>			
Fan	41.9	26.3	80.2
Radio/transistor	26.1	22.1	36.0
Sewing machine	9.1	3.5	22.8
Television	31.5	16.5	68.3
Telephone	10.4	3.9	26.4
Bicycle	65.6	61.0	76.8
Motor cycle/ scooter	15.4	7.0	36.1
Car / Jeep	1.8	0.5	5.0
Tractor	0.5	0.4	0.8
<b>Standard of living index</b>			
Low	62.4	78.6	22.7
Medium	22.9	17.8	35.4
High	14.7	3.6	41.9
<b>Number of households</b>	31,909	22,669	9,240

Other durable goods found in the surveyed households are motorcycle or scooter (15 percent), telephone (10 percent), sewing machine (9 percent), Car/jeep are owned by two percent of households and tractor are owned by only one percent in Orissa. Ownership of most of the consumer durable items is more among the urban households than among the rural households. Interestingly, a higher proportion of households in urban areas than in rural areas own a bicycle.

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

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

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

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

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

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

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

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

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

As per the standard of living index, nearly two-third of the households come under the low standard of living category, 23 percent of households to medium standard of living, and 15 percent of the households to high standard of living.

The proportion of sample households with medium and high standard of living is comparatively higher in urban areas than in rural areas, and the proportion of households with a low standard of living is much higher in rural households (79 percent) than in urban households (23 percent) in the state of Orissa.

## **2.9 Housing Characteristics by Districts**

The 30 districts in Orissa are not uniform in terms of basic amenities and possession of consumer durables. Table 2.9 presents an inter-district comparison of housing characteristics. The percentage of households with electricity is just 10 percent in the districts of Malkangiri. In 12 districts out of 30, less than 40 percent of households are with electricity connections. The household with electricity is highest in Baleshwar (65 percent). Ninety percent or more of households used piped water or water from a hand

pump for drinking in only four out of 30 districts- Baleshwar (97%), Jagatsinghapur (96%), Bhadrak (94%) and Puri (97%)

Largely the districts in Orissa have inadequate toilet facility, in 26 of the 30 districts less than 30 percent of the households have toilet facilities and it is the least in Malkangiri (6%)

In Anugol district, the percentage of households using liquid petroleum gas/electricity for cooking is 25 percent and in the rest of the districts, it is relatively low ranging between 3 to 22 percent. The percentage of households living in *pucca* houses is quite low in all the districts of Orissa. Only in 2 of the 30 districts, about 40 percent of the households live in *pucca* houses – Cuttack (43%) and Jagatsinghapur (40%). Malkangiri has only 4% of the households living in *pucca* houses.

<b>Table 2.9 HOUSING CHARACTERISTICS BY DISTRICT</b>					
Selected housing characteristics by district, Orissa, 2002-04					
Districts	Percentage of households:				
	With electricity	With drinking water <sup>1</sup>	With toilet facility	Using Liquid petroleum gas/ electricity	Living in <i>pucca</i> house
Anugul	51.2	57.3	30.4	25.6	29.3
Balangir	43.2	78.6	21.0	13.9	18.1
Baleshwar	65.0	97.4	36.5	15.5	21.1
Bargarh	53.1	85.1	16.9	11.6	11.9
Baudh	41.6	66.3	23.4	11.9	16.8
Bhadrak	51.9	93.9	27.5	11.7	13.8
Cuttack	62.2	73.5	36.2	21.6	43.0
Debagarh	35.8	67.8	22.3	8.7	13.3
Dhenkanal	50.5	34.6	28.6	18.6	31.0
Gajapati	37.6	60.0	25.2	21.9	23.3
Ganjam	54.6	69.5	27.8	16.8	39.7
Jagatsinghapur	44.7	95.6	25.1	16.8	40.5
Jajapur	54.4	63.0	24.0	12.5	22.0
Jharsuguda	61.9	71.1	16.5	11.7	15.3
Kalahandi	33.9	89.4	21.9	12.5	9.4
Kandhamal	30.9	50.4	26.2	11.7	10.9
Kendrapara	50.5	86.0	22.6	10.7	21.0
Kendujhar	33.7	58.6	15.3	9.8	6.9
Khordha	61.3	60.7	27.7	20.8	31.4
Koraput	30.1	69.7	24.5	21.1	19.2
Malkangiri	10.0	88.9	5.9	2.9	3.7
Mayurbhanj	33.1	52.7	20.6	11.2	9.6
Nabarangapur	28.8	87.6	22.0	16.6	11.0
Nayagarh	47.1	55.1	29.2	13.0	29.2
Nuapada	39.1	86.7	16.8	11.9	10.1
Puri	63.3	95.1	34.8	19.3	31.8
Rayagada	34.2	86.8	24.4	19.5	16.4
Sambalpur	47.6	73.1	21.7	18.8	17.1
Sonapur	37.1	85.1	15.3	7.6	14.6
Sundargarh	43.9	75.6	28.2	20.2	16.7
Orissa	47.3	73.0	25.6	16.2	23.1

Note: <sup>1</sup> That is piped or from a hand pump/bore well/covered well

## **2.10 Iodization of Salt**

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

In the DLHS-RCH survey, each interviewer was provided with a test kit to measure the level of iodine content of salt consumed by the surveyed households. The test results (Table 2.10) are classified by degree of ionization of salt and categorised by background characteristics. It is observed that nearly 37 percent of households used salt that contained a minimum recommended 15 ppm or higher level of iodine content whereas 32 percent of households used salt that is not iodized at all and another 30 percent used salt, which was inadequately iodized.

In rural areas, 38 percent of households against 17 percent in urban areas used non-iodized salts. Percentage of households using inadequately iodized salt in rural areas is almost two times higher compared to that in urban areas. Number of households using non-iodized or inadequately iodized salt is closely associated with the educational level of the household head. Nearly 74 percent of households headed by persons who had more than 10 years of schooling reported the use of adequately iodized salts. Consumption of adequately iodised salt among households of other caste is high (58 percent), followed by 36 percent in other backward class households and among scheduled caste and scheduled tribe it is 28 and 19 percent of households.

<b>Table 2.10 IODIZATION OF SALT</b>						
Percent distribution of household heads by degree of iodization of salt, according to selected background characteristics, Orissa, 2002-04						
Background characteristic	Not iodised	7ppm	15+ppm	Other <sup>1</sup>	Total percent	Number of households
<b>Place of Residence</b>						
Rural	38.0	35.7	25.0	1.3	100.0	22,669
Urban	16.7	17.1	65.1	1.1	100.0	9,240
<b>Education of the household heads</b>						
Non-literate	42.3	36.1	20.1	1.4	100.0	11,898
0-9 @ years	31.9	31.8	35.3	1.1	100.0	14,206
10 and above	10.1	15.0	73.7	1.2	100.0	5,795
<b>Religion of household head</b>						
Hindu	32.3	30.4	36.1	1.2	100.0	30,480
Muslim	11.4	32.0	56.2	0.4	100.0	724
Christian	36.8	29.5	31.8	1.9	100.0	619
Other	16.5	12.9	69.1	1.4	100.0	86
<b>Caste/tribe of the household head#</b>						
Scheduled caste	36.3	34.1	28.3	1.3	100.0	5,832
Scheduled tribe	41.9	37.7	19.1	1.3	100.0	6,796
Other backward class	32.7	29.8	36.2	1.2	100.0	11,282
Other	18.7	22.2	58.1	1.0	100.0	7,819
<b>Standard of living index</b>						
Low	40.9	37.2	20.6	1.3	100.0	19,912
Medium	24.3	25.6	49.0	1.0	100.0	7,316
High	5.0	8.8	85.2	1.0	100.0	4,680
Total	31.8	30.4	36.6	1.2	100.0	31,909
Note: Ppm: Parts per million						
Note: Table includes 4 household heads with missing information on education 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. <sup>1</sup> Includes salt not at home, salt not tested, refused and missing cases.						

Differential in the consumption of properly iodized salt is more pronounced when analysed by religion of the household head and standard of living index. Percentage of households using adequately iodized salt is only 36 percent among Hindu households, whereas the corresponding figures for Muslim and other religion households are 56 percent and 69 percent respectively. Again, households with low standard of living are more likely to use non-iodized or inadequately iodized salt compared to households with medium or high standard of living index. While 41 percent of households with low standard of living used non-iodized salt, only 5 percent households with a high standard of living fall in this category. The number of households with a high standard of living using adequately iodized salt is four times more than that of those with a low standard of living.

## 2.11 Iodization of Salt by Districts

Table 2.11 shows district level variation in the percent distribution of households by level of iodization of salt used in the households. Kendrapara has the lowest proportion of households (4 percent) followed by Baleswar (6%) using non-iodized salt, whereas Ganjam has the highest proportion of households (66 percent) using non-iodized salt. Percentage of households using inadequately iodized salt is the highest (44 percent) in

Debagarh and the lowest in Ganjam (16 percent). Around 37 percent of the households in the state used adequately iodized salt, the highest being in the district of Kendrapara (72 percent). Less than One-fifth of the households in Sonapur (17%), Ganjam (16 percent) and Malkangiri (11 percent) were using adequately iodized salt (see Map-2).

**Table 2.11 IDOIZATION OF SALT BY DISTRICT**  
Percent distribution of household heads by degree of idoization of salt by district, Orissa, 2002-04

District	Not idoized	7ppm	15+ppm	Other <sup>1</sup>
Anugul	24.6	32.9	41.2	1.3
Balangir	36.3	25.9	35.1	2.6
Baleshwar	6.1	37.8	55.6	0.5
Bargarh	36.2	29.4	33.4	0.9
Baudh	28.4	36.7	33.9	1.1
Bhadrak	29.2	40.0	29.4	1.3
Cuttack	11.0	32.7	55.8	0.5
Debagarh	22.7	43.9	32.3	1.1
Dhenkanal	31.5	34.2	31.5	2.8
Gajapati	54.7	20.7	21.5	3.1
Ganjam	66.4	16.0	16.2	1.4
Jagatsinghapur	19.4	21.8	58.3	0.5
Jajapur	34.6	35.4	27.7	2.4
Jharsuguda	18.4	38.1	42.9	0.6
Kalahandi	31.8	24.0	41.4	2.8
Kandhamal	50.8	21.1	27.5	0.6
Kendrapara	3.7	24.4	71.7	0.3
Kendujhar	29.3	35.4	34.0	1.2
Khordha	39.1	26.9	33.6	0.3
Koraput	47.8	24.3	26.7	1.2
Malkangiri	57.0	31.7	10.8	0.5
Mayurbhanj	20.4	41.4	37.3	1.0
Nabarangapur	38.1	30.5	29.8	1.5
Nayagarh	39.3	39.5	20.3	0.8
Nuapada	43.1	18.5	37.3	1.2
Puri	22.9	28.7	47.2	1.2
Rayagada	26.1	42.7	29.9	1.3
Sambalpur	19.6	40.6	38.7	1.1
Sonapur	52.6	29.4	17.2	0.8
Sundargarh	28.4	32.4	38.0	1.2
Orissa	31.8	30.4	36.6	1.2

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

## 2.12 Availability of Facility and Services to the Rural Population

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

(CHCs/RHs), Government dispensary, hospital, private clinic or hospitals and health facilities of Indian system of Medicine (ISM).

Table 2.12 gives the distance of surveyed villages from an education facility. The unit of analysis is usual residents of rural population. Majority of the rural residents (92 percent) (the *de jure* rural population) in the state live in villages that have a primary school, 62 percent live in villages with middle school and 37 percent of the rural population live in villages with secondary school. Half the population live the villages that has *Gurujee* scheme (50%) and followed by *Madarassa* (43%). Higher secondary schools are available for 15 percent of the rural population. Six percent of the surveyed villages have a college. As regards the distribution of educational institutions within 5 kilometres distance from of the village, it can be seen that, 32 percent of the villages have middle school, 45 percent have secondary school, 34 percent have higher secondary school and 26 and 19 percents have a '*Madarassa*' and *Gurujee* schemes respectively within this distance. For 41 percent of the villages, the college is more than 10 kilometres away and *madarassa* are available at this distance for 23 percent of the villages.

<b>Table 2.12 DISTANCE FROM THE NEAREST EDUCATION FACILITY</b>						
Percent distribution of rural household population by distance from the nearest education facility, Orissa, 2002-04						
Education facility	Within village	Distance from the village:			Don't know/missing	Total percent
		< 5 km	5-9 km	10+ km		
Primary School	91.5	8.1	0.3	0.2	0.0	100.0
Middle School	61.9	31.7	5.0	1.5	0.0	100.0
Secondary School	38.6	44.8	12.8	3.8	0.0	100.0
Higher Secondary School	14.9	34.0	30.8	19.9	0.3	100.0
College	6.4	22.2	30.5	40.6	0.3	100.0
Gurujee Scheme	50.4	25.8	7.8	15.1	0.9	100.0
Madarsa	42.8	18.9	11.8	23.4	3.1	100.0

Note: Table based on rural *de jure* population

<b>Table 2.13 DISTANCE FROM THE NEAREST HEALTH FACILITY</b>						
Percent distribution of rural household population by distance from the nearest health facility, Orissa, 2002-04						
Health facility	Within village	Distance from the village:			Don't know/missing	Total percent
		< 5 km	5-9 km	10+ km		
Rural household population						
Sub-centre	28.6	48.8	16.5	6.0	0.0	100.0
Primary health centre	13.1	23.2	29.7	33.8	0.2	100.0
Either sub-centre or PHC	32.7	48.7	14.5	4.1	0.0	100.0
Community health centre/Referral hospital	11.3	13.0	17.8	57.1	0.7	100.0
Government dispensary	19.2	23.3	19.7	36.2	1.6	100.0
Government hospital	3.6	5.6	11.1	75.7	4.0	100.0
Private clinic	11.0	29.4	19.6	39.1	0.9	100.0
Private hospital	8.9	6.9	9.4	69.8	4.9	100.0
ISM health facility	18.6	28.2	19.7	32.0	1.5	100.0

Note: Table based on rural *de jure* population

Table 2.13 summarises the availability of health facilities within the surveyed villages and provides information on the distance between the villages and the nearest health facility. About 29 percent of the rural population live in villages with Sub-centres. Only 13 percent of the rural household population live in a village with a primary health centre, though the proportion of villages having facilities of either Sub-centre or primary health centre is 33 percent. The



proportion of rural population with other health facilities are 11 percent for CHCs/RHs, 19 percent for Government dispensary, 4 percent for Government hospitals, 11 percent for private clinics, 9 percent for private hospitals and 19 percent for Indian System of Medicine.

<b>Table 2.14 AVAILABILITY OF SERVICES</b>	
Percentage of rural residents living in villages that have selected services, Orissa, 2002-04	
Services	Percentage of rural residents
Anganwadi centre	86.2
Anganwadi worker	80.5
Private doctor	11.4
Visiting doctor	17.6
Homeopathic doctor	14.4
Village health guide	17.4
Trained birth attendant	35.3
Traditional healer	26.6
Dai	59.3

Note: Table based on rural *de jure* population

The proportion of rural population located within a distance of 5 kilometres from health facilities are 49 percent each for sub-centres and Sub centre or PHC, 23 percent for primary health centres, 13 percent for CHCs/RHs. 23 percent for a Government dispensary, 6 percent for Government hospitals, 29 percent for private clinic, 7 percent for private hospitals and 28 percent for ISM health facilities. Distance of particular health facilities is beyond 10 kilometres from surveyed villages in the case of Government hospitals (76 percent) and for private hospitals, (70 percent).

Table 2.14 shows the proportion of rural residents in the state that live in the villages with various health services. Almost 86 percent of rural residents live in villages that have an *anganwadi*, (a nursery school for children age 3-6 years) and at the same time 81 percent of rural households live in villages with *anganwadi* workers (*Anganwadi* workers provide integrated child development services) are available.

About one-tenth of the rural residents live in villages that have a private doctor, 18 percent live in villages with a visiting doctor, 14 percent with a homeopathy doctor, 17 percent with a village health guide, 35 percent with a trained birth attendant and 27 percent with a traditional healer. Little less than three-fifths of the rural residents live in villages that have a *Dai* (*Dai* provides the services for the delivery).

### **2.13 Availability of Education Facility and Health Services by Districts**

Table 2.15 shows the availability of education and health facilities for the rural population within the surveyed villages by districts in Orissa. In 8 of the 30 districts, Anugol, Belangir, Cuttack, Dhenkanal, Koraput, Naupada, Sonapur and Sundargarh, all the rural population have access to primary schools. In the state of Orissa, 92 percent of the rural population live in villages having primary/ middle schools. Twenty nine percent of the rural population in the state have sub-centres within the village, with the highest coverage of 61 percent in Kendujhar and the lowest of 11 percent of the population in Kalahandi.

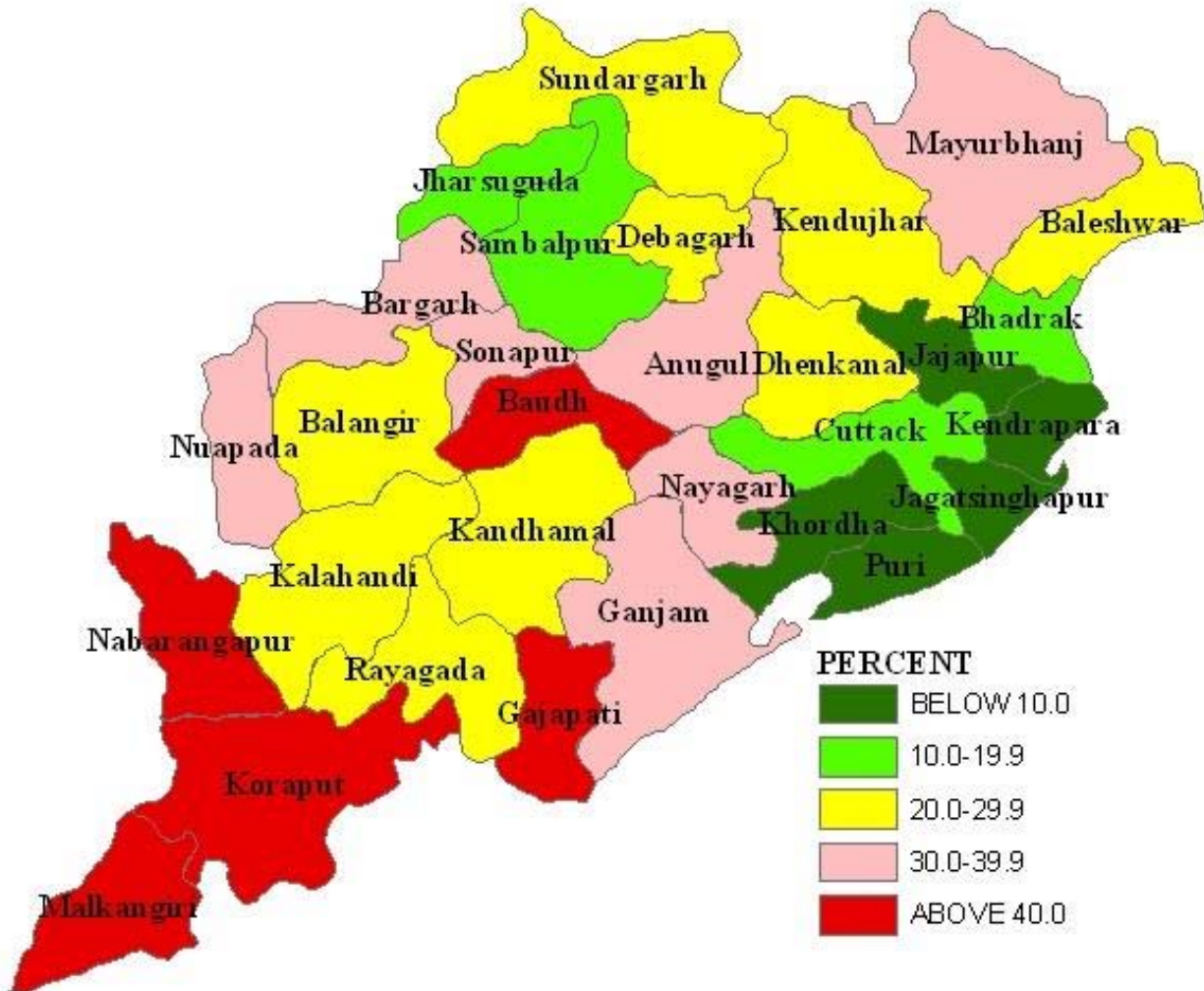
There are some districts with no PHCs within the villages. These districts include Baudh, Debagarh and Kordha. Highest availability of PHCs within the village is found in Anugol (35 percent). In Anugol, 93 percent of the households in the rural area have access to at least one government health facility including sub-centre, primary health centre, community health centre or referral hospital, government hospital and government dispensary within the village.

<b>Table 2.15 AVAILABILITY OF FACILITY AND SERVICES BY DISTRICT</b>							
Selected facility and services of rural household population within village by district, Orissa, 2002-04							
Districts	Percentage of rural household population with:						
	Primary or middle school	Sub-centre	PHCs	Any government health facility <sup>1</sup>	Doctor <sup>2</sup>	TBA <sup>3</sup>	Anganwadi worker
Anugol	100.0	56.1	35.0	92.8	22.7	21.2	62.2
Balangir	100.0	23.3	3.0	26.2	43.0	37.5	87.0
Baleshwar	76.1	21.6	19.3	72.4	17.9	29.3	88.3
Bargarh	96.5	37.5	26.8	58.6	37.8	35.7	72.2
Baudh	94.7	48.9	0.0	52.0	3.6	20.0	86.2
Bhadrak	89.2	25.5	18.3	27.9	17.8	38.1	80.6
Cuttack	100.0	11.7	3.2	18.6	40.5	43.1	95.6
Debagarh	90.5	16.1	0.0	57.6	16.5	24.9	83.1
Dhenkanal	100.0	30.7	11.4	34.7	16.7	24.3	86.6
Gajapati	100.0	31.3	26.5	41.1	17.6	46.5	72.4
Ganjam	94.6	34.4	13.9	38.3	33.4	40.9	57.0
Jagatsinghapur	85.2	28.1	11.4	28.1	15.8	23.8	85.0
Jajapur	88.4	32.7	7.1	60.1	23.1	15.1	89.0
Jharsuguda	97.4	24.2	18.0	54.9	12.7	31.7	83.7
Kalahandi	80.5	10.0	12.4	19.2	36.4	13.6	69.4
Kandhamal	81.2	29.4	16.8	62.6	28.7	40.5	87.0
Kendrapara	95.2	20.9	9.2	29.9	22.3	46.9	92.4
Kendujhar	89.0	61.1	28.2	94.7	13.3	45.6	86.7
Khordha	98.9	22.9	0.0	52.4	22.2	22.1	88.0
Koraput	100.0	27.8	25.8	45.8	27.7	10.2	80.4
Malkangiri	81.5	16.2	4.6	17.8	38.7	32.4	69.1
Mayurbhanj	91.1	30.1	3.2	43.5	25.0	30.3	84.2
Nabarangapur	96.3	40.2	17.2	45.6	21.0	57.5	90.8
Nayagarh	85.4	10.5	6.9	36.9	14.2	38.9	42.8
Nuapada	100.0	35.5	3.4	35.5	40.3	34.9	96.2
Puri	83.2	15.1	14.8	25.4	3.9	34.6	65.5
Rayagada	79.3	41.6	8.1	60.1	61.3	71.0	78.2
Sambalpur	89.3	29.8	19.3	78.5	36.4	38.7	89.7
Sonapur	100.0	17.4	4.4	18.5	54.4	37.7	81.8
Sundargarh	100.0	29.7	14.6	46.7	39.1	69.9	96.9
Orissa	91.7	28.6	13.1	45.5	26.6	35.2	80.4

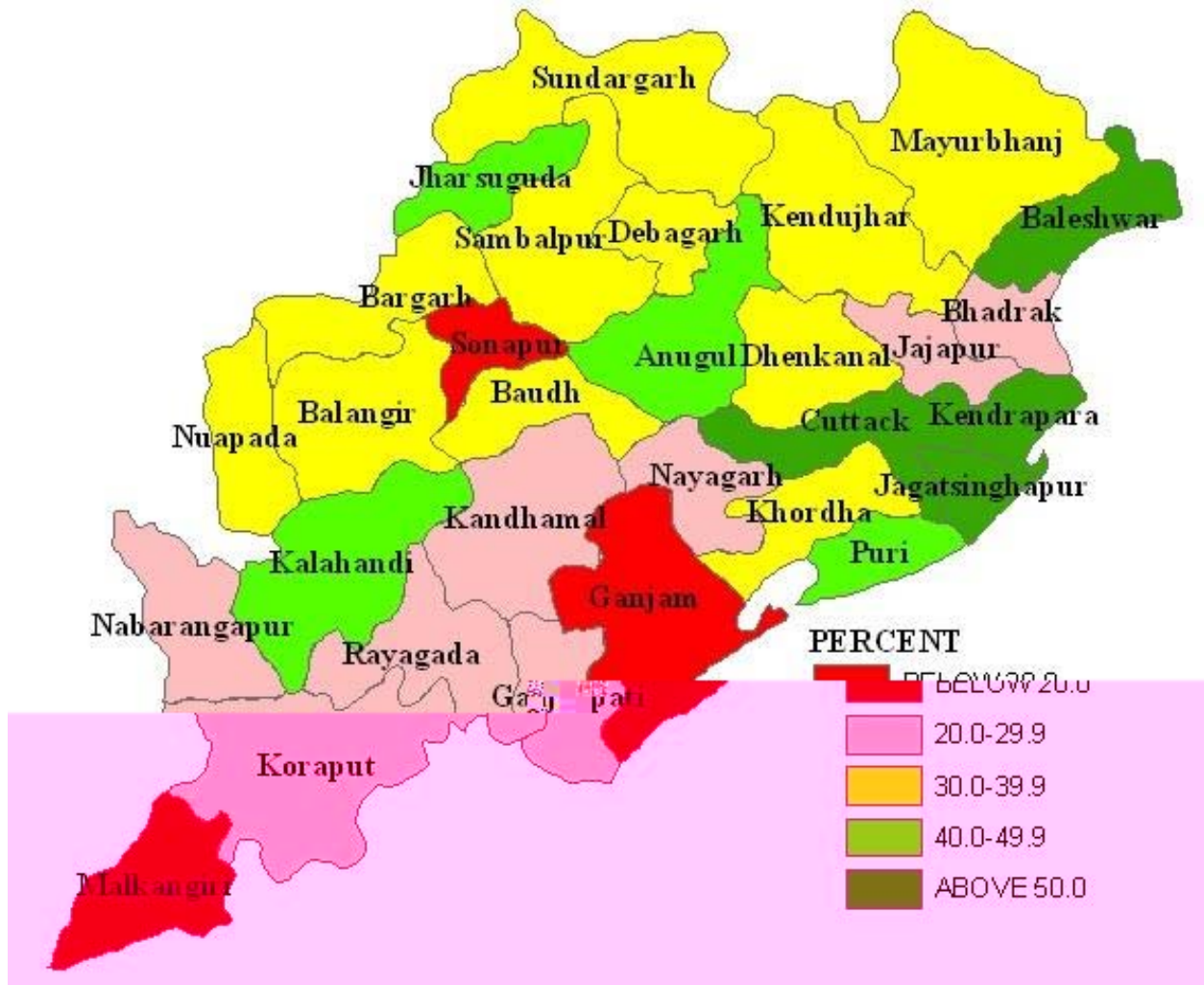
Note: <sup>1</sup> Includes sub-center, primary health center, community health center or referral hospital, government hospital, and government dispensary within the village <sup>2</sup> Either private or visiting doctor <sup>3</sup> Trained birth attendant

Around 61 percent of the rural population are visited either by private or by visiting doctors in the surveyed villages of Rayagada district, whereas 4 percent of households can be classified in this category in Baudh and Puri districts each. Highest numbers of rural population (71 percent) are attended by trained birth assistants in Rayagada, while only 10 percent of rural population, availed themselves of such a provision in Koraput. A visit by *anganwadi* workers to rural households is highest (97 percent) in Cuttack and the lowest in Nayagarh (43 percent).

**MAP-1**  
**Percent Girl Marrying Below Legal Age at Marriage**



**MAP-2**  
**Percentage of Households Using Salt that Contains 15 ppm Level of Iodine**



## CHAPTER III

### CHARACTERISTICS OF WOMEN, HUSBANDS AND FERTILITY

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

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

#### 3.1 Background Characteristics of Women

The percent distribution of currently married women in the reproductive age group 15-44 years by residence, religion and caste of head of household, economic standard of household and other demographic characteristics are shown in Table 3.1. A sample of 24,973 eligible women represents the state of Orissa in DLHS-RCH and 71 percent of these women are drawn from rural areas. Slightly more than two fifth (63 percent) of the currently married women are in the age range of 20-34 years and a similar age distribution is observed both for urban and rural areas. Age at consummation of marriage, particularly in rural areas is found to be low with as many as 58 percent of the women having cohabited before 18 years of age, while it is 41 percent in urban areas. Looking at the distribution of marital duration it is noted that about 39 percent of the women across the state are married for more than 15 years.

Among the sample 24,973 representative women in Orissa, Hindus constitute 95 percent. Muslims and Christians form about 3 and 2 percent respectively. The rural-urban differential of Hindu women is about 5 percent. The presence of women belonging to other religious groups is insignificant in proportional and absolute terms. Eighteen percent of the women belong to scheduled castes, 21 percent to scheduled tribes and 36 percent to other backward classes. About one-fifth (24 percent) belong to a general caste

other than scheduled caste/tribe and other backward class. In rural areas, there are more women belonging to scheduled caste, scheduled tribe and other backward classes than in urban areas, while more women from other castes are found in urban areas. There is a clear rural-urban differential in the educational attainment of women. For the state of Orissa, 49 percent of women are non-literate and women of this literacy category constitute 58 percent in rural areas, while it is just 25 percent in urban areas.

<b>Table 3.1 BACKGROUND CHARACTERISTICS OF ELIGIBLE WOMEN</b>			
Percent distribution of currently married women aged 15-44 by selected background characteristics, according to residence, Orissa, 2002-04			
Background characteristic	Total	Residence	
		Rural	Urban
<b>Age group</b>			
15-19	6.7	7.5	4.8
20-24	19.2	20.4	16.4
25-29	23.1	22.7	24.0
30-34	20.6	20.1	21.9
35-39	16.9	16.1	19.0
40-44	13.4	13.3	13.8
<b>Age at consummation of marriage</b>			
Below 18 years	53.3	58.4	40.7
18 years & above	46.7	41.6	59.3
<b>Marital duration</b>			
0-4	20.1	19.9	20.5
5-9	21.2	21.0	21.6
10-14	19.7	19.6	19.8
15+	39.1	39.5	38.1
<b>Religion</b>			
Hindu	95.4	97.0	91.7
Muslim	2.5	1.1	5.9
Christian	1.8	1.8	1.8
Sikh	0.1	0.1	0.3
Buddhist	0.0	0.0	0.1
Other	0.0	0.0	0.1
<b>Caste/tribe</b>			
Scheduled caste	18.1	19.2	15.5
Scheduled tribe	21.0	26.2	8.3
Other backward class	35.9	37.4	32.3
Other #	24.3	16.7	43.0
Don't know	0.6	0.5	0.9
<b>Education (Years of schooling)</b>			
Non-literate	48.6	58.1	25.3
0-9@ years	36.3	33.9	42.3
10 years & above	14.9	7.9	32.3
Missing	0.2	0.2	0.1
<b>Husband's education (Years of schooling)</b>			
Non-literate	28.9	35.5	12.5
0-9@ years	45.5	47.4	40.7
10 years & above	24.3	15.6	45.8
Don't know	1.2	1.3	0.8
Missing	0.1	0.1	0.1
<b>Standard of living index</b>			
Low	59.3	75.3	19.9
Medium	24.9	20.1	36.9
High	15.8	4.6	43.2
Number of women	24,973	17,760	7,212

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

About 36 percent of women across the state have completed 0-9 years of schooling. Just about 8 percent of rural women have completed 10 or more years of schooling compared to 42 percent for urban women. Rural men are more literate than their spouses. In Orissa, 29 percent of the husbands of eligible women are non-literate and the corresponding figures are 36 percent in rural areas and 13 percent in urban areas. The DLHS-RCH includes data on materials used for floor, walls and roof of the housing structure along with status of possession of a list of durables and these are utilized to construct a composite index of household standard of living. Households are further classified as those with low, medium and high standard of living. Fifty nine percent of women in the state live in low standard of living households and this is 75 percent in rural areas and 20 percent in urban areas. About one fourth of women across the state live in households categorised as medium standard of living and among them one fifth are from rural areas and 37 percent are from urban areas. In urban areas, 43 percent of women belong to high standard of living households and the corresponding figure is just 5 percent in rural areas.

### **3.2 Educational Level of Women**

Table 3.2 provides details of educational level of eligible women in terms of classification by years of schooling, and selected background characteristics, such as, place of residence, religion, and caste and husbands' education. As regards distribution of non-literate women, overall, it is observed that a lesser proportion of younger women below 30 years of age are non-literate (47%) compared to older women (52%) above 30 years. Though this age divide does not remain same for all age group of literate women, it is true among women who have had schooling of 1-5 years. For the women in the age group 15-19 years, 17 percent, 14 percent and 15 percent had 1-5 years, 6-8 years and 9-10 years of schooling, while only just 1 percent had 11 or more years of schooling. Among the senior women in the age group 40-44 years, distribution by year of schooling is 20 percent, 10 percent, 9 percent and 5 percent of them having attended school for 1-5, 6-8, 9-10 and 11 or more years of schooling. Proportion of women with 11 or more years, of schooling is highest in case of the women of 25-29 years (11 percent).

There is a significant rural-urban differential in the level of education of women in Orissa. About 58 percent of rural eligible women are non-literate and 16 percent, 10 percent, 12 percent and 4 percent of the women had 1-5, 6-8, 9-10 and 11 or more years of schooling. The corresponding figures in urban areas are 25 percent, 15 percent, 15 percent, 25 percent and 20 percent respectively. More Christian women (57 percent) are non-literates compared to Hindu women (49 percent), Muslim women and women belonging to other religious communities (34 percent each). For literate eligible women from Hindu and Muslim communities, maximum of them have either 1-5 or 6-8 years of schooling (15 and 26 percent) and the corresponding figures for Christian and women from other religion is 10 and 9 percents. The proportion of Hindu and Muslim women with 6-8 years of schooling is 12 percent, 11 percent for Christian women and 17 percent for women from other religions. Among the literate Christian women, only 6 percent of them had 11 or more years of schooling, while 29 percent of literate other religion

women, 11 percent of Muslim and 8 percent of Hindu women had attained this level of education.

The uneven level of educational attainment by caste can be noted from the recorded proportion of non-literate women among scheduled caste (63 percent), scheduled tribe (81 percent), other backward class (43 percent) and other caste or tribe (20 percent). The literate women belonging to different castes is concentrated more in the range of 1-5 years of schooling (17%). The husband's education is an important characteristic, which has strong association with the education of eligible women. As many as 88 percent of women whose husbands are non-literate are also non-literate, while only 4 percent of women whose husbands had 11 or more or years of schooling are non-literate. Forty five percent of literate women educated for 11 or more years of schooling have husbands who had the same level of education.

<b>Table 3.2 LEVEL OF EDUCATION OF ELIGIBLE WOMEN</b>									
Percent distribution of currently married women aged 15-44 by years of schooling, according to selected background characteristics, Orissa, 2002-04									
Background characteristic	Non-literate	Literate but no schooling	Years of schooling				Missing	Total percent	Number of women
			1-5 years	6-8 years	9-10 years	11 or more years			
<b>Age group</b>									
15-19	51.3	0.4	17.0	14.4	15.2	1.3	0.3	100.0	1,679
20-24	43.4	0.7	13.4	12.3	21.0	9.2	0.2	100.0	4,805
25-29	45.5	0.3	12.8	12.1	18.4	10.7	0.1	100.0	5,759
30-34	49.4	0.6	15.4	10.1	15.6	8.8	0.1	100.0	5,141
35-39	51.6	0.9	17.1	11.9	10.3	8.0	0.2	100.0	4,229
40-44	55.2	0.7	19.9	10.3	8.5	5.3	0.2	100.0	3,359
<b>Place of residence</b>									
Rural	58.1	0.5	15.7	10.4	11.6	3.5	0.2	100.0	17,760
Urban	25.3	0.8	14.8	14.5	24.7	19.8	0.1	100.0	7,212
<b>Religion</b>									
Hindu	48.9	0.6	15.4	11.6	15.3	8.1	0.1	100.0	23,836
Muslim	33.5	3.1	22.5	11.7	17.4	10.6	1.2	100.0	621
Christian	56.7	0.0	9.8	11.0	16.7	5.8	0.0	100.0	451
Other	33.0	0.0	8.5	16.6	11.5	29.3	0.0	100.0	65
<b>Caste/tribe #</b>									
Scheduled caste	62.7	0.6	16.5	9.1	8.3	2.6	0.1	100.0	4,526
Scheduled tribe	80.9	0.4	7.7	4.6	5.1	1.2	0.1	100.0	5,246
Other backward class	42.3	0.7	18.9	14.1	17.2	6.5	0.2	100.0	8,974
Other	19.7	0.6	16.2	15.7	26.8	20.9	0.2	100.0	6,067
<b>Husband's education</b>									
Non-literate	88.1	0.3	7.0	2.6	1.5	0.3	0.2	100.0	7,207
Literate but no schooling	72.8	8.2	11.8	5.3	1.8	0.1	0.0	100.0	294
1-5 years	61.6	1.0	23.9	9.7	3.4	0.2	0.2	100.0	4,845
6-8 years	40.9	0.9	28.6	20.2	8.6	0.6	0.2	100.0	3,293
9-10 years	18.4	0.4	18.2	23.3	35.4	4.2	0.0	100.0	5,087
11 or more years	3.5	0.2	5.5	8.5	37.1	45.2	0.1	100.0	3,921
Total	48.6	0.6	15.4	11.6	15.4	8.2	0.2	100.0	24,973
Note: # Total number may not add upto N due to don't know and missing cases. Total includes 30 cases with missing information on husband's education were not shown separately.									



### 3.3 Background Characteristics of Husbands of Eligible Women

In DLHS-RCH husbands of eligible women were also interviewed. The response rate for husbands is relatively low compared to that of eligible women. Selected background characteristics of husbands are shown in Table 3.3. Across the state of Orissa, husbands are mostly in the age group 25-34 years. Fewer husbands are 45 years or older. In Orissa, about 96 percent of the husbands are Hindus, about 2 percent each are Muslims and Christian. The presence of other religious groups is insignificant. Nineteen percent of husbands in the state belong to the scheduled caste and it is little more in rural areas (20 percent) than in urban areas (16 percent). Twenty four percent of the husbands belong to castes other than scheduled caste, scheduled tribe and other backward classes. In urban areas husbands from other castes constitute 43 percent, while it is 17 percent in rural areas. In urban areas husbands from other backward castes constitute 31 percent, while it is 37 percent in rural areas. As regards educational characteristics of the husbands of surveyed eligible women, 47 percent of them have completed 0-9 years of schooling and the proportion of non-literate husband ranges from 13 percent in urban areas to 36 percent in rural areas, while the overall state figure is 29 percent.

<b>Table 3.3 BACKGROUND CHARACTERISTICS OF MEN</b>			
Percent distribution of husbands of eligible women by selected background characteristics, according to residence, Orissa, 2002-04			
Background characteristic	Total	Residence	
		Rural	Urban
<b>Age group</b>			
< 25	5.5	6.2	3.8
25-34	34.8	36.1	31.2
35-44	40.0	38.6	43.4
45 +	19.8	19.1	21.5
<b>Religion</b>			
Hindu	95.5	97.0	91.6
Muslim	2.4	1.1	5.9
Christian	1.8	1.8	2.0
Sikh	0.1	0.1	0.3
Buddhist	0.1	0.0	0.2
Other	0.0	0.0	0.1
<b>Caste/tribe</b>			
Scheduled caste	18.7	19.7	16.1
Scheduled tribe	21.3	26.2	8.7
Other backward class	35.5	37.1	31.3
Other #	24.0	16.5	43.1
Don't know	0.5	0.4	0.8
<b>Education (Years of schooling)</b>			
Non-literate	29.3	35.6	13.1
0-9@ years	47.1	49.1	41.8
10 years & above	23.5	15.1	45.1
Missing	0.1	0.1	0.0
<b>Standard of living index</b>			
Low	60.2	75.7	20.3
Medium	24.6	19.7	37.1
High	15.2	4.6	42.6
<b>Number of living children</b>			
0	11.1	11.8	9.3
1	18.4	17.1	22.0
2	27.4	25.7	31.8
3	22.4	23.4	19.7
4+	20.7	22.0	17.3
Number of Men	19,339	13,934	5,405

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

The proportion of husbands living in households classified as low, medium and high standard of living index are 60 percent, 25 percent and 15 percent respectively. In rural areas, 76 percent of the husbands live in low standard of living households compared to 20 percent in urban areas. This is complementary in the case of husbands living in high standard of living households, 43 percent in urban and 5 percent in rural. In terms of household standard of living composition, those living in medium standard of living in urban areas are second highest position (37 percent) and in rural Orissa most (60 percent) husbands live in low standard of living households. Around 27 percent of husbands across the state reported to have two living children. More husbands in urban areas (32 percent) reported to have two living children, while more husbands in rural areas too (26 percent) have two living children. About 23 percent of the husbands of rural eligible women have more than three living children and it is 19 percent for husbands of urban eligible women.

### **3.4 Educational Level of Husbands of Eligible Women**

Educational levels in categories of year of schooling classified by age, place of residence, religion and caste/tribe of husbands of eligible women are shown in Table 3.4. The distribution of non-literate husbands is nearly same in all the age groups except for the husbands below 25 years where it is slightly higher (36 percent). Among the literate husbands, irrespective of their age at the time of survey more than 30 percent of them had 1-8 years of schooling. As expected few of the younger husbands (5 percent) below 25 years had 11 or more years of schooling compared to 16 percent of those above 45 years. As in the case of eligible women, 37 percent of Christian husbands are non-literate while the corresponding non-literate husbands of Hindu, Muslim and other religions are 29 percent, 26 percent and 17 percent respectively. The proportion of husbands of Hindu, Muslim, Christian and other religions who had 11 or more years of schooling constitute 15 percent, 18 percent, 15 percent and 26 percent respectively. Most of the literate Hindu husbands (22 percent) have completed 1-5 years of schooling and the corresponding numbers are 21 percent, 16 percent and 13 percent respectively for husbands from Muslim, Christian and other religions. Educational attainment of husbands of eligible women varies according to the caste/tribe they belong to. There are more non-literate husbands belonging to scheduled tribes (56 percent) followed by scheduled caste husbands (35 percent). Among the scheduled caste and scheduled tribe husbands, 24 percent and 14 percent had 9 or more years of schooling. The literacy level of other backward classes is comparable with that of husbands from castes other than scheduled tribe, scheduled caste and other backward classes. Among the husbands belonging to other backward classes, 23 percent are non-literate and only 25 percent had 9 or more years of schooling.

<b>Table 3.4 LEVEL OF EDUCATION OF MEN</b>									
Percent distribution of husbands of eligible women by years of schooling, according to selected background characteristics, Orissa, 2002-04									
Background characteristic	Non-literate	Literate but no schooling	Years of schooling				Missing	Total percent	Number of men
			1-5 years	6-8 years	9-10 years	11 or more years			
<b>Age group</b>									
< 25	36.1	1.0	21.4	17.0	19.2	5.3	0.1	100.0	1,071
25-34	27.8	1.1	19.1	13.7	22.2	16.0	0.0	100.0	6,720
35-44	29.7	1.3	22.1	12.9	18.3	15.6	0.1	100.0	7,727
45 +	29.2	1.8	23.7	14.7	14.8	15.7	0.1	100.0	3,820
<b>Place of residence</b>									
Rural	35.6	1.5	23.8	13.5	16.9	8.6	0.1	100.0	13,934
Urban	13.1	0.7	15.0	14.4	24.5	32.2	0.0	100.0	5,405
<b>Religion</b>									
Hindu	29.3	1.3	21.5	13.7	19.1	15.1	0.1	100.0	18,465
Muslim	25.8	2.3	20.1	18.0	15.3	18.4	0.2	100.0	468
Christian	37.1	1.5	15.9	13.5	16.9	14.8	0.3	100.0	357
Other	(17.4)	(4.3)	(13.0)	(2.2)	(37.0)	(26.1)	(0.0)	(100.0)	48
<b>Caste/tribe #</b>									
Scheduled caste	34.8	1.4	27.1	13.0	16.5	7.1	0.1	100.0	3,610
Scheduled tribe	55.7	2.1	18.6	9.7	10.0	3.9	0.1	100.0	4,126
Other backward class	23.1	1.2	24.6	16.6	20.2	14.2	0.1	100.0	6,863
Other	10.8	0.7	14.4	13.9	27.2	33.0	0.0	100.0	4,637
Total	29.3	1.3	21.3	13.8	19.0	15.2	0.1	100.0	19,339
Note: # Total number may not add upto N due to don't know and missing cases. () Based on less than 50 unweighted cases.									

### 3.5 Children Ever Born and Surviving

In DLHS-RCH, currently married women in the age group of 15-44 years were asked about the children ever born alive and the number of children surviving. Table 3.5 shows mean children ever born and mean surviving children by selected background characteristics and sex of children. A look at the mean children ever born by age of the women reveals that older women had more average live births than younger women. On the average, women in the reproductive age group have given birth to slightly more male children than female children and similar a sex differential is also noted in terms of mean surviving children. Completed fertility, that is, mean children ever born to women in the age group 40-44 years is 3.9 for the state of Orissa and it comprises an average of 2.0 male children and 1.9 female children. Out of the 3.9 mean children ever born to women in the 40-44 year age group, an average of 3.3 children survived. By sex of children, out of 2.0 mean number of males, 1.7 survived on the average and the corresponding mean number of females surviving was 1.6 out of 1.9.

Women with longer marital duration have higher mean number of children ever born. On the average, women who are married for 15 or more years have 3.7 children ever born and on the average 3.2 of them are surviving. There is a clear rural-urban divide in terms of mean number of children ever born with 2.7 children in rural areas and 2.4 children in urban areas. The mean number of children ever born to women who are Hindu, Muslim, Christian and other religions are 2.6, 3.0, 2.8 and 2.8 respectively. The

corresponding mean number of surviving children are 2.3, 2.7, 2.4 and 2.4 for these religious groups respectively. The average number of children ever born also vary by caste/tribe of the eligible women. For women belonging to scheduled caste as well as scheduled tribe, the mean number of children ever born is 2.8, 2.6 for other backward classes and 2.4 for other castes. For all religious groups, the mean number of surviving children is slightly more than 2 with the combination being almost by one surviving male and one surviving female child on the average.

<b>Table 3.5 CHILDREN EVER BORN AND LIVING</b>							
Mean children ever born (CEB) and children surviving (CS) by selected background characteristics of currently married women age 15-44 years, Orissa, 2002-04							
Background characteristic	Mean children ever born			Mean children surviving			Number of women
	Total	Male	Female	Total	Male	Female	
<b>Age Group (years)</b>							
15-19	0.6	0.3	0.3	0.6	0.3	0.3	1,679
20-24	1.4	0.7	0.7	1.3	0.6	0.6	4,805
25-29	2.3	1.2	1.2	2.1	1.0	1.0	5,759
30-34	3.1	1.6	1.5	2.7	1.4	1.3	5,141
35-39	3.5	1.8	1.7	3.0	1.5	1.5	4,229
40-44	3.9	2.0	1.9	3.3	1.7	1.6	3,359
<b>Marital Duration</b>							
0-4	0.8	0.4	0.4	0.7	0.4	0.3	5,008
5-9	2.0	1.0	1.0	1.8	0.9	0.9	5,287
10-14	2.9	1.4	1.4	2.5	1.3	1.3	4,908
15+	3.7	1.9	1.8	3.2	1.6	1.6	9,770
<b>Residence</b>							
Rural	2.7	1.4	1.3	2.3	1.2	1.1	17,760
Urban	2.4	1.2	1.2	2.2	1.1	1.1	7,212
<b>Religion</b>							
Hindu	2.6	1.3	1.3	2.3	1.1	1.1	23,836
Muslim	3.0	1.5	1.5	2.7	1.3	1.3	621
Christian	2.8	1.5	1.3	2.4	1.3	1.1	451
Other	2.8	1.7	1.2	2.5	1.4	1.1	65
<b>Caste/tribe #</b>							
Scheduled caste	2.8	1.4	1.4	2.4	1.2	1.1	4,526
Scheduled tribe	2.8	1.4	1.4	2.3	1.2	1.2	5,246
Other backward class	2.6	1.3	1.2	2.3	1.2	1.1	8,974
Other	2.4	1.2	1.2	2.2	1.1	1.1	6,067
<b>Education</b>							
Non-literate	3.0	1.5	1.5	2.6	1.3	1.3	12,145
0-9@ years	2.4	1.2	1.2	2.2	1.1	1.1	9,062
10 years & above	1.6	0.8	0.7	1.5	0.8	0.7	3,726
<b>Standard of living index</b>							
Low	2.8	1.4	1.4	2.4	1.2	1.2	14,805
Medium	2.5	1.3	1.2	2.3	1.2	1.1	6,228
High	2.0	1.0	1.0	1.9	1.0	0.9	3,939
All women	2.6	1.3	1.3	2.3	1.1	1.1	24,973
Note: Table includes 39 women with missing information on education were not shown separately.# Total number may not add upto N due to don't know and missing cases. @ Literate women with no year of schooling are included.							

The mean number of children ever born is higher for non-literate women (3.0) than women who have completed 0-9 years of schooling (2.4) and 10 or more years of schooling (1.6). The mean number of surviving children for women corresponding to these educational levels is 2.6, 2.2 and 1.5 respectively. Further the mean children ever born for women classified into low, medium and high standard of living by SLI is 2.8, 2.5 and 2.0 respectively. For the state of Orissa, the DLHS-RCH shows inverse association between mean number of children ever born and educational attainment of women and also the level of household economic comfort.

### 3.6 Completed Fertility by District

The level of completed fertility as measured by mean number of children ever born to women of 40-44 years by districts in Orissa together with mean number of surviving children are shown in Table 3.6. On the average, women on the verge of completing reproductive period have given birth to 3.9 children in their reproductive life of which 3.3 children are surviving on the average. Completed fertility in Orissa varies from the low of 3.5 mean children ever born for Anugul to the highest of 4.5 children in Bhadrak, Gajapati, and Jajapur district. Completed fertility in terms of mean number of children ever born is high in the districts of Khenrapara (4.3), Nabarangapur (4.3), Sonapur (4.3), Ganjam (4.2), Kalahandi (4.2), Kendujhar (4.2), Malkangri (4.1), Debagarh (4.0) and Sundergarh (4.0). With the exception of Anugul, mean number of children ever born in all other districts of Orissa is more than 3.5 children. It is also true that in most of the districts mean number of male children is more than that of female children born to women in the 40-44 year age group. Bhadrak (3.9) and Jajapur (3.8) recorded highest mean number of surviving children. Looking at the absolute difference between mean number of children ever born and mean number of surviving children, it seems that infant and child mortality is quite high with variation among districts in Orissa.

<b>Table 3.6 CHILDREN EVER BORN AND LIVING BY DISTRICT</b>						
Mean children ever born (CEB) and children surviving (CS) by district of currently married women age 15-44 years, Orissa, 2002-04						
District	Mean children ever born			Mean children surviving		
	Total	Male	Female	Total	Male	Female
Anugul	3.5	1.9	1.7	2.9	1.6	1.4
Balangir	3.7	1.9	1.7	3.2	1.6	1.6
Baleshwar	3.6	2.0	1.7	3.1	1.7	1.4
Bargarh	3.7	1.9	1.8	3.1	1.6	1.5
Baudh	3.7	2.0	1.6	3.1	1.7	1.4
Bhadrak	4.5	2.4	2.1	3.9	2.1	1.8
Cuttack	3.6	1.9	1.7	3.1	1.7	1.5
Debagarh	4.0	2.1	1.9	3.3	1.7	1.6
Dhenkanal	3.6	1.8	1.7	3.0	1.5	1.4
Gajapati	4.5	2.3	2.2	3.6	1.8	1.8
Ganjam	4.2	2.2	2.1	3.5	1.8	1.7
Jagatsinghapur	3.8	2.1	1.7	3.1	1.7	1.4
Jajapur	4.5	2.3	2.2	3.8	2.0	1.8
Jharsuguda	3.7	2.0	1.7	3.2	1.7	1.5
Kalahandi	4.2	2.3	1.9	3.4	1.8	1.6
Kandhamal	3.8	2.0	1.9	3.2	1.6	1.6
Kendrapara	4.3	2.1	2.2	3.7	1.8	1.9
Kendujhar	4.2	2.1	2.1	3.5	1.7	1.8
Khordha	3.9	2.1	1.9	3.3	1.8	1.5
Koraput	3.6	1.8	1.8	3.0	1.4	1.5
Malkangiri	4.1	1.9	2.2	3.2	1.5	1.8
Mayurbhanj	3.4	1.7	1.7	3.1	1.5	1.5
Nabarangapur	4.3	2.3	2.0	3.5	1.8	1.7
Nayagarh	3.8	2.0	1.8	3.1	1.6	1.5
Nuapada	3.6	2.0	1.6	3.1	1.7	1.4
Puri	3.7	1.8	1.8	3.0	1.5	1.5
Rayagada	3.8	1.9	1.9	3.3	1.6	1.7
Sambalpur	3.5	1.9	1.6	3.1	1.7	1.4
Sonapur	4.3	2.1	2.2	3.6	1.8	1.9
Sundargarh	4.0	2.0	2.0	3.5	1.7	1.7
Orissa	3.9	2.0	1.9	3.3	1.7	1.6

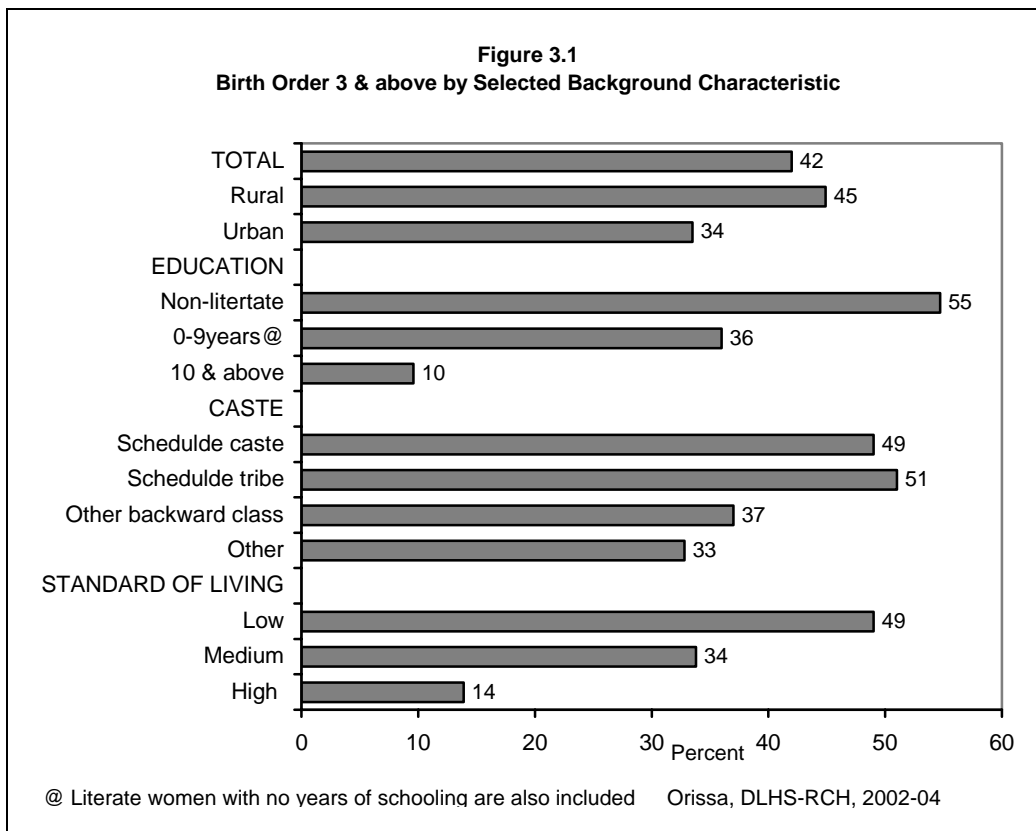
### 3.7 Birth Order

Birth order distribution by selected background characteristics of women is provided in Table 3.7 and Figure 3.1. This distribution 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.

<b>Table 3.7 BIRTH ORDER</b>						
Percent distribution of births during three years preceding the survey by birth order by selected background characteristics, Orissa, 2002-04						
Background characteristic	Birth order				Total percent	Number of births
	1	2	3	4+		
<b>Age of women</b>						
15-19	77.0	19.6	3.1	0.3	100.0	891
20-24	44.5	32.8	15.3	7.4	100.0	3,591
25-29	20.7	29.1	24.4	25.9	100.0	3,349
30-34	5.9	19.9	21.1	53.1	100.0	1,531
35-39	3.9	16.2	15.1	64.8	100.0	502
40-44	0.5	8.5	13.0	78.0	100.0	168
<b>Place of residence</b>						
Rural	28.6	26.5	19.2	25.7	100.0	7,533
Urban	37.3	29.1	14.6	18.9	100.0	2,500
<b>Education (Years of schooling)</b>						
Non-literate	21.3	24.0	20.0	34.7	100.0	5,146
0-9@ years	34.2	29.8	19.5	16.5	100.0	3,513
10 years & above	57.6	32.8	7.2	2.4	100.0	1,354
<b>Religion</b>						
Hindu	31.0	27.5	18.0	23.5	100.0	9,505
Muslim	29.4	20.1	16.7	33.8	100.0	307
Christian	21.1	25.2	22.8	31.0	100.0	187
Other	(42.9)	(25.0)	(21.4)	(10.7)	(100.0)	35
<b>Caste/tribe #</b>						
Scheduled caste	26.6	24.9	19.7	28.8	100.0	2,005
Scheduled tribe	25.0	24.2	18.8	32.0	100.0	2,602
Other backward class	33.8	29.3	18.2	18.7	100.0	3,373
Other	37.7	29.5	15.4	17.4	100.0	1,977
<b>Standard of living index</b>						
Low	25.5	25.2	19.9	29.4	100.0	6,715
Medium	36.2	30.0	17.3	16.5	100.0	2,254
High	52.3	33.9	8.2	5.7	100.0	1,064
Total	30.8	27.2	18.1	24.0	100.0	10,033
Note: Total includes 20 births with missing information on mother's education were not shown separately. # Total number of births may not add upto N due to don't know and missing cases. ( ) Based on less than 50 unweighed cases. @ Literate women with no year of schooling are included.						

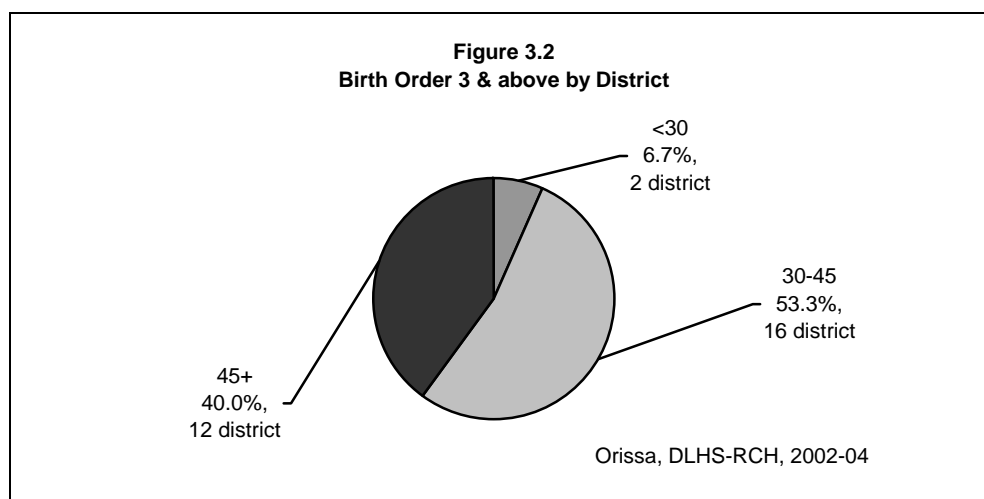
For the state of Orissa, 32 percent of the births in the three years period preceding the survey were of first order, 27 percent of second order and the remaining 42 percent were of order 3 and higher order births. By current age of eligible women, more than 60 percent of births to women in the age group 35-39 years and 40-44 years are 4 and higher order births. For women of 15-19 years, 77 percent births are of first order and 20 percent births are of second order. In the case of eligible women in urban areas 34 percent of the births are of 3 and higher whereas this order births constitute 45 percent for rural women indicating that higher order births are more concentrated in rural areas. Of the total births

born to non-literate women, 55 percent are 3<sup>rd</sup> and higher order births, followed by 36 percent for women with 0-9 years of schooling and 8 percent for women who had 10 or more years of schooling. In short, births to non-literate women are of higher order whereas much lower order births occurred to women who completed 10 or more years of schooling. Looking at the religion differential in birth order distribution, it is observed that 54 percent of births to Christian women are 3<sup>rd</sup> and higher order births. For Muslim, Hindu and women from other religions, the 3<sup>rd</sup> and higher order births constitute 52 percent, 42 percent and 22 percent respectively. The occurrence of births of order 3 and above is more among scheduled tribe women(51 percent) than among scheduled caste (49 percent), other backward classes (37 percent) and other castes (33 percent) women. Incidence of births of order 3 and above for women classified by household standard of living index is 14 percent for high, 34 percent for medium and 49 percent for low living standard household women.



### 3.8 Birth Order by District

Table 3.8 and Figure 3.2 show the birth order distribution by districts in Orissa. The proportion of births of order 3 and above ranges from the lowest of 26 percent in Dhenkanal to the highest of 52 percent in Malkangiri. The districts, which have lower proportion of births of order 3 and above, are Puri (27 percent), Jagatsinghapur (33 percent), Khendrapara (34), Anugul (34), Balangir (34) and Baleshwar (34). The districts, which can be classified as having higher proportion of births of order 3 and above, are Gajapati (51 percent), Rayagadha (51 percent), and Sundergarh (49 percent). The remaining districts fall midway between these districts in terms of incidence of births of order 3 and above.



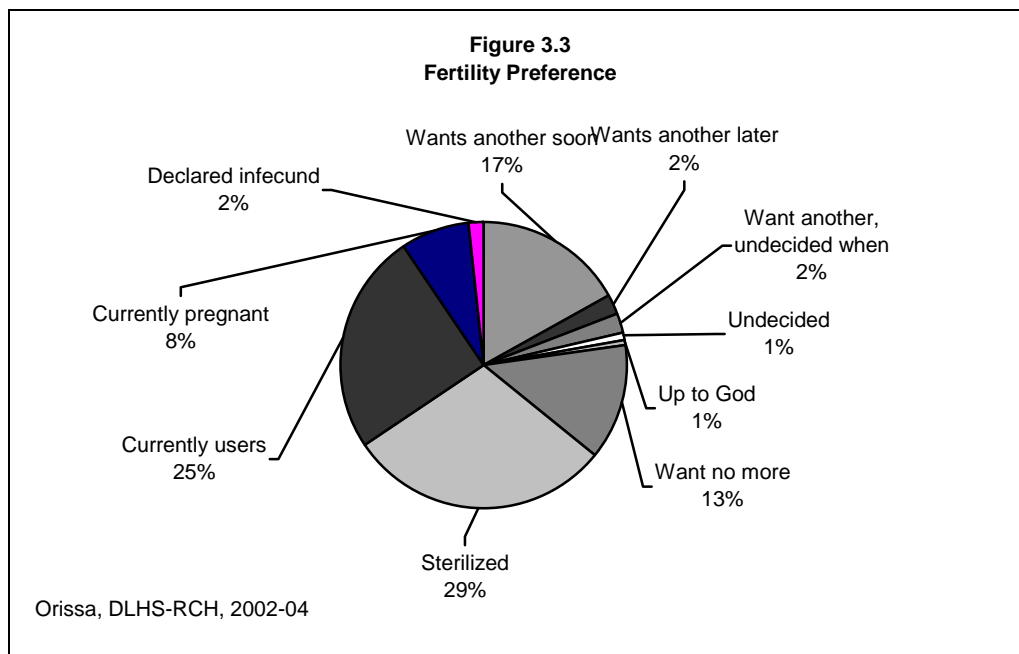


<b>Table 3.8 BIRTH ORDER BY DISTRICT</b>				
Percent distribution of births during three years preceding the survey by birth order, according to district, Orissa, 2002-04				
District	Birth order			
	1	2	3	4+
Anugul	37.5	28.3	14.7	19.5
Balangir	35.8	30.0	14.7	19.5
Baleshwar	34.6	31.6	14.3	19.5
Bargarh	29.4	29.7	22.9	17.9
Baudh	29.6	29.6	14.7	26.1
Bhadrak	28.5	27.8	20.4	23.4
Cuttack	40.4	25.3	16.7	17.6
Debagarh	34.1	26.2	14.4	25.3
Dhenkanal	39.3	35.2	16.4	9.1
Gajapati	26.1	22.9	15.7	35.4
Ganjam	25.5	28.4	20.7	25.4
Jagatsinghapur	37.6	29.7	13.9	18.9
Jajapur	29.4	24.8	21.0	24.8
Jharsuguda	31.9	26.1	16.6	25.3
Kalahandi	24.5	26.9	17.6	30.9
Kandhamal	27.0	27.0	16.2	29.7
Kendrapara	35.9	30.7	13.2	20.3
Kendujhar	25.1	27.9	17.1	29.9
Khordha	34.7	26.7	17.9	20.7
Koraput	27.1	25.5	18.6	28.8
Malkangiri	23.6	24.2	17.8	34.4
Mayurbhanj	33.4	26.0	18.4	22.3
Nabarangapur	28.6	23.8	18.8	28.9
Nayagarh	35.6	27.0	20.9	16.5
Nuapada	29.5	29.7	20.3	20.5
Puri	41.6	31.9	15.9	10.6
Rayagada	26.7	22.2	21.2	29.9
Sambalpur	39.2	23.1	13.5	24.2
Sonapur	30.5	23.3	17.6	28.6
Sundargarh	24.1	27.2	22.2	26.4
Orissa	30.8	27.2	18.1	24.0

### 3.9 Fertility Preference

The distribution of currently married women desiring additional children and preferred sex of additional children by number of living children of the women is shown in Table 3.9 and Figure 3.3. Out of the 2,859 women with no living child, 23 percent are currently pregnant and only 5 percent are using spacing methods, while 61 percent want to have children within two years, 1 percent want to have children after two years, 2 percent are undecided about the timing of birth and 3 percent desired not to have any children. Among the currently married women, the desire for additional children dwindles down with increasing number of living children. As many as 36 percent of the women having one living child are using spacing methods, 28 percent of them want additional children within two years, 7 percent after two years, 1 percent are undecided about the timing of the next child, 7 percent of them want no more additional children and 3 percent are sterilized. Use of permanent as well as temporary means of contraception tends to be

accelerated with number of living children. In the state of Orissa, out of the 24,973 surveyed representative women, 17 percent desired to have additional children within two years, 2 percent after two years, 13 percent want no more children, 8 percent are currently pregnant and 55 percent are using either terminal or temporary contraceptive methods. A total of 5,682 women want additional children irrespective of the number of living children. Out of 1,916 women who have no living children and desire for additional children, 27 percent want a boy as the first child, 2 percent desired for girl, for 57 percent, the sex of the child is immaterial and 14 percent leave it to God. With increasing number of living children, male is the dominating preferred sex of the next child though a sizeable proportion of women desiring additional children expressed that the sex of the child was immaterial.



<b>Table 3.9 FERTILITY PREFERENCE</b>						
Percent distribution of currently married women by desire for children, according to number of living children, Orissa, 2002-04						
Desire for children	Number of living children					Total
	0	1	2	3	4+	
<b>Desire for additional child</b>						
Wants another soon <sup>1</sup>	61.2	27.5	11.3	6.6	4.3	17.0
Wants another later <sup>2</sup>	0.7	7.1	1.7	1.2	0.6	2.1
Want another, undecided when	1.9	5.2	2.2	1.6	0.7	2.2
Undecided	1.6	1.4	0.8	0.7	0.5	0.9
Up to God	1.6	0.8	0.3	0.4	0.5	0.6
Want no more	2.5	6.9	13.1	16.2	19.4	13.1
Sterilized	0.8	2.6	29.9	45.2	46.8	29.4
Currently users <sup>3</sup>	4.6	35.6	33.9	22.8	21.2	25.2
Currently pregnant	23.2	11.6	5.6	3.8	2.7	7.5
Declared infecund	1.8	1.3	1.0	1.5	3.2	1.8
Missing	0.1	0.1	0.1	0.1	0.1	0.1
Total percent	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	2,859	4,342	6,076	4,832	6,864	24,973
<b>Preferred sex of additional children</b>						
Boy	27.3	46.5	58.7	66.3	65.0	45.4
Girl	2.0	12.7	10.7	11.1	4.5	8.0
Doesn't matter	57.0	32.3	22.3	14.3	18.8	36.2
Up to God	13.7	8.5	8.4	8.3	11.7	10.5
Total percent	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	1,916	1,821	992	503	449	5,682
Note: <sup>1</sup> Wants next births within 2 years. <sup>2</sup> Wants to delay next birth for 2 or more years. <sup>3</sup> Other than sterilization						

### 3.10 Pregnancy Outcomes

Table 3.10 shows distribution of pregnancy outcomes including live birth, stillbirth, induced abortion and spontaneous abortion by districts in Orissa. For the state as a whole, 89 percent of pregnancy ends in live births, 5 percent in induced abortions, 4 percent in spontaneous abortion and 2 percent in stillbirth. More pregnancies in rural areas end in live births (91 percent) than in urban areas (84 percent), while the incidence of induced abortion is more in urban areas (9 percent) than in rural areas (3 percent). The proportion of pregnancies ending in live births ranges from 82 percent in Debagarh, Nayagarh and Puri to 97 percent in Rayagada. The district on the lower side of pregnancies ending in live birth includes Baudh, Dhenkanal, Cuttack and Jagatsinghapur with less than 86 percent of pregnancies in these districts ending in live births. Baleswar, Kalahandi, Kandhamal, Kendujhar, Koraput, Mayurbhanj, Nabarangapur, Nuapada, Sambalpur and Sonapur are the other districts with more than 90 percent of pregnancies ending in live births. The incidence of stillbirth is highest in Jagatsinghapur (5 percent) followed by Baudh, Jajapur and Sundanagar (4 percent). Induced abortion is higher in the districts of Debagarh (13 percent), Dhenkanal (10 percent), Cuttack, Khenrapara and Nayagarh with 9 percent. Spontaneous abortion is zero in Jagatsinghpur, and highest in Gajapati (8 percent)..

**Table 3.10 OUTCOMES OF PREGNANCY**

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

State/Districts	Live birth	Stillbirth	Induced abortion	Spontaneous abortion	Missing	Total percent
<b>State-Rural</b>	90.6	2.4	3.3	3.7	0.1	100.0
<b>State-Urban</b>	84.0	2.6	8.6	4.6	0.3	100.0
<b>State-Total</b>	88.9	2.4	4.6	3.9	0.1	100.0
Anugul	87.8	3.3	4.7	3.9	0.2	100.0
Balangir	85.5	1.6	4.8	8.1	0.0	100.0
Baleshwar	90.6	1.8	3.9	1.6	2.1	100.0
Bargarh	88.4	3.0	3.0	5.6	0.0	100.0
Baudh	83.5	4.5	8.1	3.8	0.0	100.0
Bhadrak	89.5	2.4	4.3	3.8	0.0	100.0
Cuttack	85.5	2.4	9.2	2.9	0.0	100.0
Debagarh	81.6	2.1	12.7	3.4	0.3	100.0
Dhenkanal	84.7	1.8	10.3	3.2	0.0	100.0
Gajapati	88.2	3.5	0.4	7.8	0.0	100.0
Ganjam	88.0	1.9	5.5	4.7	0.0	100.0
Jagatsinghapur	85.6	5.3	8.2	0.0	0.8	100.0
Jajapur	87.2	4.3	4.5	4.0	0.0	100.0
Jharsuguda	89.3	0.7	3.9	6.1	0.0	100.0
Kalahandi	90.5	2.2	2.8	4.6	0.0	100.0
Kandhamal	92.7	1.7	2.1	3.5	0.0	100.0
Kendrapara	87.3	0.9	9.0	2.8	0.0	100.0
Kendujhar	93.8	1.4	2.1	2.7	0.0	100.0
Khordha	89.8	2.8	4.6	2.8	0.0	100.0
Koraput	93.1	1.6	2.0	3.3	0.0	100.0
Malkangiri	96.0	1.3	0.6	2.1	0.0	100.0
Mayurbhanj	91.4	1.4	4.4	2.6	0.2	100.0
Nabarangapur	93.9	2.5	0.7	2.7	0.1	100.0
Nayagarh	81.9	1.9	9.2	7.0	0.0	100.0
Nuapada	91.2	3.3	0.2	5.3	0.0	100.0
Puri	82.4	3.8	7.8	6.1	0.0	100.0
Rayagada	96.5	1.5	0.3	1.7	0.0	100.0
Sambalpur	90.3	2.5	3.8	3.4	0.0	100.0
Sonapur	90.0	3.3	3.9	2.9	0.0	100.0
Sundargarh	87.3	4.2	4.4	4.2	0.0	100.0

## CHAPTER IV

### MATERNAL HEALTH CARE

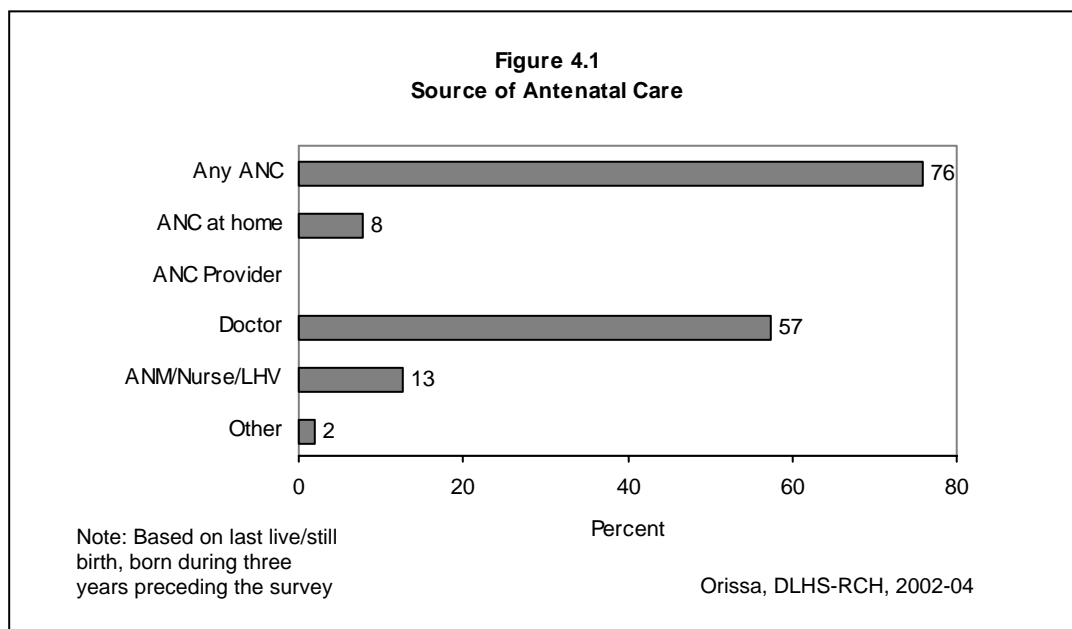
Provision of maternal health care services to ensure safe motherhood is one of the major components of the Reproductive and Child Health (RCH) programme. The RCH programme services for antenatal care, include at least three antenatal care visits, iron prophylaxis for pregnant and lactating women, at 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 had and the treatment seeking behaviour in case of complications. Women whose last pregnancy terminated into abortion, either spontaneous or induced, were asked about the utilisation of safe abortion services and the post-abortion complications they experienced. This chapter presents information on antenatal, natal and postnatal care received by women whose last pregnancy had terminated during the three years preceding the survey as live birth or as stillbirth.

## 4.1 Antenatal Check-Ups

Women who had given a birth during the three years preceding the survey were asked whether they had gone for antenatal check-ups outside the home, and if they had, what type of service provider had given them the check-ups. They were also asked whether any health worker had visited them at home to provide antenatal check-ups. Table 4.1 and Figure 4.1 present the percentage of women who had given birth during the three years preceding the survey, and information regarding the antenatal check-ups they had by source of antenatal check-ups according to some selected background characteristics. Results show that three-fourth of women received antenatal check-ups during the three years preceding the survey. Fifty seven percent of women received antenatal check-ups from doctors, and 13 percent from ANM/Nurse/LHV. And 8 percent women received antenatal check-ups at the doorstep from the ANM or health worker.



Antenatal check-ups are more common among younger women age below 20 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 (86 percent) than in rural areas (73 percent), and the percentage of women who received antenatal check-ups from doctors is much higher in urban areas (80 percent) than in rural areas (50 percent). Majority of women aged less than 35 years and women who had delivered their first child received antenatal check-ups from doctors in comparison to other service providers. Sixty six percent of non-literate women received antenatal check-ups, while most of the women (95 percent) who had completed high school education received antenatal check-ups for their last pregnancy that terminated into birth (either live or still birth) during the three years preceding the survey.

<b>Table 4.1 ANTENATAL CHECK-UP</b>							
Percentage of women* who received any antenatal check-up (ANC) during pregnancy by source of antenatal provider, according to selected background characteristics, Orissa, 2002-04							
Background characteristic	Any <sup>1</sup> antenatal check-up	Antenatal check-up only at home by ANM	Health personnel providing ANC <sup>2</sup>				Number of women
			Doctor	ANM/ Nurse/ LHV	Other health professional	Other <sup>3</sup>	
<b>Age group</b>							
Less than 20 years	78.4	8.3	53.7	17.8	0.4	2.7	776
20-34 years	76.3	7.5	58.4	12.1	0.4	1.6	7,822
35 years & above	67.6	9.5	47.9	12.8	0.1	0.8	680
<b>Children ever born</b>							
1	87.5	4.4	73.7	11.4	0.4	1.7	2,687
2	79.9	7.0	63.3	11.3	0.3	1.0	2,561
3	71.7	8.6	51.4	13.9	0.3	1.5	1,659
4+	60.7	11.8	35.0	14.7	0.6	2.3	2,292
<b>Residence</b>							
Rural	72.7	9.7	49.9	14.6	0.4	1.8	7,003
Urban	85.7	1.4	79.9	6.4	0.4	1.0	2,275
<b>Education</b>							
Non-literate	65.9	11.4	39.5	16.1	0.4	2.1	4,750
0-9 @ years	83.0	4.9	69.8	10.6	0.3	1.2	3,185
10 years & above	94.5	1.2	90.7	4.6	0.4	0.7	1,325
<b>Religion</b>							
Hindu	76.0	7.8	57.2	12.7	0.4	1.6	8,816
Muslim	74.3	2.5	65.2	8.0	1.2	0.6	251
Christian	69.0	10.2	45.5	13.1	1.1	2.3	181
Other	(85.7)	(3.6)	(78.6)	(7.1)	(3.6)	(0.0)	30
<b>Caste/tribe#</b>							
Scheduled caste	74.2	7.2	55.4	12.9	0.3	0.9	1,780
Scheduled tribe	63.7	14.0	31.9	18.3	0.3	2.6	2,411
Other backward class	79.8	5.1	66.9	10.7	0.4	1.7	3,148
Other	86.4	4.7	75.4	7.9	0.5	1.1	1,869
<b>Standard of living index</b>							
Low	69.7	10.1	45.1	15.8	0.4	1.9	6,155
Medium	84.6	3.8	75.8	7.3	0.4	1.2	2,057
High	94.5	1.1	91.4	4.5	0.3	1.0	1,066
<b>Availability of health facility<sup>4</sup> in the village</b>							
No	69.8	9.6	48.9	12.3	0.3	1.8	3,864
Yes	76.2	9.9	51.1	17.4	0.5	1.8	3,139
Total	75.9	7.7	57.3	12.6	0.4	1.6	9,278
<p>Note: * Women who had their last live/still birth since 1-1-1999/1-1-2001. Total includes 79 women with zero parity and 18 women with missing information on education who were not shown separately. <sup>1</sup> Antenatal check-ups either at home or outside from home at health facility. <sup>2</sup> Antenatal check-ups outside home and percentage add more than 100.0 due to multiple responses. <sup>3</sup> Other also includes trained and untrained <i>dai</i>. # 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. <sup>4</sup> Includes sub-centre, primary health centre, community health centre or referral hospital, government hospital, and government dispensary within the village.</p> <p>( ) Based on less than 50 unweighted cases.</p>							

The proportion of women who received antenatal check-ups from a doctor, increased steadily with the level of education and the standard of living index. Forty percent non-literate women as compared to 91 percent having education of more than 10 years received ANC from doctors. Similarly, 45 percent women belonging to households with a low standard of living against 91 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 (57 percent) was lower than that of Muslim women (65 percent). Seventy five percent of women from the 'other castes' category received antenatal check-ups from doctors, while it was 55 percent for scheduled caste women, and 32 percent for scheduled tribe women, and for women from other backward classes, it was 67 percent. Women from scheduled tribes were more likely to receive antenatal check-ups from auxiliary nurse midwives, or LHVs. Thirty two percent of scheduled tribe women received antenatal check-ups from ANMs, while it was 20 percent among scheduled castes, 16 percent among other backward class women, and 13 percent of women from the '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.



<b>Table 4.2 PLACE OF ANTENATAL CHECK-UP</b>									
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, Orissa, 2002-04									
Background characteristic	Antenatal check-up only at home	Place of antenatal check-ups <sup>1</sup>							Number of women
		Government <sup>2</sup> health facility	Private <sup>3</sup> health facility	PHC	SC	ISM <sup>4</sup> facility			
						Govt.	Private	Other	
<b>Age group</b>									
Less than 20 years	8.3	52.1	8.7	22.4	7.0	0.9	9.1	6.6	776
20-34 years	7.5	44.6	14.5	19.7	5.9	1.6	12.3	4.4	7,822
35 years & above	9.5	38.4	11.0	18.0	5.7	3.2	9.4	5.5	680
<b>Children ever born</b>									
1	4.4	51.6	19.6	16.3	4.1	2.0	14.3	3.9	2,687
2	7.0	48.4	14.3	19.2	5.6	1.7	12.5	4.5	2,561
3	8.6	41.1	13.6	21.2	6.7	1.1	10.2	4.7	1,659
4+	11.8	34.9	6.6	26.1	9.9	1.5	7.3	6.6	2,292
<b>Residence</b>									
Rural	9.7	43.9	10.1	25.5	8.1	1.6	10.2	5.5	7,003
Urban	1.4	47.3	25.1	6.8	1.2	1.9	15.8	2.8	2,275
<b>Education</b>									
Non-literate	11.4	38.5	8.0	25.8	9.8	0.9	6.9	7.4	4,750
0-9 @ years	4.9	52.6	15.8	19.4	3.9	2.1	12.4	2.6	3,185
10 years & above	1.2	48.2	29.6	8.2	2.2	2.2	21.0	3.1	1,325
<b>Religion</b>									
Hindu	7.8	45.2	13.7	20.1	5.9	1.7	11.3	4.8	8,816
Muslim	2.5	33.2	17.3	12.9	1.8	2.4	28.6	3.2	251
Christian	10.2	41.5	6.7	20.8	14.2	0.3	14.9	1.6	181
Other	(3.6)	(53.6)	(14.3)	(4.3)	(4.3)	(4.3)	(21.7)	(0.0)	30
<b>Caste/tribe#</b>									
Scheduled caste	7.2	49.5	10.8	25.8	5.3	1.4	8.9	3.4	1,780
Scheduled tribe	14.0	35.3	5.5	25.2	14.3	1.1	5.9	11.0	2,411
Other backward class	5.1	49.2	18.0	18.9	4.2	1.3	11.2	3.3	3,148
Other	4.7	45.2	19.8	12.8	2.9	2.9	19.7	2.9	1,869
<b>Standard of living index</b>									
Low	10.1	43.4	8.3	26.0	8.7	1.2	7.7	6.0	6,155
Medium	3.8	50.6	20.2	14.4	2.7	1.7	14.0	2.5	2,057
High	1.1	41.4	32.9	6.1	1.3	3.1	23.7	3.4	1,066
<b>Availability of health facility<sup>5</sup> in the village</b>									
No	9.6	42.3	9.1	26.1	5.8	1.4	10.7	5.1	3,864
Yes	9.9	45.9	11.3	24.8	10.7	1.7	9.6	5.9	3,139
Total	7.7	44.7	13.8	19.8	6.0	1.7	11.9	4.7	9,278

Note: \* Women who had their last live/still birth since 1-1-1999/1-1-2001. Table includes Total includes 79 women with zero parity and 18 women with missing information on education 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. <sup>1</sup> Antenatal check-ups outside home and percentage add more than 100.0 due to multiple responses. <sup>2</sup> 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. <sup>3</sup> Includes Private hospital/clinic or non-governmental hospital/ trust hospital or clinic. <sup>4</sup> Indian system of medicine. <sup>5</sup> Includes sub-centre, primary health centre, community health centre or referral hospital, government hospital, and government dispensary within the village.

(i) Based on less than 50 unweighted cases.

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 45 percent of women received antenatal check-ups at Government health facility, including 20 percent through primary health centre and 6 percent through sub-centre, and 14 percent at a private health facility. Other than this, 2 percent of women reported that they had received antenatal check-ups at the Government facility of Indian system of medicine, and 12 percent at private facility of 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 (52 percent) than older women - 45 percent for age 20-34 and 38 percent for age 35 and above. Forty four percent women from rural areas availed government health facilities for antenatal check-ups that were almost same in urban areas (47 percent), and a high proportion of women (25 percent) from urban areas availed private health facilities for antenatal check-ups than women from rural areas (10 percent). It may be mentioned that only 8 percent of the women from rural areas and younger women aged below 20 years (7 percent) received antenatal check-ups at sub-centre. This indicates that the services are not reaching the target population, particularly through the public sector. A comparatively higher proportion of women who received antenatal check-ups at Government health facilities are literate not upto high school, Hindu, scheduled caste or tribe, living in households with medium standard of living.

### **4.3 Antenatal Check-Ups by District**

Table 4.3 indicates the antenatal coverage in Orissa that ranges from the highest of 88 percent in Bargarh to the lowest of 54 percent in Malkangiri. In almost all districts, except Malkangiri and Nabarangpur more than 65 percent of women got some kind of antenatal check-ups for their last birth during the three years preceding the survey. The practice of receiving Antenatal check-ups from doctor was reported low in Malkangiri (21 percent), Rayagada (34 percent), and Koraput (36 percent) and in all the remaining districts more than 40 percent of the women received antenatal check-ups from doctor and it is highest in Puri and Jharsuguda (78 percent) followed by Baragarh (77 percent). Antenatal check up received by women at home provided by ANM ranges from the highest of 25 percent in Koraput to the lowest of one percent in Boudh.

The extent of utilisation of government health facilities for antenatal check-ups was higher than that of private health facilities. The range of antenatal check-ups coverage through government facilities was highest in Baudh (72 percent) to the

lowest of 25 percent in Malkangiri. On the other hand, the extent of receiving antenatal check-ups from private health facilities ranges from the highest of 34 percent in Balangir district to a lowest of zero percent in Nabarangpur. About one third (32 percent) of the pregnant women in Jharsuguda district availed the Indian system of medicine (either government or private) for an antenatal check-up. In 12 out of 30 districts, more than 10 percent of women availed such services through the Indian system of medicine.

<b>Table 4.3 ANTENATAL CHECK-UPS BY DISTRICT</b>							
Percentage of women* who received any antenatal care (ANC), by source and place of antenatal check-ups by district, Orissa, 2002-04							
District	Any <sup>1</sup> antenatal check-up	Antenatal check-up only at home by ANM	Health personnel providing ANC		Place of antenatal check-ups		
			Doctor	ANM/ Nurse	Government <sup>2</sup> health facility	Private <sup>3</sup> health facility	ISM <sup>4</sup> facility
Anugul	74.4	3.9	61.1	13.1	52.2	14.8	6.6
Balangir	87.5	2.8	73.2	11.4	45.9	34.3	1.5
Baleshwar	67.6	5.5	51.3	10.7	34.2	2.3	22.4
Bargarh	88.0	3.8	76.6	13.1	54.4	28.0	7.0
Baudh	86.7	0.9	73.9	12.2	71.8	1.0	13.6
Bhadrak	72.7	6.4	57.3	8.3	35.2	18.2	16.2
Cuttack	86.4	5.7	67.8	14.3	44.6	16.2	19.4
Debagarh	72.7	1.7	63.9	6.0	55.6	3.8	12.8
Dhenkanal	80.2	4.0	69.0	9.6	49.5	21.5	7.0
Gajapati	74.9	10.0	47.2	15.0	50.8	11.1	5.7
Ganjam	76.4	13.7	55.5	11.3	40.2	23.8	1.7
Jagatsinghapur	79.2	1.5	71.8	6.6	54.1	2.1	24.7
Jajapur	72.4	5.0	60.1	11.7	42.0	22.6	6.8
Jharsuguda	86.2	3.4	77.5	7.1	47.3	2.6	31.6
Kalahandi	74.4	4.6	62.7	7.1	53.3	1.1	19.6
Kandhamal	69.4	3.1	43.9	23.9	54.2	9.3	2.3
Kendrapara	79.5	1.9	69.6	7.0	53.7	15.5	10.2
Kendujhar	72.2	13.9	43.0	15.6	46.2	8.5	1.0
Khordha	80.9	6.2	63.8	13.0	53.8	15.2	3.0
Koraput	71.5	24.7	35.8	9.8	36.6	1.8	7.3
Malkangiri	54.3	19.3	21.2	13.6	24.7	3.0	0.4
Mayurbhanj	77.7	9.8	50.6	23.6	44.7	11.0	3.5
Nabarangapur	57.8	5.3	43.6	8.3	40.4	0.0	12.2
Nayagarh	71.9	4.9	60.7	5.9	49.5	0.3	18.4
Nuapada	78.7	6.0	60.0	17.9	58.7	8.4	2.4
Puri	83.9	1.9	78.0	3.5	50.0	5.7	27.4
Rayagada	72.0	21.5	34.1	20.2	36.0	9.3	4.8
Sambalpur	87.0	3.1	74.1	13.2	58.9	16.9	7.7
Sonapur	84.5	3.5	73.3	10.6	61.2	21.3	2.3
Sundargarh	75.3	4.2	55.2	17.2	48.6	17.2	4.4
Orissa	75.9	7.7	57.3	12.6	44.7	13.8	9.2

Note: \* Women who had last live/still birth during three years preceding the survey. <sup>1</sup> Antenatal check-ups either at home or health facility. <sup>2</sup> 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. <sup>3</sup> Includes Private hospital/clinic or non-governmental hospital/ trust hospital or clinic. <sup>4</sup> Either government or private Indian system of medicine.

#### 4.4 Reasons for Not Seeking Antenatal Check-Ups

Table 4.4 shows the percentage of women who had given live/still birth during the three years preceding the survey and who did not receive any antenatal check-ups by the main reason for not seeking check-ups according to residence and availability of health facility in the village. Forty six percent of women stated that it was not necessary to have an antenatal check-up. It was surprising to see that same proportion of urban women and rural women felt that it was not necessary to have an antenatal check-up. Forty four percent of the women from the villages with a health facility stated that an antenatal check-up was not necessary while 47 percent of women reported so in case of villages where a health facility is not available. About 4 percent of women felt that it was not customary to go for an antenatal check-up. Other factors contributing to non-use of antenatal care were that it costs too much (20 percent), it was situated too far, or there was no transportation (10 percent), no time to go and family did not allow to avail antenatal care (6 and 5 percent respectively), and 14 percent reported lack of knowledge of these services. Five percent of the women reported 'poor quality of services' as the main reason. Twenty percent of women from villages with a health facility reported too much cost as the reason for not seeking antenatal check-up and 14 percent of women reported lack of knowledge as one of the reason. The corresponding figures were 22 and 15 percent of women each from villages without a health facility.

<b>Table 4.4 REASONS FOR NOT SEEKING ANTENATAL CHECK-UPS</b>					
Percentage of women* who did not receive any antenatal check-up by the main reason for not receiving an antenatal check-up, according to residence and availability of health facility in the village, Orissa, 2002-04					
Reason	Total	Residence		Availability of health facility <sup>1</sup> in the village	
		Rural	Urban	No	Yes
Not Necessary	46.3	46.3	46.3	47.7	44.1
Not customary	4.1	3.6	7.2	3.6	3.5
Cost too much	19.7	20.9	12.5	21.7	19.6
Health facility too far/ No transport	9.6	10.4	5.1	9.8	11.3
Poor quality service	4.5	4.5	4.3	5.2	3.5
No time to go	5.9	4.5	14.2	4.5	4.4
Family did not allow	5.3	4.6	9.5	4.6	4.7
Lack of knowledge	13.9	14.3	11.5	14.6	13.8
Other	5.2	4.8	7.1	4.8	4.9
Number of women	2,238	1,913	324	1,166	747

Note: \* Women who had their last live/still birth since 1-1-1999/1-1-2001.  
<sup>1</sup> Includes sub-centre, primary health centre, community health centre or referral hospital, government hospital, and government dispensary within the village.  
 Note: percentage may add more than 100.0 due to multiple response

#### 4.5 Components of Antenatal Check-ups

Women who received any kind of antenatal check-ups were asked whether they received each of the several components of antenatal check-ups at least once during their pregnancy. Table 4.5 presents the percentage of women who received specific components of check-ups by residence. Except for X-ray (which is 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.

Fifty two percent of women were weighted, 53 percent had their blood pressure checked, and 64 percent had an abdominal examination as the part of the antenatal check-ups. Other common components of antenatal check-ups were blood test (49 percent), urine test (43 percent), measurement of height (12 percent), internal examination (13 percent), and breast examination (11 percent). About 12 percent of women had a sonogram or ultrasound, 3 percent had an X-ray and only one percent of women reported that they had amniocentesis test. All of these measurements or procedures 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 birth during three years preceding the survey is also presented in Table 4.5. Advice on diet was given to 70 percent of urban women as compared to 54 percent of rural women and 59 percent in general. Twenty three percent of the women received advice on danger signs of pregnancy. Women were less likely to receive advice on delivery care (25 percent), breastfeeding (21 percent), and newborn care (23 percent). Advice on family planning was given to only 15 percent of women.

<b>Table 4.5 COMPONENTS OF ANTENATAL CHECK-UPS</b>			
Percentage of women* who received an antenatal check-up by specific components of antenatal check-up, according to residence, Orissa, 2002-04			
Components of antenatal check-ups	Total	Rural	Urban
Antenatal measurements/tests			
Weight measured	52.4	48.3	62.9
Height measured	11.5	10.1	15.3
Blood pressure checked	52.8	44.9	73.5
Blood tested	49.2	42.3	67.2
Urine tested	43.0	34.6	64.9
Abdomen examined	63.8	60.6	72.2
Internal examined	12.6	9.8	19.9
Breast examined	11.1	10.2	13.6
X-ray	2.5	1.9	4.2
Sonography /ultrasound	11.7	6.9	24.0
Amniocentesis	1.2	1.0	2.0
Antenatal advice			
Diet	58.7	54.2	70.3
Danger signs of pregnancy	23.3	19.6	33.1
Delivery care	24.7	23.4	28.1
Breast feeding	21.3	20.4	23.7
New born care	23.2	22.0	26.4
Family planning	14.6	14.6	14.6
Number of women who received any antenatal check-up	7,039	5,088	1,951

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

#### **4.6 Antenatal Care Services**

In India, the Reproductive and Child Health Programme envisages that all pregnant women should be registered in the first 12-16 weeks (Ministry of Health and Family Welfare, 1997). Accordingly the first antenatal check-up 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, receipt of tetanus toxoid injection and supplement iron folic acid tablets. The results are presented in Table 4.6. In Orissa, 47 percent of the women received at least three antenatal check-ups and 32 percent had four or more check-ups. At least three antenatal check-ups were received by 66 percent of women in urban areas compared with 43 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. Thirty two percent of non-literate, 57 percent literate women (educated below high school) and 80 percent of women who had 10 or more years of schooling reported at least 3 antenatal care visits. Parity of women is negatively associated with antenatal check-ups. About three fourth of women with parity one received three antenatal check-ups compared to only one fourth of the women with parity 4 and above.

**Table 4.6 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, Orissa, 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+
<b>Number of ANC visits</b>										
No visit	24.2	27.4	14.3	34.1	17.1	5.6	12.5	20.1	28.4	39.4
1	11.9	13.6	6.9	15.2	9.9	4.8	9.6	11.8	14.1	13.4
2	16.6	17.7	12.9	18.9	16.1	9.7	17.2	16.3	17.0	15.9
3	15.5	15.5	15.6	13.6	18.9	14.4	15.5	16.4	15.7	14.4
4+	31.8	25.8	50.2	18.2	38.0	65.5	45.2	35.3	24.7	17.0
Missing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Stage of pregnancy at the time of the first antenatal check-up</b>										
No antenatal check-up	24.2	27.4	14.3	34.1	17.1	5.6	12.5	20.1	28.4	39.4
First trimester	38.7	32.2	58.7	25.1	45.5	71.1	52.6	42.9	31.6	22.5
Second trimester	30.2	33.1	21.0	32.2	31.7	19.4	28.8	30.5	32.5	30.0
Third trimester	6.9	7.2	6.0	8.5	5.7	4.0	6.1	6.4	7.5	8.1
Missing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Women who received TT</b>										
No TT	14.3	14.6	13.5	20.9	9.0	3.4	7.8	9.7	16.6	25.1
1	8.2	8.5	7.1	10.3	6.3	4.6	6.3	8.2	9.7	9.3
2+	76.6	76.1	78.5	67.8	83.8	91.3	85.3	81.0	73.0	64.5
Do not remember/missing	0.9	0.9	0.9	0.9	0.9	0.7	0.7	1.1	0.8	1.0
<b>Women who received IFA tablets/syrup</b>										
No IFA/syrup	24.4	24.3	25.0	29.1	22.8	11.9	16.2	22.3	26.8	34.8
Received but not consumed	5.9	6.3	4.7	5.5	7.3	4.1	5.5	5.8	7.9	5.1
Consumed one IFA per day	46.5	46.5	46.5	41.1	50.1	56.9	52.4	49.8	43.5	37.8
Received 100+ IFA tablets/syrup	24.3	22.1	31.1	19.2	23.4	44.7	30.9	25.4	21.0	17.8
Percentage of women who received full <sup>1</sup> antenatal check-ups	15.7	12.4	26.1	9.1	16.1	38.8	23.5	16.6	12.0	8.2
Number of women	9,278	7,003	2,275	4,750	3,185	1,325	2,687	2,561	1,659	2,292

Note: Total includes 79 women with zero parity and 18 women with missing information on education who were not shown separately. @ Literate women with no years of schooling are also included. <sup>1</sup> 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 4.6 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, Orissa, 2002-04

Antenatal care indicators	Religion				Caste#				Standard of living index			Availability of health facility <sup>2</sup> in the village	
	Hindu	Muslim	Christian	Other	Schedule d caste	Schedule d tribe	Other backward class	Other	Low	Medium	High	No	Yes
<b>Number of ANC visits</b>													
No visit	24.0	25.7	31.0	(14.3)	25.9	36.4	20.2	13.6	30.3	15.5	5.6	30.3	23.8
1	12.0	7.7	12.4	(14.3)	12.8	14.9	11.3	8.4	14.3	9.0	3.6	13.8	13.3
2	16.5	18.6	18.5	(10.7)	18.5	17.6	16.5	13.8	18.7	14.9	7.7	16.8	18.8
3	15.8	9.2	11.4	(21.4)	17.1	13.4	16.6	14.9	15.5	17.3	12.5	15.5	15.5
4+	31.7	38.9	26.6	(39.3)	25.7	17.7	35.4	49.4	21.2	43.3	70.6	23.6	28.5
Missing	0.0	0.0	0.0	(0.0)	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
<b>Stage of pregnancy at the time of the first antenatal check-up</b>													
No antenatal check-up	24.0	25.7	31.0	(14.3)	25.9	36.4	20.2	13.6	30.3	15.5	5.6	30.3	23.8
First trimester	38.9	40.0	29.9	(46.4)	33.3	24.9	44.1	52.7	28.2	51.8	74.1	29.4	35.7
Second trimester	30.3	23.5	32.5	(21.4)	34.1	31.5	29.1	26.6	33.9	26.8	15.0	32.5	34.0
Third trimester	6.8	10.9	6.6	(17.9)	6.7	7.2	6.6	7.1	7.6	5.8	5.3	7.8	6.5
Missing	0.0	0.0	0.0	(0.0)	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
<b>Women who received TT</b>													
No TT	14.3	8.6	19.3	(14.3)	15.6	22.7	11.1	7.9	17.2	10.5	4.6	15.5	13.4
1	8.2	9.1	8.6	(3.6)	7.1	11.9	7.0	6.7	9.2	6.1	6.1	8.6	8.5
2+	76.6	82.2	72.0	(82.1)	76.4	64.2	80.9	85.0	72.7	82.3	88.6	75.3	77.0
Do not remember/missing	0.9	0.1	0.0	(0.0)	0.8	1.1	1.0	0.4	0.9	1.1	0.7	0.7	1.1
<b>Women who received IFA tablets/syrup</b>													
No IFA/syrup	24.3	36.3	18.4	(14.3)	24.7	25.2	24.8	22.7	25.7	27.1	12.3	25.7	22.6
Received but not consumed	6.1	3.2	1.4	(0.0)	8.7	4.2	6.3	4.9	6.2	6.6	2.8	6.0	6.7
Consumed one IFA per day	46.3	48.0	54.9	(50.0)	43.7	43.6	47.4	50.7	44.5	47.2	56.7	45.2	48.0
Received 100+ IFA tablets/syrup	24.1	29.9	28.6	(25.0)	19.8	21.0	25.0	31.8	20.0	24.4	49.5	22.0	22.3
Percentage of women who received full <sup>1</sup> antenatal check-ups	15.4	25.3	16.9	(25.0)	12.0	9.4	17.1	25.0	10.1	18.2	43.7	11.9	13.0
Number of women	8,816	251	181	30	1,780	2,411	3,148	1,869	6,155	2,057	1,066	3,864	3,139

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

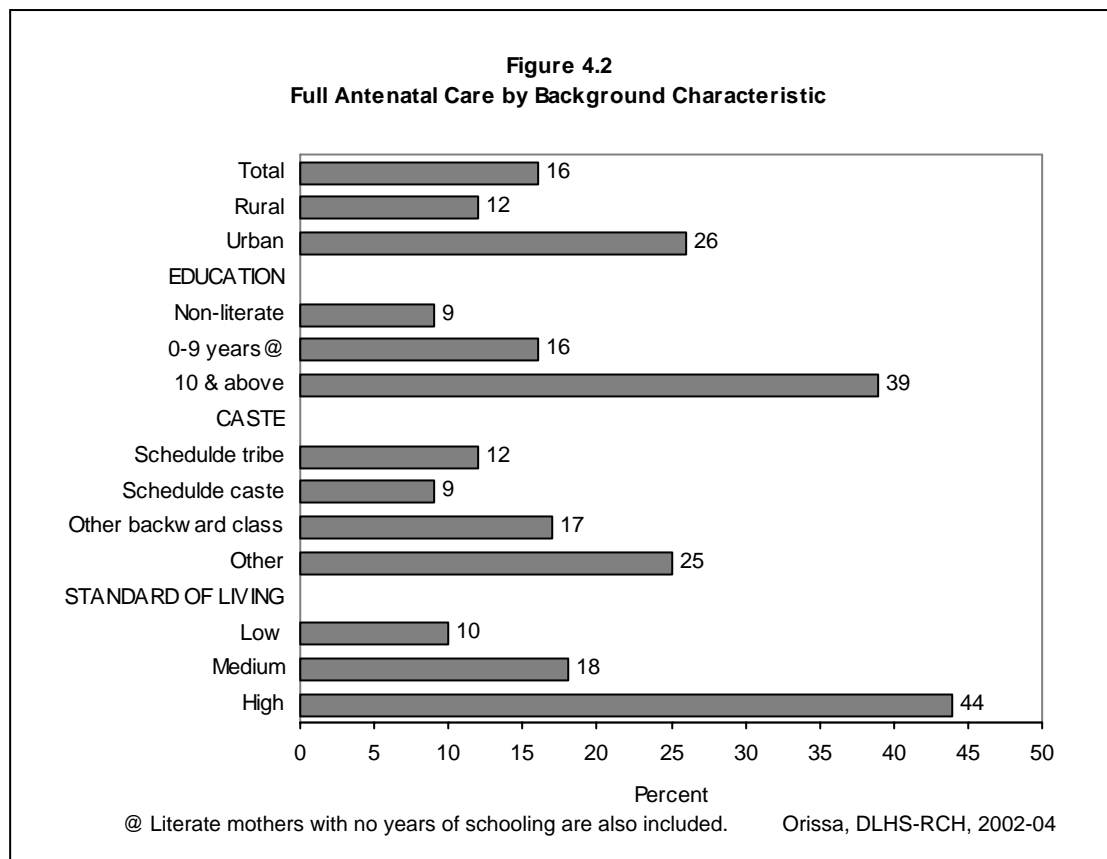


Hindu and Muslim women (48 and 49 percent respectively) were more likely to have at least three visits for antenatal check-ups than Christian women (38 percent). Coverage is substantially lower for women from scheduled-tribes (31 percent) than to women of other than scheduled tribe (64-43 percent). Having three or more antenatal visits also increased with the standard of living - 37 percent for women with a low standard of living, 61 percent for women with a medium standard of living and 83 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-up shows that about two fifth of the women received their first antenatal check-up in the first trimester of pregnancy, and another 30 percent received their first check-up in the second trimester, and 7 percent of women received their first check-up in the third trimester. A higher proportion of women in the urban areas (59 percent) as compared to those in rural areas (32 percent) had a check-up in the first trimester of pregnancy. The reporting of first antenatal check-up in the first trimester has steadily increased with education. Twenty five percent of non-literate women had undergone their first antenatal check-up in the first trimester, and 71 percent of women who had completed at least 10 years of schooling received their first antenatal check-up in the first trimester. More than half of the women (53 percent) with parity-1 were visited in first trimester but less than one-quarter (23 percent) women with parity- four and above had undergone antenatal check-up in the first trimester. There was no difference between Hindu and Muslim women with respect to first antenatal check-up during first trimester. One fourth (25 percent) of scheduled tribe women were visited in the first trimester for first antenatal check-up compared with 33 percent of scheduled caste women, 44 percent of other backward class of women and 53 percent women from 'other' caste category. Twenty eight percent women with low standard of living, 52 percent with medium standard of living, and 74 percent of women with high standard of living respectively had undergone their first antenatal check-up in the first trimester of their pregnancy period

Nutritional deficiencies in women are often exacerbated during pregnancy because of the additional nutrient requirements of foetal growth; therefore a pregnant woman needs six times more iron than a non-pregnant woman. The information on receipt of iron folic acid tablets/syrup during pregnancy was collected. Table 4.6 shows that women in Orissa received IFA supplements for almost half (47 percent) of the last birth during three years preceding the survey. The coverage of IFA tablets is almost same in both rural as well as in urban areas. IFA coverage is much low for the women of higher parity. Again, during pregnancy in the last three years preceding the survey, only 24 percent of women received 100 or more IFA, 22 percent in rural areas and 31 percent in urban areas. Intake of 100 or more IFA is positively associated with education and standard of living index and negatively associated with parity. Women from other religions and other backward classes received 100 or more IFA than their counterparts. Such a 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 4.6 shows that seventy six percent of the women received two or more tetanus toxoid injections. Coverage of two or more TT injections is slightly higher in urban areas (79 percent) than that in rural areas (76 percent). The coverage of at least one tetanus toxoid injection for Hindu women (85 percent) is slightly less than that for Muslim women (91 percent) and same as for the women from other religions (85 percent). Coverage of at least one tetanus toxoid injection is lower among scheduled tribe (76 percent) as compared to scheduled caste (84 percent), other backward classes (88 percent), and for 'other' caste category women (92 percent). Non-literate women received at least one tetanus toxoid injection for 78 percent of their last birth, where as literate women with 9 years of schooling received at least one tetanus toxoid injection for 90 percent, and women who had completed 10 years or more of schooling received at least one tetanus toxoid injection for 96 percent of their last birth. Ninety five percent of women with a high standard of living received at least one tetanus toxoid injection, and 82-88 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 92 percent women of Parity-1 compared with 74 percent of Parity 4 and above.



The percentage of women who received full antenatal care, (that is, at least three antenatal check-ups, and at least one tetanus toxoid injection and supplementary iron in the form of IFA tablets daily for 100 days as recommended by the RCH programme,) has been presented in Figure 4.2. Only 16 percent of women in Orissa received full antenatal care. Coverage of full antenatal care is low for non-literate women, women with higher parity, women from scheduled tribe, and women with a low standard of living. There was no impact of availability of health facilities in the village on full antenatal coverage. Surprisingly the coverage of full antenatal care among Muslim women was higher (25 percent) in comparison to the Hindu women (15 percent) and other religious categories.

#### **4.7 Antenatal Care Indicator by District**

Table 4.7 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 4.7 ANTENATAL CARE INDICATORS BY DISTRICT**

Percentage of women\* who received different type of antenatal care by district, Orissa, 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 <sup>1</sup>	Percentage that received full <sup>2</sup> antenatal check-ups
Anugul	46.5	51.2	78.6	18.4	14.2
Balangir	42.7	55.5	91.4	30.9	21.4
Baleshwar	40.9	46.2	85.6	25.5	16.4
Bargarh	45.5	55.5	90.2	13.2	9.4
Baudh	54.4	52.1	91.7	39.0	20.0
Bhadrak	37.3	42.7	91.6	21.4	12.0
Cuttack	48.6	57.6	93.8	43.3	33.0
Debagarh	38.0	48.9	86.3	22.9	17.5
Dhenkanal	40.3	57.4	91.0	28.9	24.1
Gajapati	38.2	44.6	83.5	26.5	19.6
Ganjam	37.4	51.5	75.0	15.6	11.2
Jagatsinghapur	53.4	56.9	82.4	22.8	19.6
Jajapur	36.6	42.8	85.5	6.9	3.7
Jharsuguda	53.0	56.0	93.3	27.2	17.0
Kalahandi	35.4	40.7	86.4	25.3	15.1
Kandhamal	37.3	37.0	84.6	30.7	12.8
Kendrapara	48.0	53.6	92.0	23.7	15.5
Kendujhar	28.6	39.0	77.0	22.5	13.7
Khordha	39.2	47.3	90.7	21.5	13.4
Koraput	32.5	37.9	76.5	24.4	13.0
Malkangiri	20.8	25.4	68.8	16.0	7.5
Mayurbhanj	34.4	48.1	89.1	30.6	17.8
Nabarangapur	28.1	33.8	78.0	27.4	14.3
Nayagarh	29.4	38.9	80.7	17.7	10.7
Nuapada	35.3	47.0	84.1	29.1	16.3
Puri	44.9	60.7	89.3	24.7	19.1
Rayagada	39.5	44.1	85.7	30.4	19.7
Sambalpur	56.8	66.1	91.9	27.0	22.8
Sonapur	44.2	57.3	87.4	20.3	13.8
Sundargarh	36.1	43.0	85.6	25.8	14.5
Orissa	38.7	47.3	84.8	24.3	15.7

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

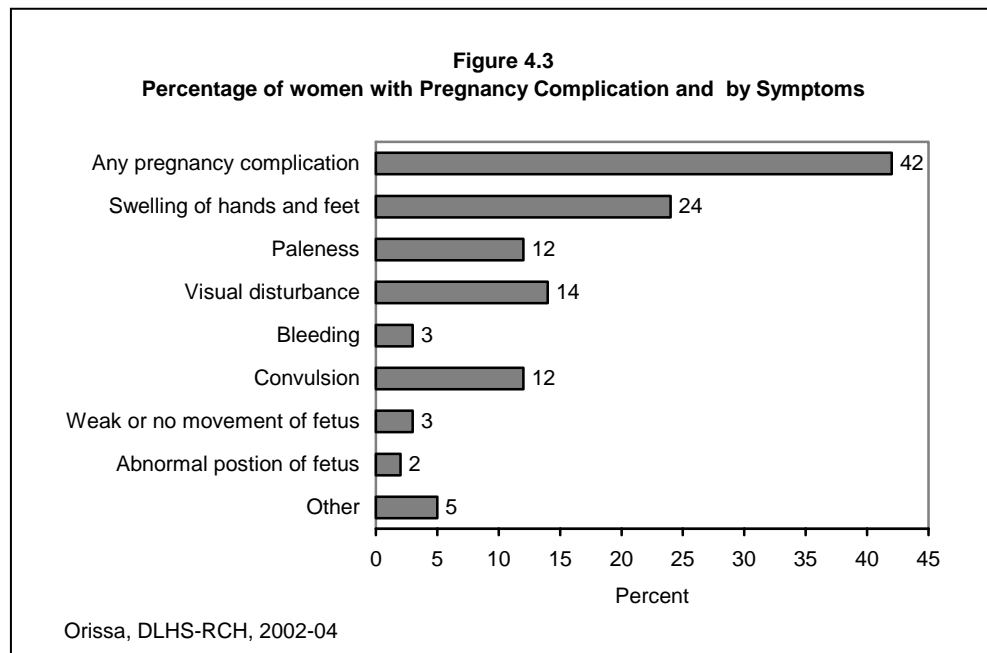
<sup>1</sup> 100 or more iron folic acid tablets including syrup<sup>2</sup> At least three visits for antenatal check-ups, at least one TT injection received and adequate amount of IFA

The utilisation of antenatal care services differs from district to district. In 4 out of 30 districts, (Baudh, Jagatsinghapur, Jharsuguda and Sambalpur) more than half 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 25 percent in Malkangiri to 66 percent in Sambalpur. In 17 districts of Orissa, the coverage of at least three visits of ANC was less than 50 percent (see Map-3). There has been good coverage of tetanus toxoid injection in all the districts, ranging from 69 to 94 percent, but on the other hand, situation regarding receipt of 100 or more IFA tablets is poor. In all the districts, the value ranges from 7 to 43 percent, and it is lowest in Jajpur. The percentage of women who received full antenatal care

ranges from 4 percent in Jajpur to 33 percent in Cuttack. In 16 out of 30 districts, Anugul, Baragarh, Bhadrak, Ganjam, Jajpur, Kalahandi, Kandhamal, Kendrapara, Kendujhar, Khordha, Koraput, Malkangiri, Nabarangpur, Nayagarh, Sonpur, and Sundargarh, the coverage rate of full antenatal care is below than that of the state average.

#### 4.8 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 4.8 and Figure 4.3.



**Table 4.8 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, Orissa, 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	
<b>Age group (years)</b>										
15-19	41.5	25.0	12.2	16.2	2.8	12.6	4.0	2.6	3.9	776
20-24	40.4	21.9	10.3	12.4	2.8	11.4	3.4	2.5	5.0	3,159
25-29	43.5	25.8	11.4	14.0	3.2	12.1	3.2	1.9	4.7	3,144
30-34	40.4	24.1	13.3	13.9	3.0	10.6	2.6	1.6	4.6	1,518
35-39	43.4	24.5	14.1	21.5	5.2	13.3	2.8	2.2	3.2	518
40-44	36.0	20.8	11.7	21.7	5.1	12.8	2.3	0.8	3.2	162
<b>Children ever born</b>										
1	46.4	30.1	10.9	10.8	2.6	12.0	3.8	2.8	5.3	2,687
2	39.4	22.8	11.0	13.1	3.7	11.1	2.8	2.0	4.9	2,561
3	41.7	21.6	12.8	16.8	3.4	12.7	3.0	1.6	5.0	1,659
4+	38.2	19.9	12.0	17.6	3.1	11.3	2.8	1.5	3.1	2,292
<b>Residence</b>										
Rural	42.3	22.8	13.1	16.5	3.4	12.8	3.5	2.1	4.5	7,003
Urban	39.7	27.3	6.6	7.0	2.5	8.5	2.3	2.0	4.8	2,275
<b>Standard of living index</b>										
Low	42.3	22.9	13.6	17.8	3.6	12.3	3.2	2.0	4.4	6,155
Medium	39.3	23.8	9.0	9.0	2.5	12.6	2.8	2.0	4.2	2,057
High	42.7	30.1	4.7	3.6	2.0	7.0	3.8	3.2	6.5	1,066
<b>Received any ANC</b>										
Yes	43.4	25.5	11.6	13.9	3.0	12.2	3.3	2.4	4.8	7,039
No	36.0	18.9	11.5	15.0	3.8	10.2	3.0	1.2	4.1	2,238
Total	41.6	23.9	11.6	14.2	3.2	11.7	3.2	2.1	4.6	9,278
Note: Total include 79 women with zero parity, 1 with missing information on received any ANC and 2 on type of pregnancy complication who were not shown separately @ Literate women with no years of schooling are also included ( ) Based on less than 50 unweighted cases.										

About 42 percent of the women experienced at least one pregnancy related problem. The proportion was higher among rural women (43 percent) than among urban women (40 percent). The problem faced by women during pregnancy is higher among the women who had received some kind of antenatal care during the pregnancy. Forty-three percent of women who had an antenatal check-up reported that they had experienced at least one problem during their pregnancy while 36 percent of women who did not receive any antenatal check-up during their pregnancy fall in this category. The major problems reported were 'swelling of hand and feet' (24 percent), 'paleness' (12 percent), 'visual disturbance' (14 percent) and 'convulsions' (12 percent). Only 5 percent reported 'abnormal position of foetus', and 'vaginal bleeding', and 'weak or no movement of foetus' (3 percent). Other problems related to pregnancy were reported by 5 percent of women. Swelling of hands and feet is more common among women with parity-1, women with high standard of living and women who received any antenatal service during their pregnancy.

The percentage of women who were more anaemic belonging to the age group 30-34 years, and 40-44 years, women from rural areas, women with a low standard of living and women who did not receive any kind of antenatal care during the pregnancy. 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 vaginal bleeding 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 4.9 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. Forty three percent of women reported that they had obtained advice or consulted someone for their problem. The proportion was higher among urban women (54 percent) than among rural women (39 percent), and 41 percent of women sought treatment from those villages where health facility was available as compared to 37 percent of women with non-availability of health facility within the village.

Among women who sought treatment for pregnancy complications, 57 percent visited a government health facility including a primary health centre (17 percent) and sub-centre (4 percent). Around one third of them visited a private health facility, and 9 percent had gone to a facility with the Indian system of medicine, while another 8 percent obtained advice from another health facility. The proportion of women who visited a private health facility is higher in urban areas (45 percent) than in rural areas (25 percent). Among women who sought treatment, 86 percent went to a doctor and 9 percent to an auxiliary nurse midwife or nurse or LHV, and another 4 percent to someone else. Ninety five percent of these women in urban areas, and 82 percent in rural areas were examined by a doctor, whereas ANM/Nurse/LHV examined 11 percent women in rural areas and 3 percent in urban areas.

<b>Table 4.9 TREATMENT FOR PREGNANCY COMPLICATIONS</b>					
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, Orissa, 2002-04					
Treatment and source	Total	Residence		Availability of health facility <sup>5</sup> in the village	
		Rural	Urban	No	Yes
Percentage of women sought treatment who had any pregnancy complication	42.5	38.9	54.4	37.2	41.0
Number of women	3,864	2,960	904	1,637	1,323
Percentage sought treatment at health facility					
Government health facility <sup>1</sup>	56.8	62.8	42.8	63.8	61.6
Primary health centre	17.3	22.9	4.1	23.2	22.7
Sub centre	3.5	4.9	0.3	4.1	5.8
Private health facility <sup>2</sup>	31.0	25.0	45.3	25.6	24.2
ISM <sup>3</sup> facility	8.6	7.6	11.0	7.5	7.7
Other	7.6	9.1	4.1	8.7	9.6
Percent distribution of women who obtained treatment from					
Doctor	86.1	82.3	94.8	83.8	80.6
ANM/nurse/midwife/LHV	8.7	11.2	3.0	9.4	13.1
Other <sup>4</sup>	4.1	5.5	0.9	5.3	5.7
Missing	1.1	1.0	1.3	1.5	0.5
Total percent	100.0	100.0	100.0	100.0	100.0
Number of women	1,642	1,151	492	609	542
Note: <sup>1</sup> 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					
<sup>2</sup> Include private hospital/clinic and non-governmental organization/ trust hospital					
<sup>3</sup> Either government or private Indian system of medicine					
<sup>4</sup> Other include Dai trained or untrained, other health professional and ISM practitioner					
<sup>5</sup> Includes sub-centre, primary health centre, community health centre or referral hospital, government hospital, and government dispensary within the village					

## 4.9 Delivery Care

### 4.9.1 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 4.10 and Figure 4.4 present the place of delivery. One fourth of the births (26 percent) took place in government health institutions, 9 percent in private health institutions, and a large proportion of births (64 percent) took place at home. About two third of



the deliveries in urban areas and one fourth of the deliveries in rural areas took place in health institutions.

Background characteristics	Health institutions					Total percent	Number of women
	Public	Private	Home	Other	Missing		
<b>Table 4.10 PLACE OF DELIVERY</b>							
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, Orissa, 2002-04							
<b>Age group (in years)</b>							
Below 20	26.5	4.1	68.6	0.8	0.0	100.0	776
25-34	25.9	9.4	63.5	1.3	0.0	100.0	7,822
35 and above	22.0	6.8	70.3	0.9	0.1	100.0	680
<b>Children ever born</b>							
1	39.6	14.6	44.4	1.4	0.0	100.0	2,687
2	26.6	7.4	64.7	1.2	0.0	100.0	2,561
3	18.3	7.4	73.2	1.1	0.0	100.0	1,659
4+	12.8	4.2	82.1	0.9	0.0	100.0	2,292
<b>Residence</b>							
Rural	20.3	4.9	74.1	0.7	0.0	100.0	7,003
Urban	42.1	20.6	34.6	2.7	0.0	100.0	2,275
<b>Education</b>							
Non-literate	14.6	3.3	81.3	0.7	0.0	100.0	4,750
0-9@ years	32.5	9.5	56.5	1.6	0.0	100.0	3,185
10 years & above	48.3	26.4	23.2	2.1	0.0	100.0	1,325
<b>Religion</b>							
Hindu	26.0	8.3	64.5	1.2	0.0	100.0	8,816
Muslim	23.5	21.7	54.2	0.7	0.0	100.0	251
Christian	13.4	8.2	77.5	0.9	0.0	100.0	181
Other	(14.3)	(17.9)	(64.3)	(3.6)	(0.0)	100.0	30
<b>Caste#</b>							
Scheduled caste	21.4	6.3	70.7	1.6	0.0	100.0	1,780
Scheduled tribe	11.3	3.3	84.9	0.5	0.0	100.0	2,411
Other backward class	32.8	8.3	57.9	1.1	0.0	100.0	3,148
Other	36.1	18.4	43.7	1.8	0.0	100.0	1,869
<b>Standard of living index</b>							
Low	17.0	3.4	78.9	0.7	0.0	100.0	6,155
Medium	40.1	12.0	45.7	2.2	0.0	100.0	2,057
High	47.6	33.2	16.7	2.5	0.0	100.0	1,066
<b>Number of antenatal check-ups</b>							
No check-up	9.8	3.2	85.0	1.9	0.1	100.0	2,243
1	16.0	4.1	78.8	1.1	0.0	100.0	1,107
2	23.0	5.5	70.8	0.7	0.0	100.0	1,537
3	28.8	6.7	63.4	1.0	0.0	100.0	1,441
4+	41.1	17.3	40.5	1.1	0.0	100.0	2,950
<b>Delivery characteristics</b>							
Normal	23.1	7.3	68.6	1.1	0.0	100.0	8,471
Caesarean	56.4	31.8	9.6	2.1	0.0	100.0	497
Assisted	46.0	11.9	38.2	3.9	0.0	100.0	298
<b>Availability of health facility<sup>1</sup> in the village</b>							
No	20.6	4.5	73.9	0.9	0.0	100.0	3,864
Yes	19.9	5.3	74.4	0.5	0.0	100.0	3,139
<b>Total</b>	<b>25.6</b>	<b>8.7</b>	<b>64.4</b>	<b>1.2</b>	<b>0.0</b>	<b>100.0</b>	<b>9,278</b>
Note: Total includes 79 women with zero parity, 18 cases with missing information on education, 1 on number of ANC visits and 12 on delivery characteristics 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. <sup>1</sup> 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.							

The proportion of births occurring in health institutions is little higher for young women under 35 years (31-35 percent) than for women aged 35 years and above (29 percent). Institutional deliveries, particularly in private health facilities, increase sharply with education and the standard of living. Around one fifth (18 percent) of the births to non-literate women and 75 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 (54 percent) to parity four and above (17 percent). Institutional delivery is much higher for Muslim women (45 percent) than for Hindus (34 percent), Christians (22 percent) and other religion women (32 percent). Only 15 percent births of women from scheduled-tribes are institutional deliveries as compared to 28 percent of births to women from scheduled-castes, 41 percent to other backward classes and 55 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 (58 percent) than among who had fewer antenatal check-ups (20-36 percent). Institutional deliveries are least prevalent among women who did not receive any antenatal check-ups (13 percent). As expected, a large proportion of births occurred through caesarean section (88 percent), and 58 percent of assisted deliveries took place at health institutions. At the same time, 10 percent of caesarean deliveries and 38 percent of assisted deliveries took place at home. Availability of health facility in the villages had no impact on institutional deliveries.

#### 4.9.2 Assistance During Home Delivery

Table 4.11 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 6 percent of home deliveries were attended by doctors, 8 percent by ANM or nurse or LHV, 9 percent by trained birth attendants, 30 percent by untrained *dais*, 43 percent were attended by relatives and friends and 4 percent of home deliveries were not attended by anyone (Figure 4.4). Overall, health professionals attended 14 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. In rural areas, 13 percent of births were attended by health professionals as compared to 20 percent of that in urban areas. The percentage of births attended by health professionals decreased steadily with increase in 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 two times higher than those of non-literate women. About one fourth (23 percent) of home deliveries to women with a medium standard of living and 12 percent of deliveries to women with a low standard of living were attended by health professionals. Home deliveries are slightly

more likely to be attended by health professionals among Muslim women (16 percent) than among Hindu women (14 percent).

**Table 4.11 ASSISTANCE DURING HOME DELIVERY AND SAFE DELIVERY**

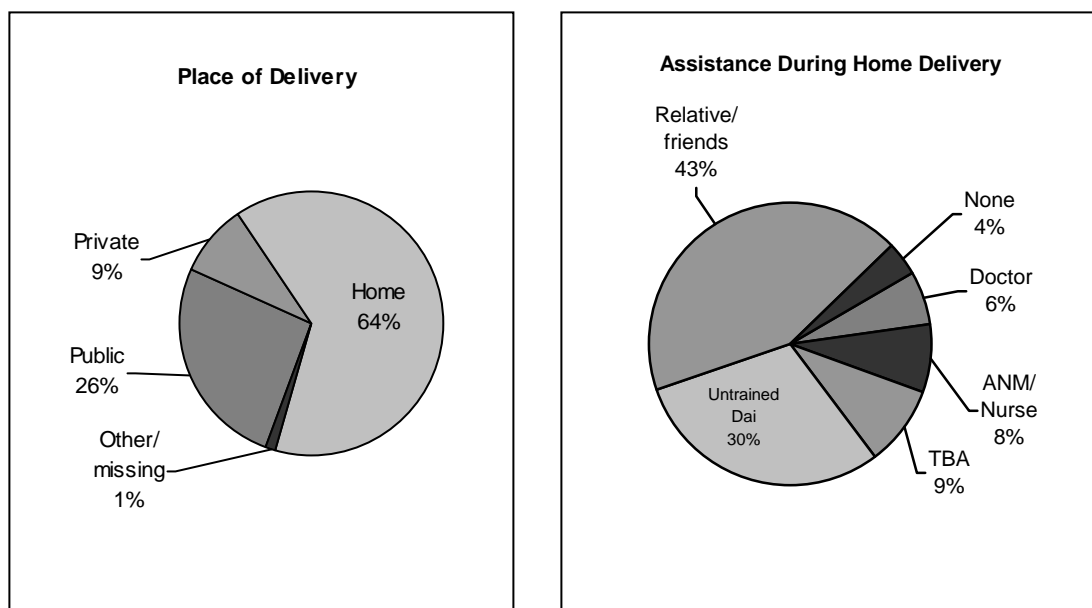
Percent distribution of women who had given live/still births during three years preceding the survey, by assistance during home delivery, and percentage of safe delivery, according to selected background characteristics, Orissa, 2002-04

Background characteristics	Attendant assisting during home delivery <sup>1</sup>						Number of women	Percentage of safe <sup>2</sup> delivery
	Doctor	ANM/ Nurse/ LHV	TBA	Un- trained dai	Relative / friends	None		
<b>Age group (in years)</b>								
Below 20	6.2	6.5	5.6	27.9	51.0	2.8	532	39.3
25-34	6.2	8.2	9.0	30.0	42.2	4.4	4965	44.4
35 and above	6.8	7.0	7.1	28.4	44.6	6.1	478	38.4
<b>Children ever born</b>								
1	10.1	8.4	8.6	29.6	40.8	2.5	1192	62.4
2	6.0	10.6	10.2	29.0	40.2	3.9	1657	44.8
3	5.3	7.3	7.5	29.2	45.7	5.0	1214	35.0
4+	4.3	5.9	7.7	30.8	45.8	5.5	1881	25.4
<b>Residence</b>								
Rural	6.2	7.2	7.9	30.4	43.9	4.3	5188	35.1
Urban	6.4	13.3	12.3	24.9	38.5	4.7	788	69.5
<b>Education</b>								
Non-literate	4.9	5.3	7.0	30.5	47.5	4.8	3863	26.2
0-9@ years	8.2	11.9	9.8	29.3	37.2	3.7	1798	53.3
10 years & above	11.7	18.5	20.2	22.1	24.1	3.3	307	81.7
<b>Religion</b>								
Hindu	6.3	8.0	8.2	29.9	43.2	4.5	5685	43.5
Muslim	7.8	8.2	16.3	21.4	43.3	3.0	136	53.8
Christian	4.1	6.0	13.8	28.5	45.5	2.0	140	29.4
<b>Caste#</b>								
Scheduled caste	7.1	6.2	8.6	31.0	43.2	3.9	1258	37.1
Scheduled tribe	4.2	4.4	6.8	33.8	46.9	4.0	2048	21.8
Other backward class	6.8	9.7	9.7	24.7	43.7	5.3	1822	50.6
Other	8.3	16.2	9.6	29.3	32.8	3.9	817	65.2
<b>Standard of living index</b>								
Low	5.7	6.0	7.3	31.1	45.6	4.4	4857	29.6
Medium	8.2	14.8	13.6	24.7	34.6	4.1	940	62.7
High	11.7	25.1	15.8	19.0	24.0	4.4	178	87.0
<b>Number of antenatal check-ups</b>								
No check-up	4.3	3.5	6.8	33.1	46.1	6.1	1907	19.7
1	7.2	6.5	7.4	30.4	44.9	3.7	872	30.9
2	5.7	7.6	7.2	28.7	47.3	3.5	1088	37.9
3	5.7	8.5	10.2	30.1	41.8	3.8	913	44.5
4+	9.5	16.1	12.0	24.5	34.6	3.2	1194	68.8
<b>Delivery characteristics</b>								
Normal	4.9	7.9	8.7	30.1	44.0	4.4	5810	39.1
Caesarean	(38.3)	(6.4)	(2.1)	(19.1)	(29.8)	(4.3)	48	(44.7)
Assisted	60.3	12.7	2.3	13.3	7.8	3.6	114	85.8
<b>Availability of health facility<sup>3</sup> in the village</b>								
No	6.2	6.3	8.7	29.3	45.0	4.5	2854	34.4
Yes	6.3	8.3	7.1	31.8	42.5	4.1	2334	35.9
<b>Total</b>	6.2	8.0	8.5	29.7	43.2	4.4	5975	43.5

Note: Total includes 31 women with zero parity, 8 women with missing information on education I and 3 on delivery characteristics who were not shown separately. Total includes 14 women in other religion who were not shown separately. @ Literate women with no years of schooling are also included. # Total figure may not add to N due to do not know and missing cases <sup>1</sup> If the respondent mentioned more than one attendant, only the most qualified attendant is shown <sup>2</sup> Either institutional delivery or home delivery assisted by doctor/ANM/Nurse/LHV <sup>3</sup> 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

Only 13 percent of births to women from scheduled castes, 9 percent to scheduled tribes, 17 percent to other backward classes and 25 percent to women belonging to 'other castes' category were attended by health professionals. Eight percent of home deliveries to women who did not have any antenatal check-ups were attended by health professionals compared to 26 percent of home deliveries to women who had four or more antenatal check-ups. About 13 percent of home deliveries that were normal were attended by health professionals, which differ substantially to births by either caesarean section or assisted (45-73 percent), but the result should be interpreted with caution due to the small number of cases. Twelve percent of home deliveries were attended by health professionals in villages with non-availability of a health facility and 15 percent in villages with availability of a health facility.

**Figure 4.4**  
Place of Delivery and Assistance During Delivery



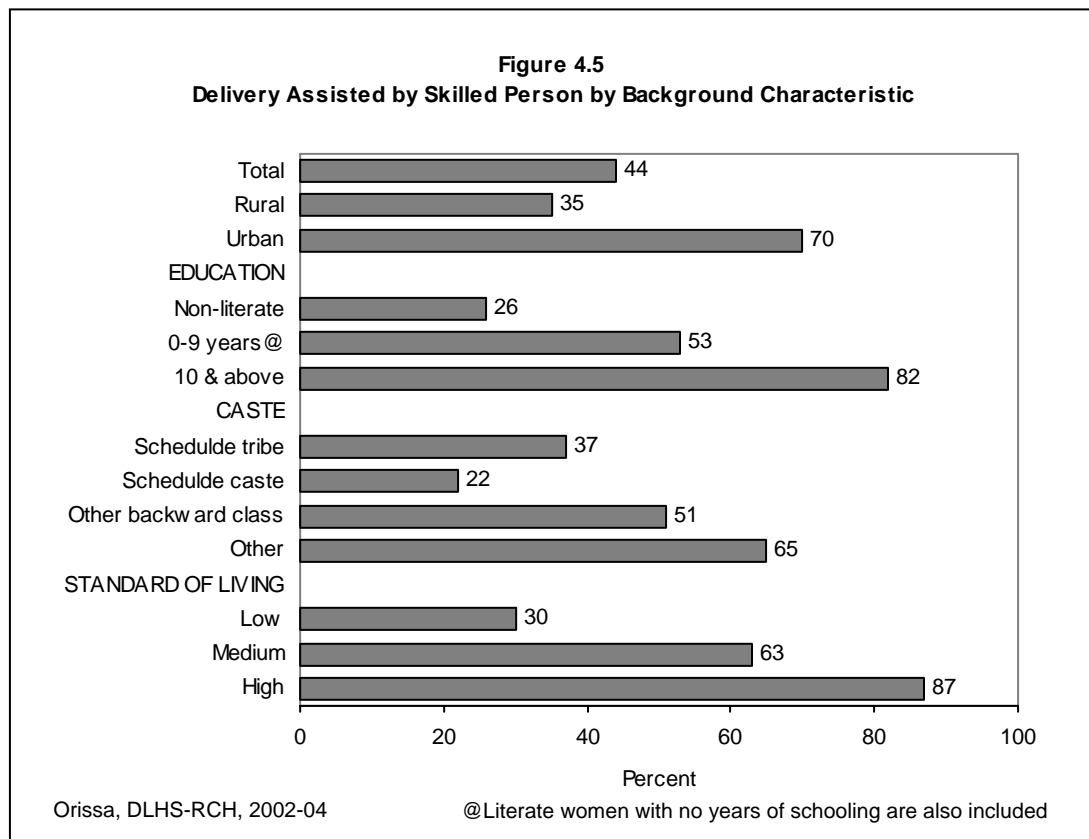
Note: Percentage may add more than 100.0 due to rounding

Orissa, DLHS-RCH, 2002-04

### 4.9.3 Delivery Assisted by Skilled Persons

The extent of safe deliveries varied substantially by background characteristics of women (Table 4.11 and Figure 4.5). More than two fifth of the births (44 percent) were safe in Orissa. In urban areas more than two third (70 percent) of the deliveries were safe as against only 35 percent in rural areas. There was not much difference in percentage of safe deliveries by age of the mother. The proportion of safe deliveries

was lower among Hindu women (44 percent) than among Muslim women (54 percent) and women from other religions (29 percent). Only 22 percent of births to women from scheduled-tribe were safe deliveries, compared to 37 percent to women from scheduled-castes, 51 percent to women from other backward classes, and 65 percent of births to women from ‘other castes’ category. Proportion of safe deliveries decreases as parity rises from 1 (62 percent) to 4 and above (25 percent). Safe deliveries were least prevalent among women who did not receive any antenatal check-ups (20 percent), and it is most prevalent among women who had four or more antenatal check-ups (69 percent). The proportion of safe deliveries increased sizeably with women’s education and standard of living. Only twenty six percent of non-literate women had safe deliveries whereas its prevalence is 82 percent among women who had completed at least high school education. Women with a high standard of living had 87 percent safe deliveries compared to 63 percent of women with a medium standard of living and 30 percent with a low standard of living. As compared to women who had caesarean and assisted deliveries (45-86 percent) only 39 percent of women with normal deliveries are safe deliveries. The proportion of safe deliveries was slightly higher in villages with a health facility than to women from those villages where health facilities are not available.



#### 4.10 Reasons for Not Going to Health Institutions for Delivery

Table 4.12 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. More than three-fifth (61 percent) of the women stated that it was not necessary to deliver in health institutions. It is surprising to see that more than half of urban women (54 percent) also felt this way. Also, 61 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 63 percent of women from villages where a health facility is not available. About 2 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 costs too much' (9 percent), 'no transportation' or 'health facility is too far' (3 percent), 'no time to go' (4 percent), 'family did not allow', 'better care at home' and 'lack of knowledge' (5 percent each), and 'other' (2 percent). Five percent women did not opt for institutional delivery due to poor quality of services. The corresponding figure was 9 percent in urban areas and 4 percent in rural areas. It needs to mention that 5 percent of women from villages with a health facility reported lack of knowledge as a reason for not having delivery at home.

<b>Table 4.12 REASONS FOR NOT GOING TO HEALTH INSTITUTIONS FOR DELIVERY</b>					
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, Orissa, 2002-04					
Reason	Total	Residence		Availability of health facility <sup>1</sup> in the village	
		Rural	Urban	No	Yes
Not Necessary	61.0	62.0	54.2	62.7	61.1
Not customary	1.5	1.4	2.2	1.2	1.6
Cost too much	8.7	9.2	5.3	9.6	8.8
Health facility too far/ No transport	2.9	2.8	3.7	3.5	1.9
Poor quality service	4.9	4.2	9.3	3.7	4.9
No time to go	4.4	4.2	5.7	4.2	4.2
Family did not allow	5.3	5.1	6.3	3.8	6.8
Better care at home	5.1	5.2	3.8	5.6	4.7
Lack of knowledge	4.9	4.5	7.2	4.1	5.0
Other	1.4	1.3	2.2	1.6	1.0
Total percent	100.0	100.0	100.0	100.0	100.0
Number of women	5,975	5,188	788	2,854	2,334

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

#### 4.11 Delivery Characteristics by District

Table 4.13 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 birth to women during the three years preceding the survey. The proportion of institutional deliveries is lowest in Malkangiri (11 percent) and followed by Kendujhar and Rayagada (20 percent) and it is highest in Jagatsinghpur (62 percent).

<b>Table 4.13 DELIVERY CHARACTERISTICS BY DISTRICT</b>				
Place of delivery, assistance during home deliveries, and percentage of safe deliveries by district, Orissa, 2002-04				
Districts	Percentage of women who had institutional delivery	Percentage of women who had delivery at home	Home delivery assisted by skilled <sup>1</sup> persons	Percentage of safe <sup>2</sup> delivery
Anugul	37.1	62.3	8.1	42.1
Balangir	37.9	61.1	27.4	54.6
Baleshwar	28.0	69.0	13.3	37.1
Bargarh	32.1	67.9	27.4	50.7
Baudh	34.4	65.6	16.3	45.1
Bhadrak	35.2	63.5	15.6	45.1
Cuttack	52.2	47.8	10.8	57.3
Debagarh	32.4	67.6	11.0	39.9
Dhenkanal	47.6	52.0	10.6	53.1
Gajapati	21.3	78.7	14.5	32.7
Ganjam	32.7	66.3	20.1	46.0
Jagatsinghpur	61.5	35.5	21.7	69.2
Jajapur	36.2	63.8	12.1	43.9
Jharsuguda	37.2	62.8	37.3	60.6
Kalahandi	30.6	69.4	12.5	39.2
Kandhamal	32.4	66.8	14.3	42.0
Kendrapara	42.3	57.7	18.6	53.0
Kendujhar	19.9	79.0	6.9	25.4
Khordha	52.9	46.5	11.5	58.3
Koraput	19.3	80.7	4.3	22.8
Malkangiri	10.7	89.3	6.9	16.9
Mayurbhanj	32.4	67.2	7.4	37.4
Nabarangapur	25.1	71.3	10.2	32.4
Nayagarh	38.3	60.5	9.7	44.2
Nuapada	24.9	74.8	14.0	35.4
Puri	60.6	39.4	17.9	67.7
Rayagada	20.2	79.8	17.2	34.0
Sambalpur	44.3	55.6	24.7	58.1
Sonapur	29.8	68.9	15.0	40.1
Sundargarh	32.2	62.6	22.4	46.2
Orissa	34.4	64.4	14.2	43.5

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

Compared to delivery in a private health facility, deliveries in a government health facility are more common in all the districts of Orissa. Only one-third of births are institutional delivery in the state, and Koraput and Malkangiri districts had more than 80 percent of home deliveries. All the districts except Balangir, Baragarh and Jharsuguda less than one-fourth of home deliveries were attended by a health professional. For the state as a whole the figure was 14 percent. The extent of safe deliveries also varies by district. In 14 of 30 districts, the proportion of safe deliveries is below the state average. The percent safe deliveries across the districts ranges from lowest of 17 percent in Malkangiri to highest of 69 percent in Jagatsinghpur. The proportion of safe deliveries is less than 40 percent in ten districts i.e. Baleswar, Gajapati, Kalahandi, Kendujhar, Koraput, Malkangiri, Mayurbhanj, Nabarangpur, Nuapada and Rayagada (see Map-4).

#### **4.12 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 two-fifth of the women experienced at least one problem during delivery (Table 4.14 and Figure 4.6). The proportion of delivery complications is lower among rural women (42 percent) than among urban women (49 percent). Women with parity-1 reported more delivery related problem than women with higher parity. The extent of problems remains more or less unchanged with the age of the women. This proportion is relatively high among women who had received some kind of antenatal care during their pregnancy. Thirty-five percent of women who had not had any antenatal check-up reported that they experienced at least one problem during their pregnancy compared to 42-50 percent of women who had received some kind of antenatal check-up. Among women who had assisted or caesarean delivery, 68-67 percent reported experiencing such problems, and 42 percent women with normal deliveries also cited complications during delivery. A relatively higher proportion of women who delivered in health institutions (56-60 percent) faced at least one delivery complication compared to those who delivered at home or other places (38-18 percent).

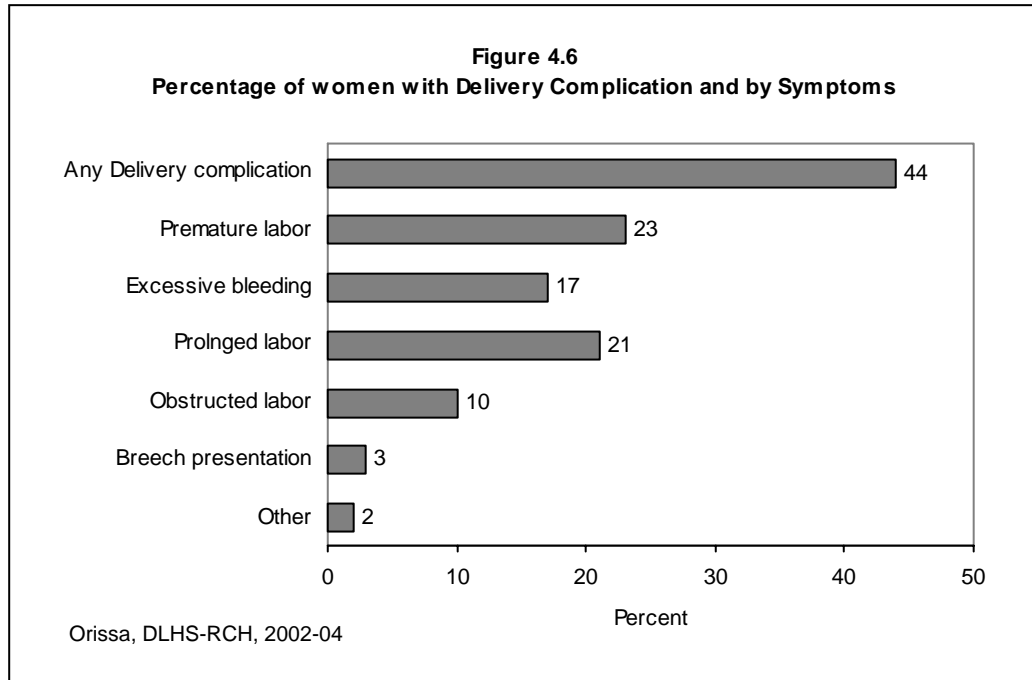


<b>Table 4.14 DELIVERY COMPLICATIONS</b>								
Percentage of women who had given last live/still births during three years preceding the survey by delivery complication, according to selected background characteristics, Orissa, 2002-04								
Background characteristics	Any delivery complication	Type of delivery complication;						Number of women
		Premature labour	Excessive bleeding	Prolonged labour	Obstructed labour	Breech presentation	Other	
<b>Age group (in years)</b>								
Below 20	43.4	23.0	18.9	23.6	12.8	2.6	1.2	776
25-34	44.4	23.4	16.8	20.5	10.6	2.9	1.6	7,822
35 and above	40.5	22.5	15.6	17.7	6.0	2.4	1.6	680
<b>Children ever born</b>								
1	52.9	27.5	18.3	29.1	14.4	4.5	1.8	2,687
2	42.9	22.8	16.1	18.5	9.9	2.6	2.0	2,561
3	42.4	23.1	17.7	16.8	9.3	2.3	1.4	1,659
4+	35.4	18.6	15.3	15.1	7.0	1.7	0.9	2,292
<b>Residence</b>								
Rural	42.2	21.8	15.8	21.0	11.0	2.4	1.1	7,003
Urban	49.4	27.7	20.1	19.3	8.7	4.2	3.0	2,275
<b>Number of antenatal check-ups</b>								
No check-up	35.3	16.9	14.5	16.2	8.0	1.7	0.7	2,243
1	42.4	22.5	15.1	19.0	11.1	2.9	1.9	1,107
2	42.5	22.7	17.6	19.7	10.0	2.3	1.1	1,537
3	47.8	25.0	18.6	22.8	12.6	2.7	1.5	1,441
4+	50.2	27.8	18.1	23.8	11.2	4.1	2.4	2,950
<b>Delivery characteristics</b>								
Normal	41.8	22.2	16.4	18.9	9.5	2.0	1.1	8,471
Caesarean	67.2	33.5	22.2	39.0	16.0	14.1	6.9	497
Assisted	67.9	36.9	20.8	37.8	27.0	8.7	6.7	298
<b>Place of delivery</b>								
Government sector	55.6	29.8	19.9	30.9	15.0	4.7	2.3	2,378
Private sector	59.6	37.4	20.6	24.4	11.4	8.0	2.3	810
Home	37.8	18.9	15.4	16.1	8.6	1.5	1.1	5,975
Other	18.0	14.2	4.2	9.7	4.9	2.3	3.4	113
Total	44.0	23.3	16.9	20.6	10.4	2.9	1.6	9,278

Note: Table include 79 women with zero parity, 1 with missing information on number of ANC visits, 12 on delivery characteristic and 2 on place of delivery who were not shown separately.

The major problems reported were 'premature labour' (23 percent), 'prolonged labour' (21 percent), 'excessive bleeding' (17 percent), and 'obstructed labour' (10 percent). Only 3 percent reported 'breech presentation', and 2 percent reported 'other' problems related to delivery. Prolonged labour, obstructed labour and breech presentation are more common among younger women, and women with low parity. Rural women were more likely to report delivery complications such as prolonged labour, and obstructed labour, whereas premature labour, excessive bleeding and breech presentations are more prevalent among urban women. Premature labour, prolonged labour, obstructed labour and other health problems related to delivery were more among women whose last delivery was assisted with instruments, and breech presentation was more likely among those who had a caesarean, and excessive bleeding during delivery than by women with normal delivery during the three years preceding the survey. Women whose recent delivery was performed in medical

institutions were more likely to report premature labour, prolonged labour, breech presentation and obstructed labour compared with place of delivery other than medical institutions.



### 4.13 Post Delivery Complications and Treatment

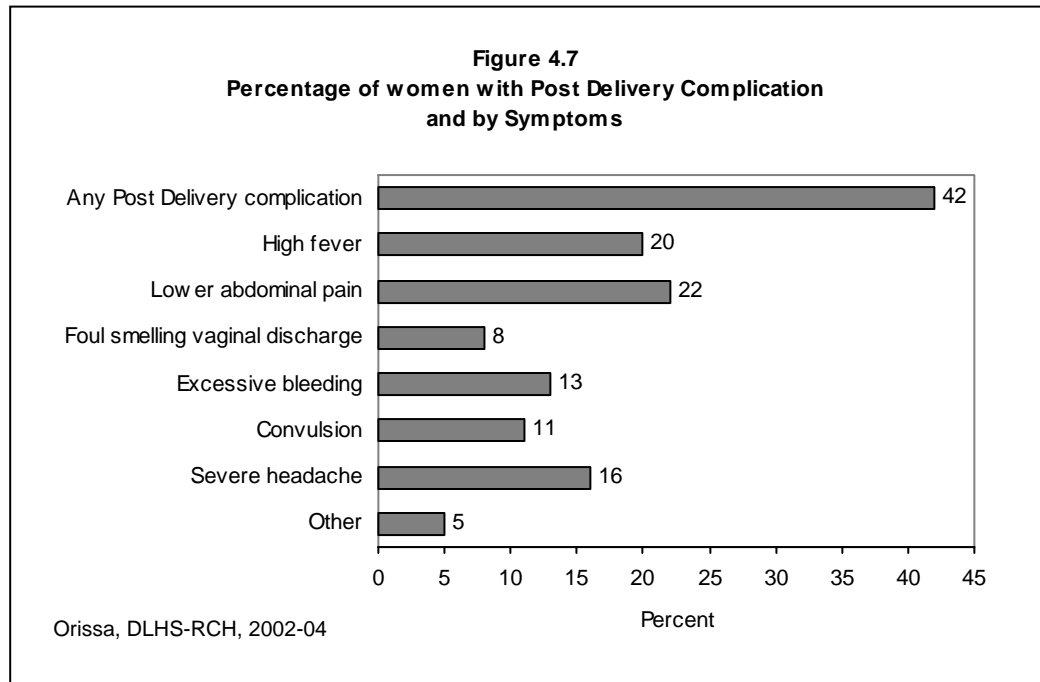
Table 4.15 and Figure 4.7 present information about women who faced complications after delivery according to some selected background characteristics. The incidence of post delivery complications judged by any of the following during the first six-weeks of delivery- ‘high fever’, ‘lower abdominal pain’, ‘foul smelling vaginal discharge’, ‘excessive bleeding’, ‘convulsion’, ‘severe headache’, and ‘other’ problems. Forty-two 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 (44 percent) than in urban areas (35 percent). Women with higher parity 4 and over, had their deliveries assisted with instruments, and those whose deliveries took place at home, and those whose deliveries at home were attended by none are more prone to report at least one post delivery related complication.

<b>Table 4.15 POST DELIVERY COMPLICATIONS</b>									
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, Orissa, 2002-04									
Background characteristics	Any post delivery complication	Type of post delivery complication;							Number of women
		High fever	Lower abdominal pain	Foul smelling vaginal discharge	Excessive bleeding	Convulsion	Severe headache	Other	
<b>Age</b>									
Below 20	41.5	22.3	21.6	9.3	15.2	12.5	17.5	4.6	776
25-34	42.0	19.5	22.2	7.4	12.3	10.2	16.1	4.5	7,822
35 and above	42.6	23.3	23.8	7.8	13.6	12.6	17.8	5.5	680
<b>Children ever born</b>									
1	39.7	17.6	17.3	8.1	13.4	9.6	14.3	4.4	2,687
2	43.5	20.9	23.3	6.8	12.7	10.9	16.6	5.2	2,561
3	42.5	18.2	24.9	7.8	12.9	12.7	16.7	4.6	1,659
4+	42.8	22.9	25.2	7.7	11.2	10.0	18.3	4.2	2,292
<b>Residence</b>									
Rural	44.3	21.7	23.8	8.5	13.6	12.3	17.8	5.0	7,003
Urban	34.9	14.7	17.6	4.8	9.5	5.2	11.7	3.3	2,275
<b>Delivery characteristics</b>									
Normal	42.0	20.1	22.4	7.6	12.3	10.5	16.2	4.5	8,471
Caesarean	41.2	18.4	22.4	5.8	15.2	10.2	13.9	3.9	497
Assisted	45.1	20.8	18.9	12.0	16.8	12.9	23.5	8.7	298
<b>Place of delivery</b>									
Government sector	39.0	14.0	17.8	7.5	12.4	9.2	12.8	4.6	2,378
Private sector	37.9	13.0	18.0	8.2	12.5	7.3	14.9	4.2	810
Home	43.9	23.4	24.7	7.6	12.9	11.7	18.0	4.7	5,975
Other	34.2	16.7	16.7	3.0	4.3	1.8	12.2	3.1	113
<b>Assistance during home delivery</b>									
Doctor	45.3	24.4	21.9	6.3	11.9	11.5	16.7	6.8	372
ANM/Nurse/LHV	45.0	22.4	23.2	7.3	13.5	10.5	16.6	6.3	477
TBA	50.8	24.1	27.4	8.9	15.2	18.7	19.6	5.7	509
Untrained dai	47.2	23.1	27.5	8.9	15.0	12.4	19.9	4.0	1,775
Relative/friends	40.0	23.7	23.1	6.7	11.1	10.2	16.7	4.4	2,581
None	43.8	21.9	23.3	7.3	11.1	11.7	19.0	3.8	261
Total	42.0	20.0	22.3	7.6	12.6	10.6	16.3	4.6	9,278

Note: Table include 79 women with zero parity, 12 missing cases on delivery characteristic and 2 on place of delivery who were not shown separately.

Women reported high fever (20 percent), severe headache (16 percent), lower abdominal pain (22 percent), foul smelling vaginal discharge (8 percent), excessive vaginal bleeding (13 percent), and convulsion (11 percent). Five percent of women reported other problems. Rural-urban differences in experience of all symptoms of postpartum complication are large. Most of the postpartum complications, are more prevalent among older women aged 35 years and above than among women below 35 years. The symptoms of postpartum complications were increasing steadily with increased parity. There are minimal differences in the likelihood of having different symptoms in the postpartum period by place of delivery. Women who had the last delivery at home and were not assisted by anyone were more likely to have high fever,

lower abdominal pain and other postpartum problems during the first six weeks of delivery. Symptoms like high fever 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.



Women who reported at least one complication during the postpartum period were asked, whether they had consulted or sought treatment for their problems and also the source of treatment. Table 4.16 shows the percentage of women who had post delivery complications and who sought treatment by source of treatment according to residence and availability of health facility in the village. Forty-two percent of women reported that they had obtained advice or had consulted someone for their problems. The proportion was higher among urban women (52 percent) than among rural women (39 percent), and 39 percent of women sought treatment from those villages where health facility was available as compared to 40 percent of women who did not have a health facility within the village.

<b>Table 4.16 TREATMENT FOR POST DELIVERY COMPLICATIONS</b>					
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, Orissa, 2002-04					
Treatment and source	Total	Residence		Availability of health facility <sup>5</sup> in the village	
		Rural	Urban	No	Yes
Percentage of women sought treatment who had any post delivery complication	42.0	39.4	51.9	39.8	39.0
Number of women	3,899	3,104	795	1,653	1,451
Percentage sought treatment at health facility					
Government health facility <sup>1</sup>	53.3	53.8	51.8	52.1	55.8
Primary health centre	15.1	18.8	4.1	18.3	19.3
Sub centre	4.0	4.9	1.2	3.1	7.0
Private health facility <sup>2</sup>	26.8	24.0	34.9	23.7	24.5
ISM <sup>3</sup> facility	7.7	6.9	10.0	7.1	6.7
Other	14.3	17.0	6.3	18.6	15.1
Percent distribution of women who obtained treatment from					
Doctor	77.5	73.0	90.9	71.3	75.0
ANM/nurse/midwife/LHV	10.5	12.8	3.9	13.3	13.3
Other health professionals <sup>4</sup>	3.5	4.3	0.9	4.7	3.9
Other	8.4	9.7	4.3	10.7	8.6
Missing	0.1	0.2	0.0	0.0	0.3
Total percent	100.0	100.0	100.0	100.0	100.0
Number of women	1,636	1,224	412	658	566
Note: <sup>1</sup> 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 <sup>2</sup> Include private hospital/clinic and non-governmental organization/ trust hospital <sup>3</sup> Either government or private Indian system of medicine <sup>4</sup> Other health professionals include Dai (trained or untrained), relative/friends and ISM practitioner <sup>5</sup> 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, 53 percent visited a government health facility including primary health centre (15 percent) and sub-centre (4 percent). Twenty-seven percent of women visited a private health facility, and 8 percent visited a facility of the Indian system of medicine (either government or private) and another 14 percent obtained advice from other health facilities. The proportion of women who visited a government health facility is slightly higher in rural areas (54 percent) than in urban areas (52 percent). There was not much difference between the percentage of women who sought treatment for their complications from the villages with health facility and from the villages without health facility by different sources. Among women who sought treatment, 76 percent preferred to go to a doctor and 11 percent visited an auxiliary nurse midwife or nurse or LHV, 4 percent visited other health professionals, and 9 percent visited some one else. Ninety-one percent of these women in urban areas, and 73 percent in rural areas approached a doctor, whereas visit to an ANM/nurse/LHV was reported by 13 percent in rural areas and 4 percent in urban areas. There are also differences by availability and non-availability of health facilities in the village. Seventy-five percent of women

who belonged to villages with availability of health facilities were seen by doctor compared to 71 percent of women belonging to villages with non-availability of health facilities.

#### 4.14 Obstetric Morbidity by District

The extent of health problems/ complications women suffer during pregnancy, delivery and post delivery period indicates the state of obstetric morbidity. Table 4.17 presents the incidence of pregnancy, delivery and post-delivery complications and treatment seeking behaviour in case of pregnancy and post delivery complications by district. As mentioned earlier, in the state, 42 percent, 44 percent and 42 percent of the women experienced pregnancy, delivery and post delivery complications respectively. About 43 percent of the women sought treatment for pregnancy complications and 42 percent for post delivery complications. In every district, a minimum of one-fourth of the women experienced at least one of the symptoms of pregnancy complications.

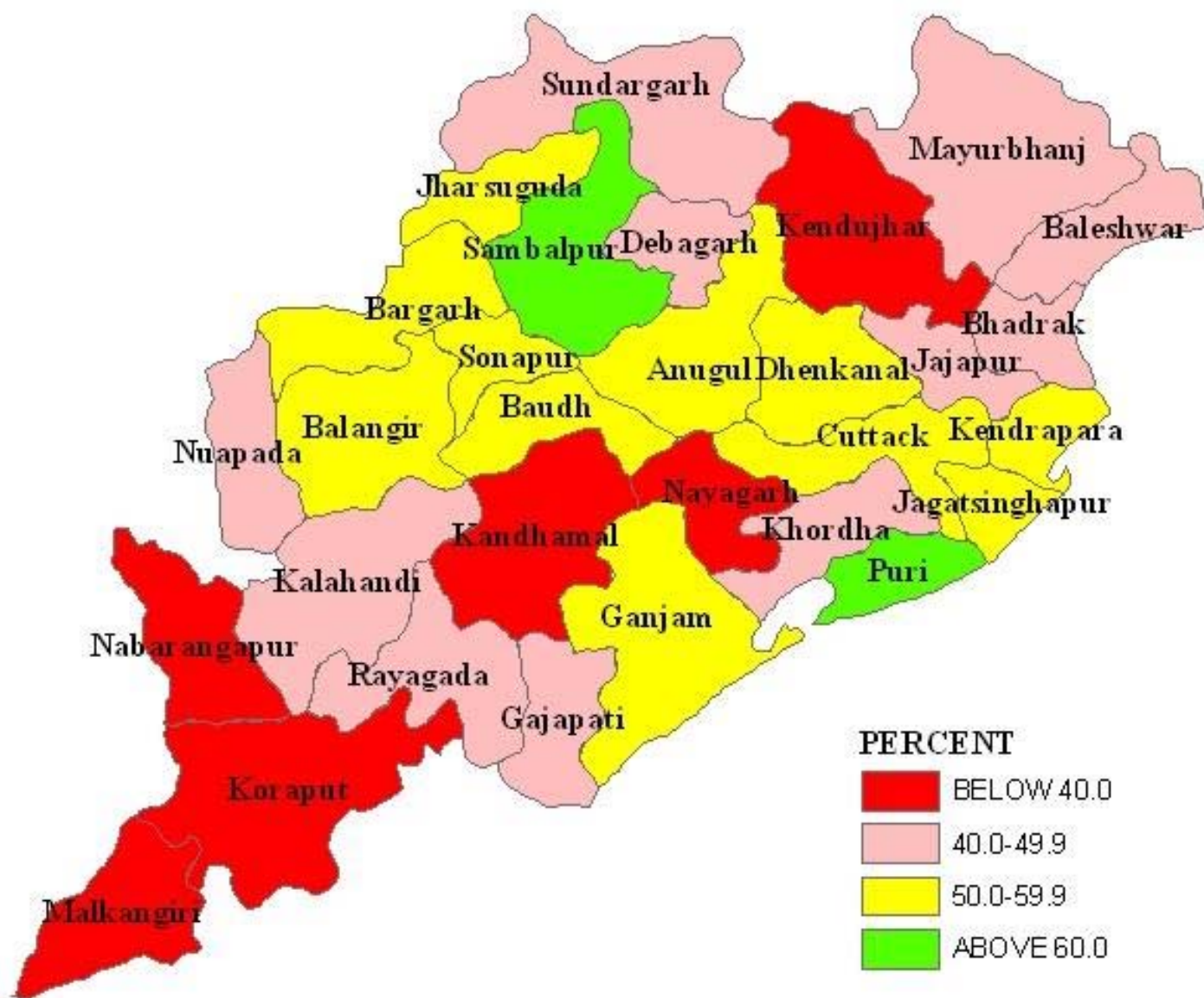
<b>Table 4.17 PREGNANCY, DELIVERY AND POST DELIVERY COMPLICATIONS</b>					
Extent of pregnancy, delivery and post delivery complications and treatment seeking behaviour by districts, Orissa, 2002-04					
District	Percentage of women <sup>1</sup>				
	Who had complication during pregnancy	Sought <sup>2</sup> treatment for pregnancy complication	Who had delivery complication	Who had post delivery complication	Sought <sup>3</sup> treatment for post delivery complication
Anugul	43.4	45.1	53.9	55.8	36.9
Balangir	43.8	61.5	41.1	44.7	64.7
Baleshwar	56.7	39.3	51.8	50.8	41.4
Bargarh	47.8	57.1	51.4	42.1	47.5
Baudh	49.6	73.4	33.4	37.0	53.1
Bhadrak	50.7	33.8	61.6	54.9	25.6
Cuttack	54.7	55.2	56.8	46.8	53.4
Debagarh	48.2	42.9	40.7	45.6	43.6
Dhenkanal	47.3	46.1	51.0	38.1	45.1
Gajapati	29.1	56.4	26.2	31.3	54.0
Ganjam	25.8	35.4	32.9	29.2	51.6
Jagatsinghapur	54.4	40.5	47.3	42.5	46.8
Jajapur	50.0	45.2	56.6	58.1	33.3
Jharsuguda	45.4	51.4	38.5	34.5	55.0
Kalahandi	46.9	42.7	36.2	50.3	49.4
Kandhamal	38.5	46.8	37.3	44.0	38.9
Kendrapara	56.3	44.9	51.4	56.4	48.5
Kendujhar	38.9	32.7	50.3	48.6	32.1
Khordha	28.9	40.6	34.3	26.1	40.0
Koraput	33.7	38.7	35.0	42.1	39.2
Malkangiri	30.4	12.5	44.9	35.1	20.5
Mayurbhanj	46.2	44.1	53.8	45.9	36.5
Nabarangapur	26.8	43.3	26.1	37.3	42.2
Nayagarh	43.9	54.9	38.9	41.4	52.4
Nuapada	30.3	42.0	27.0	30.3	45.7
Puri	48.4	40.1	42.3	39.5	46.0
Rayagada	36.2	21.4	34.7	28.3	33.1
Sambalpur	40.2	45.2	47.7	39.0	49.6
Sonapur	39.2	49.3	53.6	35.5	45.4
Sundargarh	41.0	27.1	55.0	44.1	34.0
Orissa	41.6	42.5	44.0	42.0	42.0

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

In a few districts like, Bhadrak (51 percent), Jagatsinghpur (54 percent), Cuttack (55 percent) and Baleswar (57 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 26 percent in Gajapati and Nabarangpur to 62 percent in Bhadrak, and incidence of post delivery complication varies from 26 percent in Khorda to 58 percent in Jajpur. The incidence of all three types of complications seems to be linked with each other in varying proportions.

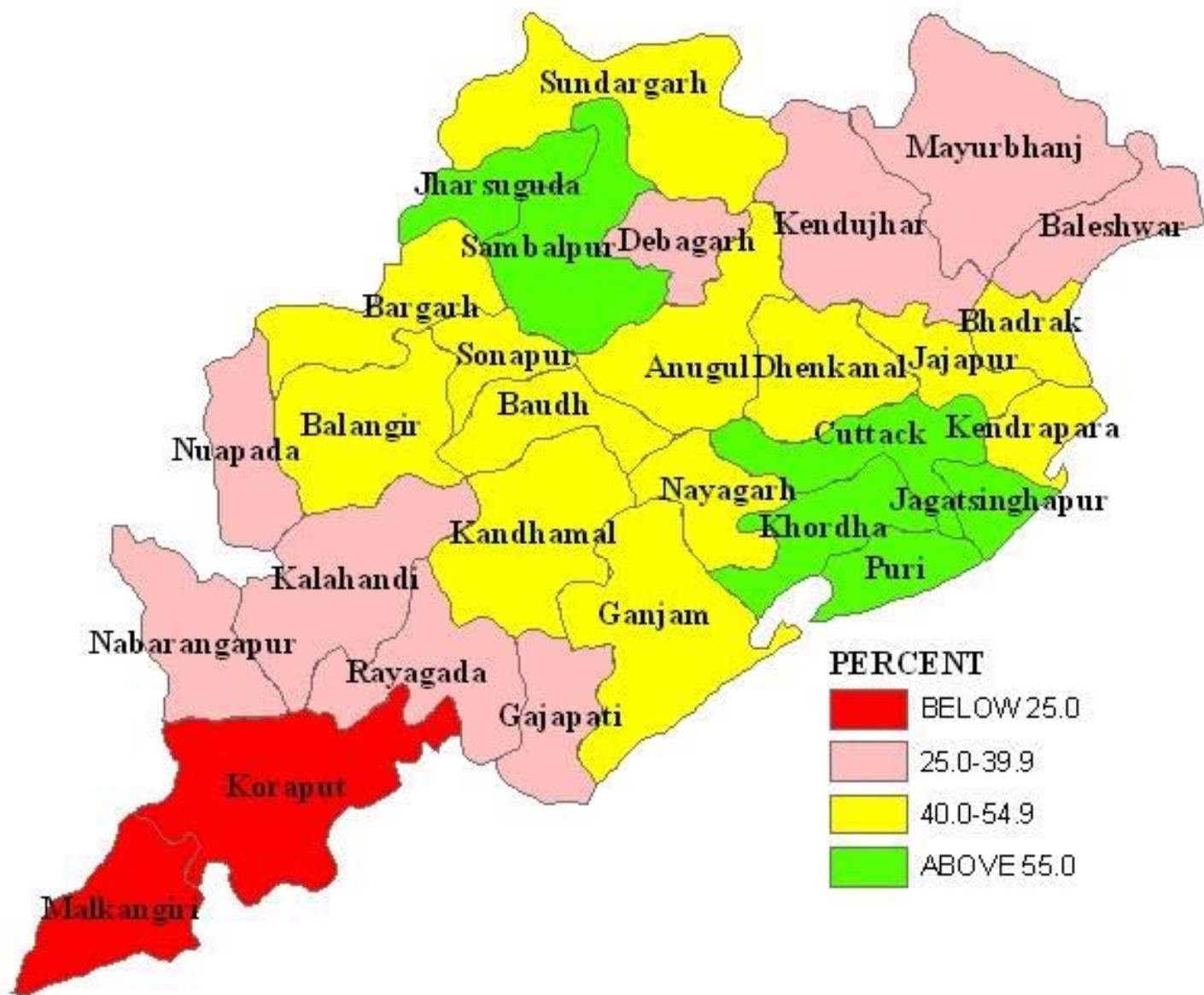
In most of the districts of Orissa about three-quarters of the women received some kind of antenatal care. In spite of a large proportion of women having contact with a doctor or any other health worker during the antenatal period, in all districts (except Balangir, Baragarh, Baudh, Cuttack, Gajapati, Jharsuguda and Nayagarh) less than 50 percent of the women sought treatment for pregnancy complication. Similarly, among women who experienced at least one symptom of postpartum complication, the proportion seeking treatment also varies across the districts, ranging from 21 percent in Malkangiri to 65 percent in Balangir.

**MAP-3**  
**Percentage of Women Received Three or More Ante-natal Check Ups**





**MAP-4**  
**Percentage of Delivery Attended by Skilled Person**



## CHAPTER V

### CHILD CARE AND IMMUNIZATION

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

#### 5.1 Breastfeeding

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

As recommended by the World Health Organization (WHO), breastfeeding should be initiated immediately after birth and should be continued upto a minimum of six months. The WHO also suggests that the yellowish milk, known as colostrum, 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 Orissa. Although, the practice of breastfeeding is common in Orissa, the initiation of breastfeeding within two hours of the birth of the child is not always followed. Forty-three percent of the children were breastfed within two hours of birth, and 65 percent were breastfed within one day of birth (including those who were breastfed within two hours of birth), while 35 percent of children were breastfed after one day of birth. As shown in Figure 5.1, about 20 percent of the children were breastfed within one day of birth but after two hours of birth, 27 percent were breastfed after the first day of birth but before 3 days, and 8 percent children were put to the breast after

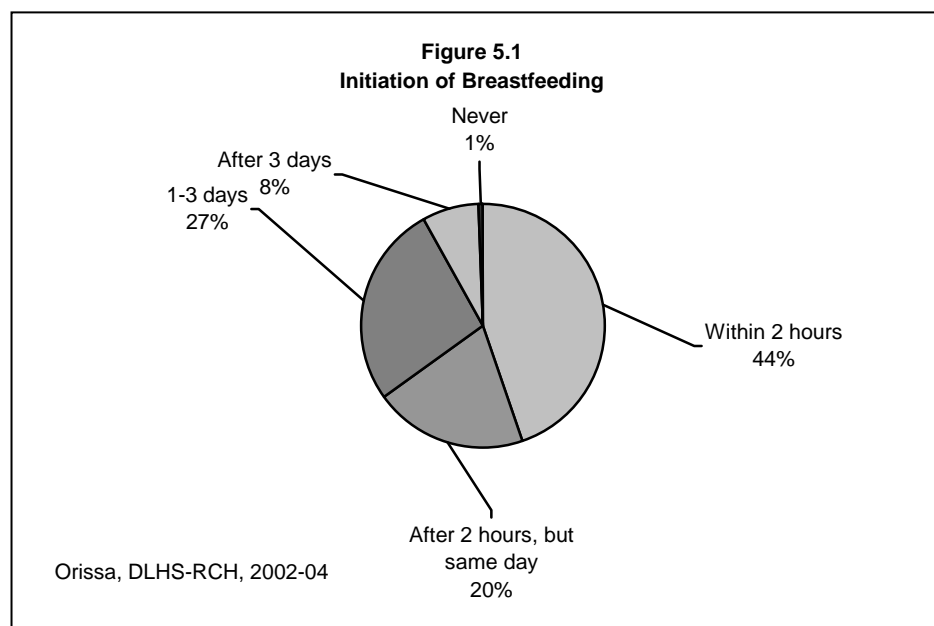
three days. One percent of the children were never breastfed. A little less than half of the women (48 percent) who gave birth to children during the three years preceding the survey squeezed the first milk from the breast before they began breastfeeding. Not more than 56 percent of children in any socio-economic groups shown in Table 5.1 were breastfed within two hours of birth. Forty-two percent of children from scheduled tribe were breastfed within two hours of birth, and 41 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 likely to start breastfeeding their children early. A large proportion of children from urban areas (51 percent), Muslim children (53 percent), children from other castes (44 percent), children of educated mothers (54 percent), and children from households with a high standard of living (57 percent) were put to the breast within one day of birth.

<b>Table 5.1 INITIATION OF BREASTFEEDING</b>					
Percentage of children under age 3 whose mother started breastfeeding within two hours of birth, within one day of birth, and after one day of birth and percentage whose mother squeezed the first milk from her breast before breastfeeding by selected background characteristics, Orissa, 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 <sup>1</sup>	After one day of birth		
<b>Residence</b>					
Rural	42.7	64.2	35.3	50.0	6,224
Urban	50.7	67.0	32.8	42.4	2,107
<b>Mother's education</b>					
Non-literate	39.1	60.4	39.0	57.4	4,143
0-9@ years	48.9	67.7	31.9	42.3	2,955
10 and above	53.6	73.1	26.8	30.3	1,217
<b>Religion</b>					
Hindu	44.4	64.7	34.8	47.8	7,913
Muslim	53.1	64.6	34.7	55.4	241
Other	49.9	74.8	24.0	48.4	150
	(44.0)	(60.0)	(40.0)	(48.0)	27
<b>Caste/tribe#</b>					
Scheduled caste	41.0	58.5	41.1	48.3	1,628
Scheduled tribe	41.7	64.1	35.2	60.8	2,108
Other backward class	44.0	64.8	34.7	44.2	2,846
Other	53.2	71.9	27.8	38.6	1,682
<b>Standard of living index</b>					
Low	40.7	62.2	37.3	55.1	5,464
Medium	50.4	69.0	30.5	35.8	1,909
High	56.5	71.8	27.9	32.4	958
Total	44.7	64.9	34.6	48.1	8,331

Note: Table based on youngest living child born during the three years preceding the survey.  
<sup>1</sup> Includes children whose mother started breastfeeding within two hours of births.  
 @ Literate mother with no years of schooling are included. #Total figure may not add to N due to do not know and missing cases. Total 16 cases with missing information on mother's education were shown separately

The custom of squeezing the first milk from the breast before breastfeeding is widely practised in every group, but it is slightly higher among the mothers of scheduled tribe children, Muslim 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. There is not much Rural-Urban differential of the custom of squeezing 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.



**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, Orissa, 2002-04

Age in months	Status of exclusive breastfeeding			Number of children
	Exclusive breastfeeding	At least 4 months	At least 6 months	
<2	56.5	*	*	415
2-3	41.6	*	*	542
4-5	22.5	41.0	*	600
6-7	13.4	46.7	24.5	542
8-9	6.6	42.4	20.6	505
10-11	3.4	46.8	20.2	544
12-13	5.6	45.5	24.8	492
14-15	4.7	42.0	21.8	482
16-17	5.1	46.0	21.9	459
18-19	2.9	42.2	19.1	483
20-21	3.2	41.5	19.4	386
22-23	2.3	44.8	15.4	405
24-25	3.0	41.8	16.9	490
26-27	3.3	42.2	19.8	445
28-29	3.4	43.0	19.0	457
30-31	2.7	47.6	22.2	412
32-33	1.8	36.2	18.6	341
34-35	1.6	45.4	26.1	331
< 4 months	48.0	*	*	957
4-6 months	21.0	44.2	*	881
7-9 Months	7.3	42.2	20.6	766

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

In Orissa, only 48 percent of children under four months of age are exclusively breastfed. The percentage of infants exclusively breastfed drops steadily from 57 percent for children under 2 months of age to 23 percent for children who are 4-5 months old. About 44 percent of children in the age group 4-6 months were exclusively breastfed up to 4 months and 21 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 Orissa, except Puri, Gajapati, Khenrapara and Baleshwar, not more than 55 percent of the children were put to the breast within two hours of birth. Less than 30 percent of the children were breastfed within two hours of birth in Anugul district. More than two-fifth of the children were put to the breast after one day of birth in Bargarh, Debagarh, Jharsuguda, Sambalpur, Bhadrak, Anugul and Jajapur districts. In 8 of the 30 districts only, the mothers of more than 55 percent children squeezed the first milk before breastfeeding.

District	Percentage started breastfeeding			Percentage whose mother squeezed first milk from breast	Exclusive breastfeeding <sup>2</sup>
	Within two hours of birth	Within one day of birth <sup>1</sup>	After one day of birth		
Anugul	29.2	57.8	42.0	54.0	40.1
Balangir	40.7	61.6	37.7	55.2	17.6
Baleshwar	55.3	66.2	32.8	59.1	28.2
Bargarh	30.6	47.3	51.8	60.7	43.9
Baudh	49.9	69.3	30.4	47.9	18.5
Bhadrak	40.0	50.4	48.6	54.3	20.8
Cuttack	48.8	65.8	34.2	44.5	8.3
Debagarh	34.9	47.1	51.7	45.2	9.3
Dhenkanal	53.9	69.9	29.8	39.1	11.4
Gajapati	56.7	73.8	25.7	50.4	11.2
Ganjam	48.1	64.0	35.5	37.1	21.6
Jagatsinghapur	42.5	65.4	34.2	24.7	11.4
Jajapur	43.7	58.7	40.9	46.5	32.9
Jharsuguda	33.8	49.7	48.8	47.0	20.3
Kalahandi	44.1	67.3	31.4	49.4	15.0
Kandhamal	39.9	60.5	39.0	34.2	23.7
Kendrapara	56.4	71.3	28.4	34.0	14.4
Kendujhar	39.7	58.2	41.8	57.6	11.1
Khordha	41.9	73.7	26.3	34.4	7.4
Koraput	41.6	81.5	18.5	55.4	25.5
Malkangiri	49.3	72.5	27.5	70.9	24.5
Mayurbhanj	46.1	69.1	30.2	48.9	9.0
Nabarangapur	43.6	68.6	30.5	56.0	25.6
Nayagarh	41.4	66.7	32.4	48.4	7.7
Nuapada	38.3	68.9	30.3	40.9	27.9
Puri	60.8	77.1	22.7	34.5	22.1
Rayagada	40.4	75.7	24.3	53.2	15.5
Sambalpur	25.8	53.6	43.3	51.2	25.9
Sonapur	46.5	65.0	34.5	53.8	28.1
Sundargarh	51.3	62.6	36.6	56.3	38.5
<b>Orissa</b>	<b>44.7</b>	<b>64.9</b>	<b>34.6</b>	<b>48.1</b>	<b>20.7</b>

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

There is a great deal of variation in the extent of exclusive breastfeeding for six months. It is highest in Bargarh (44 percent) and lowest in Khodha (7 percent), Nayagarh (8 percent) and Cuttack (8 percent).

## **5.2 Immunization of Children**

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

The Universal Immunization Programme (UIP) was introduced in 1985-86 with the objective of covering at least 85 percent of all infants against the six vaccine preventable diseases by 1990. This scheme has been introduced in every district of the country. The standard immunization schedule developed for the child immunization programme specifies the age at which each vaccine should be administered and the number of doses to be given. Routine vaccinations received by infants and children are usually recorded on a vaccination card that is issued for the child.

In the first phase of Round II, all the women with last and last but one living child born after January 1, 1999 were asked whether the child/children had received the vaccination against polio, tuberculosis (BCG), diphtheria, whooping cough (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. Only 54 percent of the children are fully vaccinated, and around 6 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-fourth of children (Figure 5.3). Only 70 percent of the children have received three doses of DPT and 69 percent of the children received 3 drops of Polio, and only 68 percent of the children have been vaccinated against measles. Moreover, not all children who begin the DPT and polio vaccination series, go on to complete them. The differences between the percentage of children receiving the first and third doses is 20-percentage point for DPT and nearly same percentage points for polio.

There has been some improvement in full vaccination coverage in Orissa 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 Orissa, coverage levels are still low and a large proportion of children who received some early vaccinations dropped out of the programme before receiving all of the recommended vaccinations.

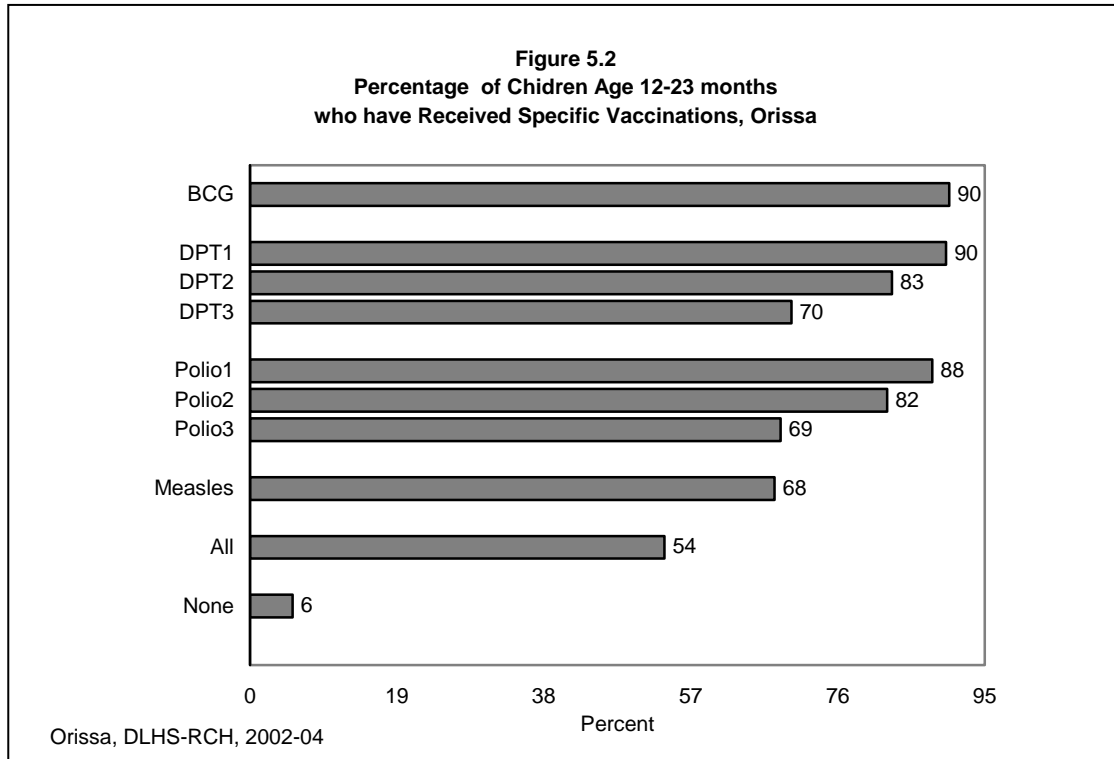
**Table 5.4 VACCINATION OF CHILDREN**

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

Background characteristic	Polio 0	BCG	DPT			Polio			Measles	Full <sup>1</sup> vaccination	No vaccination	Number of children
			1	2	3	1	2	3				
<b>Residence</b>												
Rural	27.5	90.3	89.7	82.0	68.2	88.8	82.5	67.7	68.0	52.8	5.4	2,171
Urban	62.5	90.8	91.2	86.0	75.8	86.2	81.9	71.2	67.3	56.1	5.9	703
<b>Sex of the child</b>												
Male	38.6	90.6	91.0	84.2	70.8	89.0	82.5	69.1	67.9	53.5	4.8	1,485
Female	33.4	90.2	89.0	81.7	69.3	87.4	82.3	68.1	67.7	53.8	6.2	1,389
<b>Birth order</b>												
1	48.5	92.7	94.1	88.6	78.2	91.9	86.9	76.0	70.2	58.7	4.0	893
2	40.1	92.2	91.6	85.4	73.2	89.9	85.2	72.3	71.7	56.9	4.1	801
3	26.2	91.8	87.1	78.8	65.3	84.8	77.8	64.0	66.9	51.1	5.6	513
4+	22.1	84.0	85.0	75.9	59.0	83.8	76.5	57.6	60.7	44.8	9.0	667
<b>Mother's education</b>												
Non-literate	19.5	86.2	85.2	76.1	60.5	83.4	76.0	59.4	60.5	44.9	8.1	1,439
0-9@ years	43.6	93.4	93.9	88.4	78.1	93.1	88.7	76.6	71.4	58.6	3.6	1,028
10 years and above	75.7	97.7	97.5	93.8	83.5	92.7	89.0	80.8	84.6	71.8	1.2	403
<b>Religion</b>												
Hindu	36.2	90.4	90.1	83.1	70.0	88.2	82.5	68.7	67.9	53.5	5.5	2,730
Muslim	40.5	86.7	91.7	86.4	76.2	86.7	80.9	68.1	65.8	53.4	8.0	77
Christian	20.5	92.7	82.4	72.7	62.3	88.1	78.4	62.3	64.2	54.1	3.5	57
<b>Caste/tribe#</b>												
Scheduled caste	25.4	87.6	87.5	78.7	67.2	84.4	77.6	63.4	58.2	45.0	8.0	567
Scheduled tribe	18.6	86.0	83.6	71.9	53.7	82.0	72.6	53.4	59.0	39.3	8.2	737
Other backward class	42.1	94.1	93.7	89.6	78.1	92.5	88.3	77.1	74.7	63.7	3.6	960
Other	57.3	92.6	94.3	90.2	80.0	92.3	89.5	78.6	76.1	62.9	3.0	592
<b>Standard of living index</b>												
Low	22.4	88.3	87.3	78.9	64.2	86.2	79.1	63.4	62.4	47.3	6.8	1,900
Medium	51.7	92.5	93.5	89.9	79.1	91.0	87.8	74.8	74.1	61.1	4.0	636
High	83.7	98.2	99.0	93.3	86.0	94.1	90.8	85.9	86.4	74.9	1.0	338
<b>Total</b>	36.1	90.4	90.0	83.0	70.0	88.2	82.4	68.6	67.8	53.6	5.5	2,874

Note: Table includes only last and last but one living child born since 1.1.1999/1.1.2001. Total includes 3 women with missing information on mother's education 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. <sup>1</sup>BCG, three injection of DPT, three doses of Polio (excluding Polio 0) and measles

The data indicates that there is not much difference in the coverage of each type of vaccine in rural areas and urban areas. Fifty-three percent of the children in rural areas had received all the recommended vaccinations by the time of the survey while in urban area the percentage is slightly higher (56 percent). Rural-urban differentials in polio 0 coverage may be observed from the table. Sixty-three percent of the children have received polio vaccine at the time of birth in urban areas whereas just half of it received the same in the rural areas.



Percentages of children receiving full vaccination by sex do not show any significant difference between male and female children. Individual vaccination coverage of the children doesn't differ significantly. 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 45 percent children of non-literate mothers are fully vaccinated compared to 59 percent of children with mothers' education below high school and 72 percent of mothers who had at least completed high school. No religious differentials are noticed in the percentage of children who had full vaccination. Children from Other Backward Class and Other Caste/tribe are more likely to have vaccinations as compared to children of Scheduled tribe and Scheduled castes. The standard of living index of the household has a strong positive relationship with vaccination coverage. Seventy five percent of children from households with a high standard of living are fully vaccinated, whereas



only 47 percent of children from households with a low standard of living had full coverage.

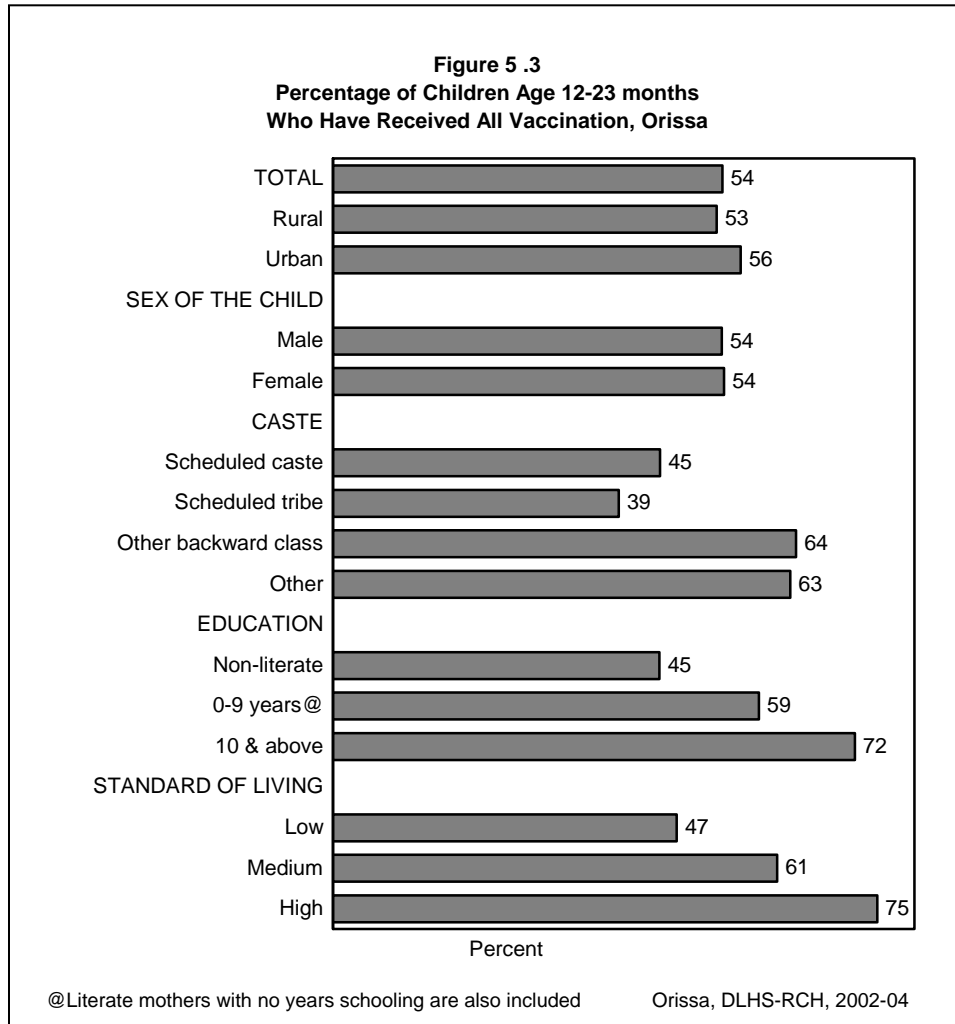
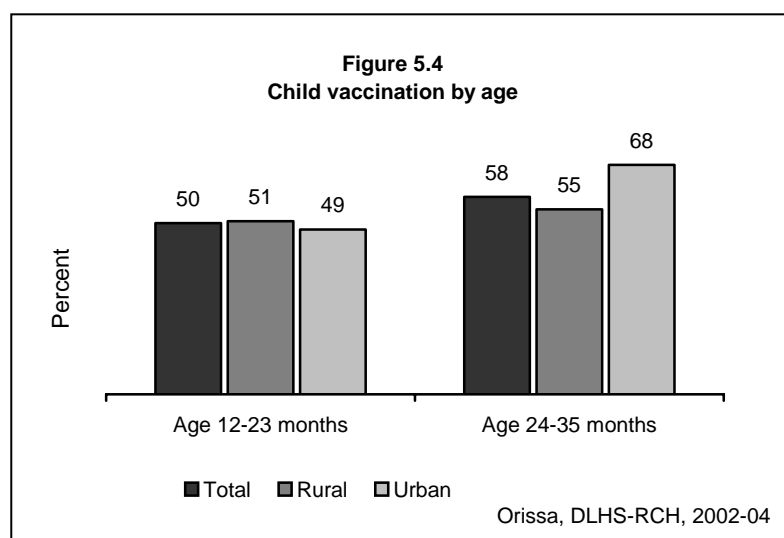


Table 5.5 shows the percentage of children in the age group 12-23 months and 24-35 months with a vaccination card, and the percentage who received various vaccinations during the first year of life by current age of children and place of residence. The interviewer was shown this vaccination card.

The proportion of children fully vaccinated by age 12 months increased slightly from 54 percent for children in the age group 12-23 months to 56 percent for children in the age group 24-35 months. A rural-urban differential for the coverage of full vaccination is also observed. Fifty-three percent of children in the age group 12-23 months are fully vaccinated against 57 percent of children in the age group 24-35 months in rural areas, but in urban area there is a very slight difference (Figure 5.4). Only 56 percent of children in the age group 12-23 months received all vaccinations in urban areas compared to 55 percent with children in the age group 24-35 months. Children aged 24-35 months are more likely to receive each type of vaccine.

<b>Table 5.5 CHILDHOOD VACCINATION RECEIVED BY 12 MONTHS OF AGE</b>						
Percentage of children age 12-23 months and 24-35 months with a vaccination card that shown to the interviewer and percentage who received specific vaccinations by 12 months of age according to residence, Orissa, 2002-04						
Vaccination status	Total		Rural		Urban	
	12-23 months	24-35 months	12-23 months	24-35 months	12-23 months	24-35 months
Vaccination card shown to interviewer	48.3	32.9	44.9	30.4	58.7	39.6
Percentage vaccinated by 12 months of age						
Polio 0	36.1	36.6	27.5	26.7	62.5	63.7
BCG	90.4	86.7	90.3	88.2	90.8	82.6
<b>Polio doses</b>						
No Polio	9.7	11.7	9.2	10.9	11.1	13.8
1	5.9	5.6	6.3	5.4	4.4	6.2
2	13.9	10.2	14.9	11.5	10.9	6.6
3	69.1	70.6	67.9	70.0	72.7	72.4
Don't remember						
<b>DPT injection</b>						
No DPT	8.9	11.3	9.1	10.2	8.5	14.2
1	7.0	7.9	7.6	7.5	5.2	8.9
2	13.0	9.5	13.8	11.4	10.2	4.3
3	70.0	70.0	68.2	69.3	75.8	71.9
Don't remember/missing			68.0			
Measles	67.8	71.8		73.5	67.3	67.1
Full <sup>1</sup> vaccination	53.6	56.4	52.8	56.9	56.1	54.8
No vaccination at all	5.5	7.2	5.4	6.5	5.9	9.1
Number of children	2,874	3,129	2,171	2,290	703	839

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



### 5.3 Source of Immunization

Table 5.6 gives the percent distribution of children under three years of age who received any vaccination by the source of last vaccine, according to place of residence and availability of health facilities in the village. The primary providers of childhood vaccinations in Orissa are the other health facilities. Only half of the children (52 percent) were immunized at the government health facilities, while three percent were immunized at private health facilities. Further, among the children immunized, 14 percent of them had received vaccination from the sub-centre, 17 percent from municipal hospital, and 16 percent from community health centre or from primary health centre. The percentage of children receiving vaccination from the private sector is very low in rural areas (1 percent) as well as in urban areas (2 percent). Even in urban areas, however, 74 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.

<b>Table 5.6 SOURCE OF CHILDHOOD VACCINATION</b>					
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, Orissa, 2002-04					
Source of vaccination	Total	Residence		Availability of health facility <sup>1</sup> in the village	
		Rural	Urban	No	Yes
<b>Government health sector</b>					
Government/municipal hospital	17.3	7.0	48.1	7.0	7.1
Community/primary health centre	15.7	15.1	17.6	12.7	17.9
Sub-centre	13.7	17.0	3.7	14.8	19.7
RCH/MCP camp	5.5	6.7	1.9	6.3	7.2
<b>Private health sector</b>					
Private hospital	1.8	0.6	5.7	0.6	0.5
Private doctor	1.5	0.9	3.2	0.8	1.0
ISM <sup>2</sup> health facility	0.8	0.5	1.6	0.5	0.5
Other	40.2	48.0	16.8	54.2	40.6
Do not remember	3.4	4.0	1.5	3.0	5.1
Missing	0.1	0.2	0.0	0.0	0.3
Total percent	100.0	100.0	100.0	100.0	100.0
Number of children	8,102	6,073	2,029	3,312	2,761
Note: Table includes last and last but one living children born in the three years preceding the survey. <sup>1</sup> Includes sub-centre, primary health centre, Community health centre or referral hospital, government hospital, and government dispensary within the village. <sup>2</sup> Either government or private health facility of Indian System of Medicine Total includes 9 cases with missing information on source of last vaccination were not shown separately					

### 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 16 percent of the

children did not receive any vaccination because the mothers of children were unaware of the need for immunization, and 26 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 place or time of vaccination was not known (12 percent), place or time of vaccination was inconvenient (5 percent), fear of side effects (1 percent), no faith in vaccination (1 percent) and ANM absent/ vaccine not available (6 percent), and other reasons (20 percent). The percentage of children who did not receive any vaccinations is considerably is slightly higher in rural areas (17 percent) than in urban areas (15 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 less likely to report that they were unaware of the need for immunization as compared to those villages where health facilities are not available. Where health facilities were available, fear of side effects and no faith in immunization were reported more as reasons for not immunizing the children compared to the areas without having the same.

<b>Table 5.7 REASON FOR NOT GIVING VACCINATION</b>					
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, Orissa, 2002-04					
Reason	Total	Residence		Availability of health facility <sup>1</sup> in the village	
		Rural	Urban	No	Yes
Unaware of need for immunization	15.6	15.4	17.1	15.8	14.8
Place/time unknown	14.0	13.9	14.2	13.0	15.0
Place/time inconvenient	8.5	9.7	2.3	15.7	3.2
Fear of side effect	7.1	6.7	9.7	3.7	9.9
No faith in Immunization	4.1	4.0	4.7	3.0	5.2
ANM absent/vaccine not available	3.4	3.4	3.3	5.2	1.4
Long waiting time	0.8	0.7	1.3	0.0	1.5
Child too young	22.6	22.3	24.2	19.3	25.6
Family problems <sup>2</sup>	13.2	13.4	12.0	13.9	12.8
Other	10.6	10.5	11.2	10.5	10.5
Total percent	100.0	100.0	100.0	100.0	100.0
Number of children	549	462	87	241	221

Note: Table includes last and last but one living children born in the three years preceding the survey.<sup>1</sup> Includes sub-centre, primary health centre, Community health centre or referral hospital, government hospital, and government dispensary within the village. <sup>2</sup> Includes mother too busy, family problems, including illness of mother, and illness of child; Total includes 65 cases with missing information on receive any vaccination by reason were not shown separately

## 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 Orissa as a whole, 53 percent of the children received at least one dose of Vitamin A, and only six percent received IFA tablets/syrup. This indicates that a large number of children in Orissa did not receive Vitamin A supplements and very few children received IFA tablets/syrup supplementation.

<b>Table 5.8 VITAMIN A AND IFA SUPPLEMENTATION FOR CHILDREN</b>			
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, Orissa, 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
<b>Age of the child</b>			
12-23 months	52.1	5.6	2,874
24-35 months	53.9	5.8	3,129
<b>Sex of the child</b>			
Male	52.8	5.2	3,022
Female	53.2	6.2	2,981
<b>Birth order</b>			
1	57.4	5.1	1,840
2	53.6	5.4	1,695
3	52.0	7.2	1,083
4+	47.5	5.6	1,384
<b>Residence</b>			
Rural	53.7	6.1	4,461
Urban	51.3	4.5	1,542
<b>Mother's education</b>			
Non-literate	47.4	5.6	2,995
0-9 years@	54.3	5.7	2,179
10 years and above	70.2	6.0	823
<b>Religion</b>			
Hindu	52.8	5.4	5,703
Muslim	58.7	18.2	157
Christian	56.1	5.7	123
Other	(49.6)	(0.0)	20
<b>Caste/tribe #</b>			
Scheduled caste	43.3	4.9	1,233
Scheduled tribe	47.0	5.7	1,483
Other backward class	59.5	5.6	2,014
Other	59.4	6.8	1,230
<b>Standard of living index</b>			
Low	48.9	5.8	3,943
Medium	56.2	5.5	1,401
High	71.0	5.5	659
<b>Availability of health facility in the village<sup>1</sup></b>			
Yes	56.2	7.8	1,986
No	51.6	4.7	2,474
Total	53.0	5.7	6,003
Note: Table includes last and last but one living children born in the three years preceding the survey. Total includes 5 cases with missing information with mother's education were not shown separately. @ 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. <sup>1</sup> 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. Female children are more likely to receive Vitamin A and IFA tablets/syrup. Children living in rural 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 Scheduled castes are less likely to receive at least one dose of Vitamin A and a dose of IFA tablets/syrup than other caste category.

<b>Table 5.9 CHILDHOOD VACCINATION BY DISTRICT</b>								
Percentage of children who received specific vaccinations and Vitamin A supplementation by district, West Bengal, 2002-04								
District	Percentage vaccinated <sup>1</sup>							Percentage received at least one dose of Vitamin A <sup>3</sup>
	Polio 0	BCG	DPT3	Polio3	Measles	Full <sup>2</sup>	None	
Anugul	45.2	88.6	69.6	59.8	69.4	50.8	7.7	53.5
Balangir	53.7	95.0	77.9	77.9	75.7	63.4	1.3	62.8
Baleshwar	40.5	97.2	82.6	79.4	76.8	69.2	1.3	69.8
Bargarh	27.1	93.8	89.5	87.7	79.1	71.6	0.8	69.6
Baudh	36.4	96.0	73.0	73.0	80.7	66.8	1.5	74.8
Bhadrak	28.4	89.2	76.4	71.2	62.7	51.7	5.9	48.1
Cuttack	78.3	97.1	85.3	90.6	88.4	82.8	2.9	62.4
Debagarh	26.0	88.7	63.0	56.3	67.1	46.5	2.9	57.8
Dhenkanal	63.9	97.5	78.9	77.6	76.0	62.1	2.5	62.9
Gajapati	21.5	89.1	59.7	59.7	66.5	46.3	10.9	52.9
Ganjam	31.8	87.3	72.3	69.3	64.8	51.5	8.4	41.2
Jagatsinghapur	48.2	61.0	57.8	57.8	50.5	46.6	34.9	43.7
Jajapur	33.5	76.2	61.9	65.5	52.3	35.1	9.9	44.6
Jharsuguda	39.6	95.4	84.5	84.5	78.0	71.1	1.3	74.1
Kalahandi	36.5	91.5	57.5	59.1	73.0	50.1	4.2	66.0
Kandhamal	19.2	91.3	69.6	70.2	72.4	58.3	5.0	63.5
Kendrapara	44.5	94.2	74.4	71.5	63.5	55.5	3.6	60.0
Kendujhar	24.4	84.4	60.8	51.0	56.7	34.0	8.2	38.7
Khordha	42.9	98.3	91.8	87.0	68.1	63.4	0.3	40.3
Koraput	32.7	93.4	37.5	37.5	52.2	31.4	5.3	38.0
Malkangiri	10.6	83.7	50.5	55.3	54.5	39.7	8.7	52.7
Mayurbhanj	37.0	92.1	50.9	48.2	71.5	39.6	5.7	55.4
Nabarangapur	26.6	89.4	51.1	52.4	66.4	46.2	4.0	55.1
Nayagarh	31.7	79.3	71.4	71.1	68.9	62.0	19.4	54.6
Nuapada	23.5	89.6	73.7	61.4	58.7	41.8	3.0	44.8
Puri	51.6	91.5	79.3	80.2	79.6	69.5	3.2	59.8
Rayagada	18.5	86.5	58.0	59.0	61.8	45.0	7.0	56.8
Sambalpur	43.4	93.6	84.0	82.3	74.9	65.7	1.7	61.6
Sonapur	29.9	95.2	78.0	73.1	68.9	58.4	2.3	58.5
Sundargarh	36.6	89.2	74.2	78.6	69.6	59.0	5.9	52.8
Orissa	36.1	90.4	70.0	68.6	67.8	53.6	5.5	53.0

Note: Table includes only last and last but one living child born since 1.1.1999/1.1.2001  
<sup>1</sup>Children age 12-23 months, <sup>2</sup> BCG, three injection of DPT, three doses of Polio (excluding Polio 0) and measles.  
<sup>3</sup> Children age 12-35 months.

## **5.6 Immunization Coverage by District**

The coverage of vaccination rates for all vaccines for children in the age group 12-23 months in each district is presented in Table 5.9. 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 31 percent in Koraput to 83 percent in Cuttack. In three districts, namely Koraput (31 percent), Khendujhar (34 percent) and Jajapur (35 percent) the coverage of full immunization is below 40 percent (see Map-5) and including these three districts 12 districts are there, in which the coverage rate of full immunization is below the state average of 54 percent. Thirty-five percent of children in Jagatsinghapur district were not vaccinated at all, and in eight 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 Malkangri (11 percent) and Rayagada (19 percent) to the highest in Cuttack (78 percent).

District wise variations in the percentage of children who received at least one dose of Vitamin A are also shown in Table 5.9. The percentage of children in the age group 12-35 months who received at least one dose of Vitamin 'A' supplements ranges from 38 percent in Koraput to 75 percent in Baudh. Kendujhar (39 percent), Khordha (40 percent), Ganjam (41 percent), Jagatsinghapur (44 percent), Jajapur (45 percent) Naupada (45 percent) and Bhadrak (48 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.

In Orissa, 74 percent of the mothers with births three years preceding the survey were aware of what to do when a child had diarrhoea, and 49 percent were aware of ORS. Thirty-six percent of the women were aware of salt and sugar solution. Some of the women also reported that they would continue normal food (3 percent), continue

breastfeeding (7 percent), and give plenty of fluids (7 percent), and about 14 percent of women did not know what to give a child who had diarrhoea. As expected, knowledge of ORS is higher among urban women (62 percent) than rural women (45 percent), and among high school and above educated women (84 percent) as compared to non-literate women (32 percent). Women belonging to Scheduled Tribes (33 percent) are less likely to know about ORS than women belonging to other caste groups (65 percent). Eighty-two percent of women with children having a high standard of living know about ORS and it declines to 61 percent for women with a medium standard of living and 39 percent with a low standard of living. Knowledge of ORS is more among middle age groups and among older women than among younger women. Women from villages with availability of health facilities are more aware of diarrhoea management than women from other villages.

**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<sup>1</sup> from diarrhoea by selected background characteristics, Orissa, 2002-04

Background characteristic	Knowledge of diarrhoea management	Type of practices to be followed if child gets diarrhoea*					Do not know	Number of women
		Give ORS	Salt and sugar solution	Continue normal food	Continue breastfeeding	Give plenty of fluids		
<b>Age</b>								
15-24	69.7	46.3	31.3	2.9	7.0	6.9	17.3	3,853
25-34	76.8	51.9	39.3	3.6	7.3	7.9	11.9	4,579
35-44	73.1	42.4	36.4	4.3	7.1	7.5	12.7	633
<b>Residence</b>								
Rural	68.5	44.5	32.5	3.6	8.2	6.7	17.1	6,763
Urban	88.2	61.6	45.2	2.8	4.0	9.6	5.9	2,301
<b>Mother's education</b>								
Non-literate	59.8	32.0	22.4	2.4	5.7	4.2	22.6	4,517
0-9@ years	84.0	58.0	45.3	3.9	7.8	9.1	7.3	3,197
10 and above	95.2	83.9	57.9	5.7	10.6	14.7	2.3	1,334
<b>Religion</b>								
Hindu	73.4	48.8	35.3	3.4	7.2	7.4	14.1	8,603
Muslim	83.3	55.4	49.8	2.1	4.5	6.7	12.5	257
Other	65.2	42.5	33.2	2.9	9.2	7.1	24.4	175
	(78.6)	(50.0)	(46.4)	(0.0)	(3.6)	(14.3)	(14.3)	29
<b>Caste/tribe#</b>								
Scheduled caste	75.5	45.2	31.3	2.7	5.9	5.2	10.8	1,746
Scheduled tribe	53.6	33.0	20.5	2.0	6.1	4.6	29.6	2,290
Other backward class	79.2	52.9	39.4	3.7	7.8	8.5	10.2	3,087
Other	86.3	64.8	51.7	5.1	8.7	10.9	5.6	1,873
<b>Standard of living index</b>								
Low	65.4	38.7	28.6	2.7	6.6	5.5	19.3	5,930
Medium	86.4	60.8	44.9	5.0	8.7	10.2	5.8	2,053
High	93.7	81.5	57.3	3.8	7.6	13.0	2.7	1,082
<b>Availability of health facility<sup>2</sup> in the village</b>								
Yes	69.7	47.3	35.9	4.1	8.3	7.3	15.3	3,055
No	67.6	42.1	29.7	3.1	8.2	6.3	18.5	3,708
Total	73.5	48.8	35.7	3.4	7.2	7.4	14.2	9,064

Note: Table based on women with living children born since 01.01.1999 for phase - I /01.01.2001 for phase - II. <sup>1</sup> Last two weeks prior to survey.

Total includes 17 women with missing information on education who are not shown separately.

@ Literate mother with no years of schooling are included. # Total figure may not add to N due to do not know and missing cases.

<sup>2</sup> Includes sub-centre, primary health centre, Community health centre or referral hospital, government hospital, and government dispensary within the village.



### **5.7.2 Treatment of Diarrhoea**

During the two weeks before the survey, 15 percent of the women reported that their children had 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 48 percent of the women mentioned that they gave ORS therapy, and 60 percent of the women said that their child had been treated at health facility. Use of ORS for the treatment of childhood diarrhoea in Orissa is nearly equal among urban and 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, only 25 percent of women visited private hospitals/clinics and 24 percent of women treated their children through the Indian System of Medicine.

<b>Table 5.11 TREATMENT OF DIARRHOEA</b>					
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, Orissa, 2002-04					
Sought treatment/ source of treatment	Total	Residence		Availability of health facility <sup>2</sup> in the village	
		Rural	Urban	Yes	No
Percentage of women whose child suffered <sup>1</sup> from diarrhoea	15.4	16.9	10.8	18.2	15.9
Number of women	9,064	6,763	2,301	3,055	3,708
Percentage of women whose child suffered <sup>1</sup> from diarrhoea treated with ORS	48.4	47.9	50.7	51.0	45.1
Percentage of women whose child suffered <sup>1</sup> from diarrhoea sought treatment	60.2	60.1	60.6	58.1	62.0
Number of women	1,393	1,145	248	556	589
<b>Source of treatment</b>					
<b>Government health facility</b>					
Hospital/dispensary	19.7	17.7	29.0	18.4	17.0
UHC/UHP/UFWC	1.1	1.3	0.3	1.6	1.0
CHC/ Rural hospital	6.1	7.2	1.4	6.8	7.4
Primary health centre	17.9	20.1	7.8	21.0	19.3
Sub centre	6.2	7.4	0.4	11.7	3.6
<b>Private health facility</b>					
NGO/Trust hospital/clinic	0.8	0.8	1.1	0.8	0.8
Private hospital clinic	25.3	21.9	40.7	18.6	24.8
ISM <sup>3</sup> facility	23.7	21.5	33.9	22.4	20.7
Home remedy	5.4	5.2	6.3	4.4	6.0
Other	13.1	14.1	8.3	12.2	15.8
<b>Percent distribution of women who seek treatment by</b>					
Doctor	71.9	69.4	83.5	68.5	70.1
ANM/Nurse/LHV	14.4	16.5	4.8	17.6	15.5
<i>Dai</i> (trained or untrained)	1.7	2.0	0.6	1.9	2.1
Relative/friends	0.7	0.7	0.8	0.9	0.6
Chemist/medical shop	7.4	7.0	9.3	6.7	7.3
ISM practitioner	2.5	3.0	0.3	3.8	2.3
Missing					
Total percent	100.0	100.0	100.0	100.0	100.0
Number of women	839	688	151	323	365
Note: Table based on women with living children born since 01.01.1999 for phase - I /01.01.2001 for phase - II. <sup>1</sup> Last two weeks prior to survey. <sup>2</sup> Includes sub-centre, primary health centre, Community health centre or referral hospital, government hospital, and government dispensary within the village. <sup>3</sup> Either government or private health facility of Indian System of Medicine. Total include 10 cases with missing information on seek treatment were not shown separately					

### 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 (12 percent) of women with births in the three years preceding the survey in Orissa were aware of danger signs of pneumonia. A relatively higher proportion of women in urban areas (17 percent) were aware of the danger signs of pneumonia as compared to women from rural areas (10 percent). Knowledge of danger signs of pneumonia is slightly higher among women in the age group 25-34 (14 percent), Muslim women (27 percent) and women of other religions (23 percent), other castes category (22 percent), highly educated women (28 percent), women living in high standard of living household (27 percent), and women living in those villages with health facilities (11 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' (67 percent), 'pain in chest and productive cough' (51 percent), 'wheezing / whistling' (28 percent), 'chest in drawing' (25 percent), 'not able to drink or take a feed' (25 percent), 'rapid breathing' (15 percent), 'condition get worse than before' (13 percent) and 'excessive drowsy and difficulty in keeping awake' (11 percent).

#### **5.7.4 Treatment of Pneumonia**

About 26 percent of women reported that their child had suffered from pneumonia during two weeks before the survey, the corresponding figures were 27 percent in rural areas and 22 percent in urban 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. Sixty-nine percent of women received some advice or treatment whose children were ill with ARI. This percentage is relatively low in rural areas (65 percent) than in urban areas (82 percent) and percentage is nearly same in the villages without health facilities (65 percent) and in villages with health facility (65 percent).

Among them who got advice for children ill with ARI, 28 percent of women visited private hospital/clinic, and only 16 percent went to government hospital/dispensary, whereas 13 percent of them obtained treatment through Indian System of Medicine.

**Table 5.12 AWARENESS OF PNEUMONIA**

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

Background characteristic	Percentage of women aware of danger signs of pneumonia	Number of women	Danger signs of ARI								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		
<b>Age</b>												
15- 24	9.4	3,853	67.6	21.0	27.8	11.7	48.2	9.6	26.2	12.9	363	
25-34	13.5	4,579	66.6	28.3	24.4	11.7	52.9	15.1	28.6	15.3	617	
35-44	10.1	633	59.9	17.1	18.4	1.8	49.0	16.2	32.2	16.5	64	
<b>Residence</b>												
Rural	9.5	6,763	65.8	24.3	29.0	10.7	48.6	12.2	28.2	11.5	644	
Urban	17.4	2,301	67.7	26.3	19.2	11.8	55.0	14.8	27.6	19.5	400	
<b>Mother's education</b>												
Non-literate	5.2	4,517	58.1	27.7	25.9	9.2	47.9	12.1	19.9	11.3	235	
0-9@ years	13.6	3,197	69.8	21.2	25.1	11.9	47.4	11.1	30.3	15.4	435	
10 and above	28.0	1,334	68.1	28.1	24.9	11.4	57.3	16.4	30.3	15.6	374	
<b>Religion</b>												
Hindu	11.1	8,603	66.9	25.6	25.4	11.3	51.8	13.2	26.5	14.2	955	
Muslim	27.1	257	59.2	6.0	20.9	11.3	44.0	15.7	52.0	21.1	69	
Christian	7.5	175	*	*	*	*	*	*	*	*	13	
Other	22.7	29	*	*	*	*	*	*	*	*	7	
<b>Caste/tribe#</b>												
Scheduled caste	9.1	1,746	61.8	29.6	25.0	5.5	46.3	10.9	27.0	13.0	158	
Scheduled tribe	5.0	2,290	59.0	35.8	35.1	13.9	45.6	4.4	20.2	4.6	116	
Other backward class	11.4	3,087	70.3	25.4	26.9	9.3	50.7	11.1	30.2	16.8	351	
Other	21.7	1,873	66.4	18.1	20.3	14.1	54.9	18.7	29.6	16.5	406	
<b>Standard of living index</b>												
Low	7.5	5,930	63.9	25.0	27.6	10.7	44.9	12.4	25.8	13.1	447	
Medium	14.7	2,053	66.7	24.4	23.0	9.5	54.5	13.6	28.9	13.4	301	
High	27.3	1,082	70.5	25.9	23.9	13.4	56.8	14.1	30.3	17.9	295	
<b>Availability of health facility<sup>2</sup> in the village</b>												
Yes	10.5	3,055	63.8	27.2	27.3	9.3	49.6	12.2	24.4	10.5	321	
No	8.7	3,708	67.9	21.5	30.7	12.0	47.7	12.3	31.9	12.5	322	
<b>Total</b>	<b>11.5</b>	<b>9,064</b>	<b>66.6</b>	<b>25.1</b>	<b>25.2</b>	<b>11.1</b>	<b>51.1</b>	<b>13.2</b>	<b>28.0</b>	<b>14.5</b>	<b>1,043</b>	

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

Total includes 20 women with missing information on education who are not shown separately. \* Percentage not shown: Based on few cases

<b>Table 5.13 TREATMENT OF PNEUMONIA</b>					
Percentage of women who sought treatment whose child suffered <sup>1</sup> from cough and cold and source of treatment, according to place of residence and availability of health facility in the village, Orissa, 2002-04					
Sought treatment/ source of treatment	Total	Residence		Availability of health facility <sup>2</sup> in the village	
		Rural	Urban	Yes	No
Percentage of women whose child suffered from cough, cold and difficulty in breathing	26.0	27.3	22.1	28.9	26.0
Number of women	9,064	6,763	2,301	3,055	3,708
Percentage of women sought treatment whose child suffered from cough and cold	68.8	65.4	81.5	65.4	65.4
Number of women	2,356	1,847	509	882	965
<b>Source of treatment</b>					
<b>Government health facility</b>					
Hospital/dispensary	16.4	15.2	19.8	15.6	14.8
UHC/UHP/UFWC	1.1	1.2	0.8	.8	1.5
CHC/ Rural hospital	8.5	7.6	11.2	8.1	7.1
Primary health centre	14.1	17.5	4.1	18.6	16.6
Sub centre	2.6	3.3	0.6	3.8	2.8
<b>Private health facility</b>					
NGO/Trust hospital/clinic	1.1	0.8	1.8	1.4	0.3
Private hospital clinic	27.7	25.6	33.6	27.0	24.4
ISM <sup>3</sup> facility	12.5	11.8	14.3	11.7	11.9
Home remedy	7.9	7.6	8.9	7.6	7.6
Other	13.2	13.8	11.7	10.9	16.4
<b>Percent distribution of women who seek treatment by</b>					
Doctor	81.0	75.9	95.9	76.3	75.7
ANM/Nurse/LHV	4.0	5.2	0.6	5.6	4.8
Dai (trained or untrained)	0.4	0.5	0.0	0.3	0.7
Relative/friends	2.7	3.6	0.2	3.9	3.4
Chemist/medical shop	5.6	7.2	1.1	7.0	7.3
ISM practitioner	2.3	2.9	0.6	2.0	3.7
	3.9	4.7	1.6	5.0	4.5
Total percent	100.0	100.0	100.0	100.0	100.0
Number of women	1,622	1,207	415	577	630
Note: Table based on women with living children born since 01.01.1999 for phase - I /01.01.2001 for phase - II.					
<sup>1</sup> Last two weeks prior to survey. <sup>2</sup> Includes sub-centre, primary health centre, Community health centre or referral hospital, government hospital, and government dispensary within the village.					
<sup>3</sup> 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, knowledge about ORS is low. Knowledge of ORS is also not common, and it is lowest in Koraput (42 percent). Women in Gajapati, Rayagada, Bargarh, Malkangiri, Ganjam, Mayubhanj, Khandmal, Sonapur, Jharsuguda, Kendujhar and Nabarangapur also

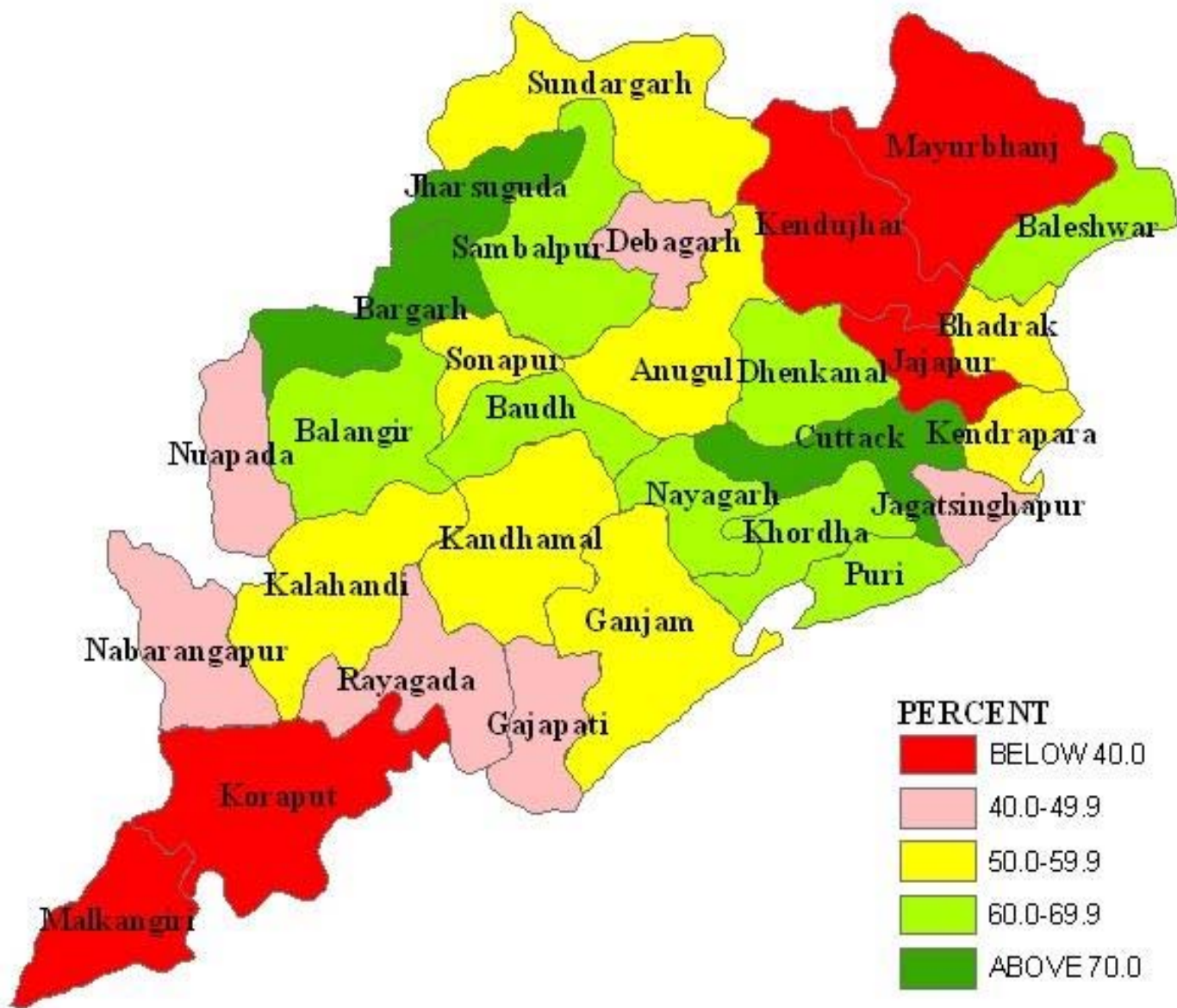
have relatively low level of knowledge of ORS. The incidence of diarrhoea is 15 percent in the state as a whole and it varies from eight percent in Jagatsinghapur to 26 percent in Denkanhal. Table 5.14 also shows differentials in the awareness of danger signs of pneumonia and incidence of pneumonia. In comparison to awareness about diarrhoea management, awareness of danger signs of pneumonia is quite low. It is lowest in Koraput (2 percent) and highest in Khendrapara (29 percent). Incidence of pneumonia is comparatively higher in nearly all the districts in Orissa. It is highest in Baleshwar (50 percent) followed by Khendrapara and Denkanhal (47 percent each), Cuttack (39 percent), and lowest in Nabrangapur (8 percent).

<b>Table 5.14 KNOWLEDGE OF DIARRHOEA MANAGEMENT AND PNEUMONIA BY DISTRICT</b>					
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, Orissa, 2002-04					
District	Percentage of women aware of		Percentage of women whose child suffered <sup>1</sup> from diarrhoea	Percentage of women aware of danger signs of pneumonia	Percentage of women whose child suffered <sup>1</sup> from pneumonia
	Diarrhoea Management	ORS			
Anugul	80.0	62.8	18.4	9.6	34.6
Balangir	81.5	61.9	19.5	9.4	25.5
Baleshwar	86.2	59.8	19.2	20.9	44.9
Bargarh	58.3	39.5	10.3	6.7	15.7
Baudh	83.9	53.6	11.2	5.8	25.5
Bhadrak	84.1	60.2	19.9	33.6	30.4
Cuttack	88.7	65.9	9.3	27.9	38.9
Debagarh	75.8	52.1	16.0	4.4	28.4
Dhenkanal	83.6	59.3	25.5	9.5	46.8
Gajapati	43.9	21.1	10.5	2.5	11.5
Ganjam	62.9	24.8	18.1	5.1	19.6
Jagatsinghapur	90.1	56.1	7.9	15.6	24.4
Jajapur	78.4	54.6	14.8	12.4	25.5
Jharsuguda	66.4	44.9	16.3	14.9	23.2
Kalahandi	73.8	50.6	20.0	2.8	13.8
Kandhamal	64.2	47.2	18.4	4.5	11.8
Kendrapara	91.5	62.3	15.1	28.8	47.1
Kendujhar	66.4	51.5	17.2	9.0	33.0
Khordha	91.5	68.7	19.8	2.9	17.0
Koraput	42.0	28.7	10.6	1.9	11.9
Malkangiri	60.8	33.4	17.6	4.5	24.3
Mayurbhanj	63.7	45.5	15.6	14.6	29.0
Nabarangapur	66.9	46.4	12.2	7.3	8.4
Nayagarh	74.3	39.7	8.1	5.1	24.3
Nuapada	70.5	59.1	9.8	8.7	12.1
Puri	87.8	46.4	12.5	5.3	11.9
Rayagada	53.1	35.7	21.4	4.2	25.7
Sambalpur	80.6	62.4	14.4	16.3	20.4
Sonapur	65.0	36.1	12.0	3.9	18.4
Sundargarh	79.7	57.1	15.1	17.6	27.4
Orissa	73.5	48.8	15.4	11.5	26.0

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

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

**MAP-5**  
**Percentage of Children (age 12-23 months) Who Have Received Full Vaccination**



## CHAPTER VI

### FAMILY PLANNING

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

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

#### 6.1 Knowledge of Family Planning Methods

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

The extent of knowledge of contraceptive methods among currently married women for specific methods and selected background characteristics are shown in Table 6.1 and Figure 6.1. Knowledge of any method including any modern contraceptive method is almost universal in the state of Orissa. 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 88 percent, and is higher among the women with an urban residence. There are large differentials in knowledge of all modern methods with respect to the aforesaid background characteristics. For instance, 37 percent of women from rural areas are aware of all modern methods compared to 69 percent of their urban counterparts.

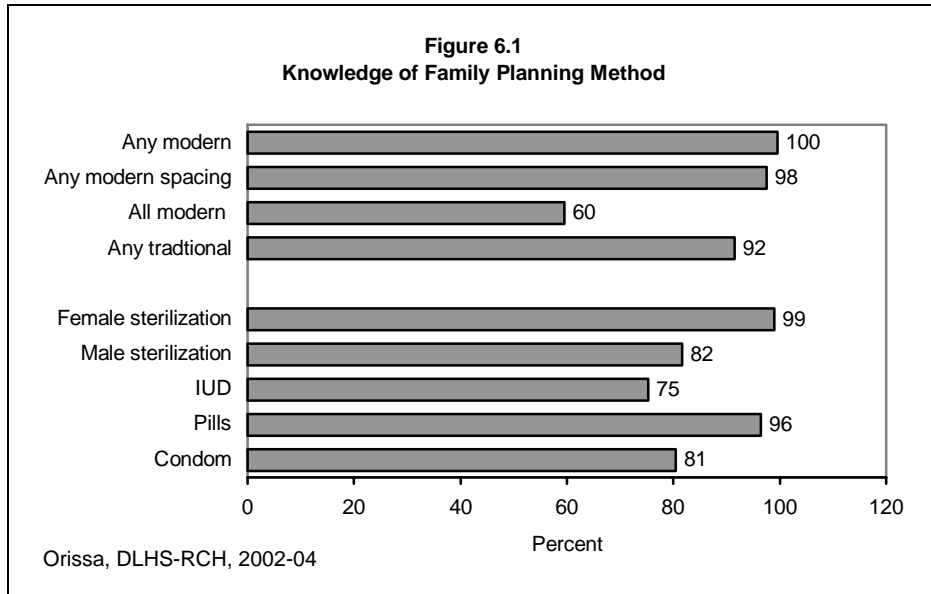


<b>Table 6.1 KNOWLEDGE OF CONTRACEPTIVE METHODS</b>					
Percentage of currently married women age 15-44 years who know any contraceptive method by specific method and selected background characteristics, Orissa, 2002-04					
Contraceptive methods	Total	Residence		Availability of health facility in the village <sup>3</sup>	
		Rural	Urban	No	Yes
Any method	99.4	99.2	99.9	99.1	99.3
Any modern method	99.1	98.8	99.8	98.6	99.0
Any modern spacing method <sup>1</sup>	88.1	84.7	96.3	83.0	86.8
All modern methods <sup>2</sup>	46.1	36.8	68.9	35.8	38.0
Female sterilization	98.8	98.4	99.6	98.3	98.6
Tubectomy	95.5	95.0	96.8	95.0	95.0
Laparoscopy	60.1	55.7	71.0	56.6	54.5
Male sterilization	79.5	76.1	87.9	75.5	76.7
Vasectomy	69.9	65.6	80.7	65.1	66.1
No-scalpel vasectomy	38.1	33.3	49.9	32.2	34.7
IUD/Loop	63.4	55.3	83.3	53.6	57.3
Pills	86.2	82.6	95.1	80.9	84.5
Daily	74.1	68.5	88.0	66.4	71.0
Weekly	33.8	30.7	41.3	29.6	32.0
Condom/Nirodh	59.0	50.6	79.6	48.8	52.7
Sponge (today)	11.1	7.3	20.5	6.8	7.9
Injectables	36.8	31.3	50.1	31.4	31.2
Norplant	5.9	4.9	8.1	4.3	5.7
Contraceptive herbs	58.3	58.9	56.7	58.3	59.6
Any traditional method	72.8	68.8	82.6	68.9	68.7
Any other Indian system of medicinal contraceptives	13.5	7.5	28.3	7.4	7.6
Number of women	24,973	17,760	7,212	9,731	8,029

Note:<sup>1</sup> Include IUD, pills and condom. <sup>2</sup> Include Female sterilization, Male sterilization, IUD, pills and condom  
<sup>3</sup> Includes sub-centre, primary health centre, community health centre or referral hospital, government hospital, and government dispensary within the village. Total includes 39 cases with missing information on education were not shown separately.

Female sterilisation is the most widely known method of all contraceptive methods in Orissa followed by Pills. Overall, 99 percent of currently married women are aware of female sterilization and 80 percent knew about male sterilization. There is no rural - urban difference in knowledge of female sterilization but it is not the case of male sterilization. A sizable number of urban women (88 percent) know about male sterilization as compared to 76 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 (86 percent) and IUD/Loop (63 percent) respectively. Only 59 percent of women know about condoms. There is a large differential in knowledge of spacing methods by residence, as only 51 percent of the rural women know condom compared to 80 percent of urban women. The modern spacing methods, Pill and IUD are known to 83 and 55 percent of rural women respectively while the corresponding figures in urban areas are 95 and 83 percent respectively. The knowledge of the spacing methods remains low as compared to knowledge of sterilization.

In Orissa, more than 72 percent of the women are aware of a traditional method and more than one-tenth are also aware of other contraceptives of the Indian System of Medicine. It is also observed that women from villages with a health facility are slightly more aware about modern spacing methods.



<b>Table 6.2 KNOWLEDGE OF CONTRACEPTIVE METHODS BY DISTRICTS</b>										
Percentage of currently married women age 15-44 years who know any contraceptive method by specific method and district, Orissa, 2002-04										
Districts	Any method	Any modern <sup>1</sup> method	Any modern spacing <sup>2</sup> method	All modern <sup>3</sup> methods	Male sterilization	Female sterilization	IUD	Pill	Condom /Nirodh	Any traditional method
Anugul	98.9	98.7	90.8	38.2	69.3	97.5	66.3	88.9	54.1	65.2
Balangir	99.7	98.9	84.9	40.4	78.7	98.4	52.2	83.5	52.9	65.3
Baleswar	100.0	99.8	97.1	54.3	78.0	99.3	74.7	96.1	73.6	80.1
Bargarh	99.2	99.0	84.3	32.8	71.3	98.7	50.7	82.9	41.5	47.7
Baudh	99.5	99.0	94.6	45.3	74.6	99.0	66.8	93.8	58.3	85.1
Bhadrak	99.9	99.9	95.8	45.9	87.0	99.0	67.7	94.0	60.9	73.1
Cuttack	100.0	100.0	98.6	73.5	91.6	100.0	82.0	98.2	85.4	88.4
Debagarh	99.2	99.2	92.9	44.7	78.0	99.3	69.6	89.3	59.6	78.0
Dhenkanal	99.9	99.8	94.0	54.9	83.6	99.6	71.8	91.9	69.9	82.5
Gajapati	99.3	99.1	68.1	29.7	72.0	99.1	40.2	66.9	39.1	57.2
Ganjam	100.0	100.0	87.8	38.6	75.7	99.9	63.5	85.3	51.3	71.9
Jagatsinghapur	99.5	99.5	96.5	71.2	87.9	99.4	85.5	95.7	83.5	80.5
Jajapur	99.1	99.1	92.4	42.8	76.4	99.0	66.1	90.5	59.0	68.8
Jharsuguda	99.9	99.9	92.0	44.6	71.3	99.9	60.5	91.0	62.7	66.2
Kalahandi	97.5	95.8	80.5	36.2	76.6	95.1	43.6	78.3	47.6	67.2
Kandhamal	99.6	99.6	82.1	32.9	79.5	99.0	54.2	79.8	43.8	50.5
Kendrapara	99.9	99.9	98.8	62.2	84.2	99.9	78.8	98.1	79.1	94.4
Kendujhar	100.0	98.5	87.6	37.5	78.7	97.6	55.2	85.4	53.3	89.3
Khordha	100.0	99.9	99.3	76.3	93.9	99.2	90.1	99.0	84.9	96.6
Koraput	97.4	97.3	61.0	34.9	71.4	97.1	42.8	58.4	43.1	47.8
Malkangiri	99.8	99.7	54.7	16.5	76.6	99.7	27.0	50.8	24.3	50.6
Mayurbhanj	98.4	98.1	85.6	33.7	64.0	97.0	52.0	82.6	54.8	61.3
Nabarangapur	96.1	95.7	69.0	30.0	72.1	95.6	38.3	67.5	39.1	46.0
Nayagarh	100.0	99.7	93.4	51.0	82.9	99.7	66.0	92.0	65.8	79.5
Nuapada	100.0	99.8	91.4	39.8	86.7	98.9	53.0	90.0	55.0	89.2
Puri	99.9	99.9	98.5	65.7	91.8	99.8	84.7	97.8	74.1	80.0
Rayagada	99.6	99.5	74.2	26.4	79.5	99.3	48.0	70.5	33.4	44.9
Sambalpur	99.8	99.8	91.3	49.7	76.7	99.8	74.4	89.8	62.9	69.2
Sonapur	100.0	99.9	90.1	33.3	75.3	99.3	62.9	87.5	46.4	66.4
Sundargarh	100.0	99.8	86.5	45.6	87.5	99.6	65.7	81.8	57.4	85.6
Orissa	99.4	99.1	88.1	46.1	79.5	98.8	63.4	86.2	59.0	72.8

Note:<sup>1</sup> Includes Female sterilization, Male sterilization, IUD, Pills and Condom.  
<sup>2</sup> Includes IUD, Pills and Condom.  
<sup>3</sup> 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 Orissa. In all districts, more than 96 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 17 percent in Malkangiri to 76 percent in Khordha district. There is not much variation in the knowledge of female sterilization, which is the lowest in Kalahandi (95 percent) and the highest in Cuttack district (100 percent). Knowledge about IUD/Loop and condom are 27 and 24 percent respectively in Malkangiri district, whereas the same is around 90 and 85 percent respectively for

IUD/Loop and condom. As for any traditional method, awareness is 97 percent in Khordha district and the lowest in Rayagada district (45 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 Orissa is shown in Table 6.3. Only one-third (32 percent) of the husbands know about the no-scalpel vasectomy. In rural areas, 25 percent of husbands know about NSV compared to 49 percent in urban areas. For women residing in villages with a health facility, 25 percent of their husbands are aware of No-scalpel vasectomy and it is nearly the same (26 percent ) for those living in villages without health facilities. Among the husbands who know about NSV, 81 percent reported that NSV is simpler than a conventional family planning method, 53 percent feel that NSV does not lead to any complication and 42 percent reported that NSV does not affect a man's sexual performance. Only 38 percent of the husbands in villages with a health facility reported that NSV does not affect sexual performance compared to 43 percent of husbands in villages without a health facility.

<b>Table 6.3 KNOWLEDGE OF NO-SCALPEL VASECTOMY (NSV)</b>					
Husbands knowledge of NSV by residence and availability of health facility in the village, Orissa, 2002-04					
Knowledge of NSV	Total	Residence		Availability of health facility in the village <sup>1</sup>	
		Rural	Urban	No	Yes
Percentage of husband who had knowledge about NSV	31.9	25.4	48.5	25.7	25.0
Number of husbands	19,339	13,934	5,405	7,688	6,246
Who know that NSV is simpler than conventional vasectomy	81.3	81.2	81.5	81.6	80.6
Who feel that NSV does not lead to any complication	53.0	55.1	50.1	57.2	52.4
Who feel that NSV does not affect man's sexual performance	41.7	40.5	43.3	42.9	37.5
Number of husbands	6,160	3,537	2,623	1,972	1,565

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

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

No-scalpel vasectomy awareness by districts in Orissa is provided in Table 6.4. The districts in which at least 40 percent of husbands know about NSV are Cuttack (61 percent), Kendrapara (54 percent), Balangir (47 percent), Jagatsinghapur and Dhenkanal (45 percent each). Only 15 percent of the husbands in Gajapati and Rayagada districts know about the no-scalpel vasectomy. That NSV does not lead to any complications was reported by 69 percent of the husbands in Bargarh district, followed by 66 percent in Cuttack and 63 percent in Jajapur, and only 27 percent in Gajapati. The proportion of

husbands who reported that the NSV does not affect a man's sexual performance was highest (59 percent) in Balangir district and the lowest in Mayurbhanj (19 percent).

<b>Table 6.4 NO-SCALPEL VASECTOMY BY DISTRICTS</b>				
Percentage of husband of eligible women by knowledge of NSV by district, Orissa, 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
Anugul	22.5	71.4	47.5	29.1
Balangir	46.7	74.5	55.8	59.3
Baleshwar	36.6	78.2	45.6	33.3
Bargarh	29.3	84.3	68.9	41.7
Baudh	27.4	87.4	47.8	43.2
Bhadrak	29.2	82.4	48.1	31.6
Cuttack	61.2	85.6	65.8	50.0
Debagarh	37.1	70.4	47.1	44.0
Dhenkanal	44.8	78.4	41.1	39.4
Gajapati	15.3	88.7	27.3	30.9
Ganjam	16.2	78.8	51.3	40.2
Jagatsinghapur	45.2	86.0	56.7	46.0
Jajapur	38.6	79.5	62.5	46.0
Jharsuguda	36.7	76.9	55.7	43.4
Kalahandi	25.6	90.8	57.1	52.0
Kandhamal	29.4	69.7	34.0	29.3
Kendrapara	53.9	82.0	48.2	43.2
Kendujhar	21.9	74.1	36.1	29.3
Khordha	39.4	87.3	51.1	35.6
Koraput	23.0	83.6	37.6	26.5
Malkangiri	20.4	69.4	54.2	37.7
Mayurbhanj	25.8	73.9	30.2	18.8
Nabarangapur	29.0	71.6	35.2	44.1
Nayagarh	21.5	77.7	35.1	27.5
Nuapada	24.9	73.4	34.7	21.9
Puri	42.2	86.2	43.1	42.4
Rayagada	15.5	84.9	46.9	30.3
Sambalpur	26.4	79.8	44.4	25.6
Sonapur	26.1	85.5	56.4	34.5
Sundargarh	28.9	84.1	56.2	46.1
Orissa	31.9	81.3	53.0	41.7

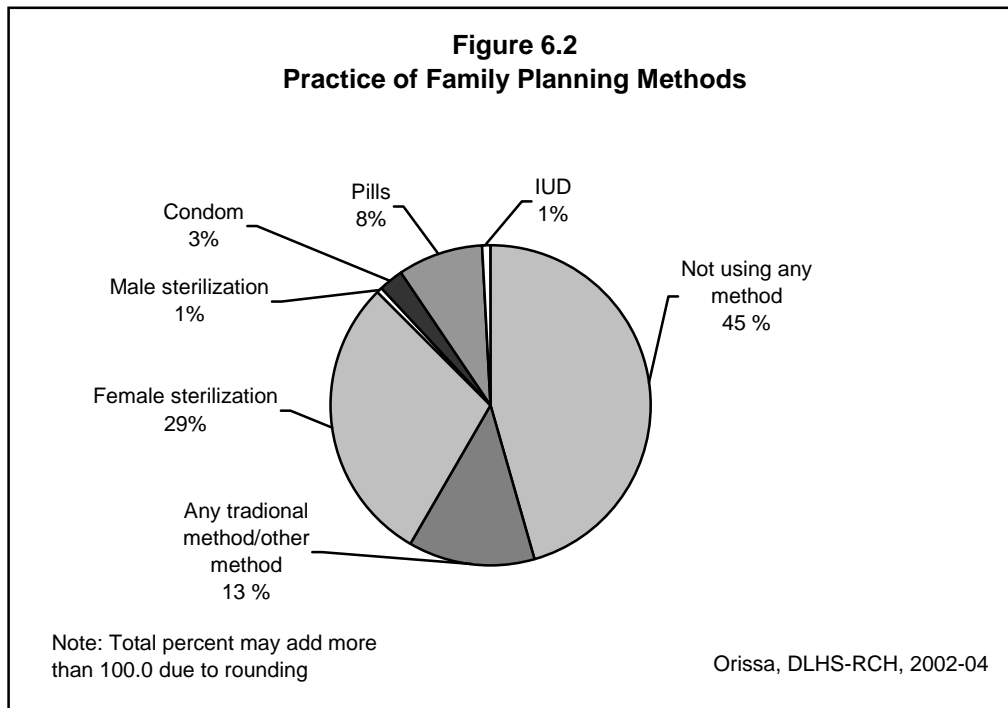
## 6.2 Current use of Family Planning Methods

Table 6.5 and Figure 6.2 provide the information on current use of family planning methods for currently married women in Orissa. At the time of DLHS-RCH, 55 percent of currently married women were using some method of contraception, 5 percentage points up from Round I. Current contraceptive use is slightly higher in urban areas (67 percent) than in rural areas (50 percent). Use of modern method is reported by 42 percent of the women, the breakdown of which is 30 percent for permanent methods and 12 percent for spacing methods. Among the users of sterilization methods most prefer female sterilization, which invalidates the use of male sterilization (0.5 percent).

<b>Table 6.5 CONTRACEPTIVE PREVALENCE RATE</b>													
Percentage of currently married women age 15-44 years currently using any contraceptive method by selected background characteristics, Orissa, 2002-04													
Method	Any method	Any modern <sup>1</sup> method	Any modern spacing method <sup>2</sup>	Any sterilization	Male sterilization	Female sterilization	IUD/ Loop	Pill	Condom / Nirodh	Any traditional method <sup>3</sup>	Rhythm/ periodic abstinence	Withdrawal	Number of women
<b>Residence</b>													
Rural	49.9	38.6	8.4	29.9	0.5	29.4	0.4	6.8	1.2	11.3	4.3	5.3	17,760
Urban	66.6	50.0	21.2	28.3	0.6	27.7	2.4	12.5	6.4	16.6	6.4	9.3	7,212
<b>Education</b>													
Non-literate	48.4	38.1	4.9	32.9	0.7	32.2	0.1	4.2	0.5	10.3	3.9	4.1	12,145
0-9@ years	58.4	45.7	14.7	30.6	0.4	30.3	1.1	11.2	2.3	12.8	5.0	6.9	9,062
10 years & above	66.4	44.9	29.3	15.1	0.4	14.6	3.2	15.4	10.7	21.6	8.2	12.8	3,726
<b>Religion</b>													
Hindu	54.7	42.0	11.8	29.9	0.5	29.4	0.9	8.3	2.5	12.7	4.8	6.4	23,836
Muslim	56.1	37.5	22.7	14.7	0.3	14.4	0.6	15.1	7.0	18.6	8.3	8.3	621
Christian	51.7	39.9	13.2	26.2	1.3	24.8	2.9	5.9	4.5	11.7	5.4	3.5	451
Other	61.9	54.2	24.3	29.9	0.0	29.9	1.5	15.4	7.4	7.6	1.7	6.0	65
<b>Caste/tribe#</b>													
Scheduled caste	52.2	42.1	8.8	32.7	0.4	32.3	1.0	6.3	1.5	10.1	4.6	4.3	4,526
Scheduled tribe	39.5	27.8	5.0	22.3	1.1	21.2	0.2	3.9	0.9	11.7	4.2	4.1	5,246
Other backward class	57.2	44.6	12.5	32.0	0.3	31.7	0.6	9.3	2.6	12.6	4.5	7.0	8,974
Other	66.1	49.7	19.8	29.6	0.4	29.2	2.0	12.7	5.1	16.4	6.4	9.2	6,067
<b>Standard of living index</b>													
Low	46.5	36.2	6.5	29.5	0.6	28.9	0.4	5.3	0.7	10.3	4.0	4.3	14,805
Medium	61.6	47.3	15.4	31.4	0.5	30.9	0.7	12.5	2.2	14.3	5.3	8.0	6,228
High	74.5	54.5	28.0	26.1	0.5	25.6	3.3	13.8	10.8	20.0	7.6	11.8	3,939
Availability of health facility in the village <sup>4</sup>													
No	49.6	37.6	7.9	29.4	0.5	28.9	0.3	6.4	1.2	12.0	4.4	5.8	9,731
Yes	50.2	39.7	9.0	30.5	0.5	30.0	0.4	7.4	1.2	10.6	4.2	4.6	8,029
Total	54.7	41.9	12.1	29.4	0.5	28.9	0.9	8.4	2.7	12.8	4.9	6.4	24,973

Note: <sup>1</sup> Include Female sterilization, Male sterilization, IUD, Pills and Condom. <sup>2</sup> Include IUD, Pills and Condom. <sup>3</sup> 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. <sup>4</sup> 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 13 percent of the women of whom 6 percent are using withdrawal while 5 percent follow the rhythm or periodic abstinence practice. The rural-urban differential is visible in the case of traditional methods, where 17 percent of the urban women are using this means of contraception compared to 11 percent of the rural women.



Current use of contraception is high among women of other backward class (57 percent) and other castes (66 percent) than among scheduled tribe women (40 percent). The current use is also high among the women who have 10 or more years of schooling (66 percent) than the women who have less than 10 years of schooling (58 percent) and also among non-literate women (48 percent). Similarly, current contraceptive use varies positively with respect to the standard of living of the women, increase of the prevalence rate from 47 percent to 75 percent for women from the lowest to the highest standard of living households. The availability of health facility in the village does not seem to be an important factor in motivating eligible women to use contraceptives. Fifty percent each of the women living in villages with and without a health facility are currently using contraception. The current use of the traditional method is also higher among women with a higher education level and with a high standard of living than their counterparts not on par with these categories of women.

## 6.2.1 Current Use of Family Planning Methods by Districts

Table 6.6 presents a picture of current contraceptive use in the districts of Orissa. The contraceptive use is a couple concept 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 Bargarh (49 percent) Ganjam (48 percent) Kandhamal (47 percent) and Kalahandi, Malkangiuri Nabarangapur and Rayagada (44 percent each) (see Map-6). The state figure of current spacing methods use is 12 percent and it ranges from 4 percent in Nuapada district to 22 percent in Baleswar. The variation in contraceptive prevalence at district level is basically due to the variation in the use of spacing methods while both modern and traditional contraceptive use does not vary across districts.

Districts	Any method	Any modern <sup>1</sup> method	Any modern spacing <sup>2</sup> method	Male sterilization	Female sterilization	IUD	Pill	Condom / Nirodh	Any traditional <sup>3</sup> method
Anugul	54.7	40.3	13.5	0.6	26.3	0.5	11.0	1.9	14.4
Balangir	46.2	38.9	9.7	0.2	28.9	0.3	6.2	3.2	7.3
Baleswar	60.4	44.8	21.5	0.1	22.7	0.5	17.2	3.7	15.6
Bargarh	49.4	41.9	8.7	0.5	32.6	0.6	6.7	1.4	7.5
Baudh	53.1	41.6	17.6	0.0	23.3	2.5	12.5	2.7	11.4
Bhadrak	53.3	44.2	16.9	0.3	26.6	0.4	14.5	2.0	9.2
Cuttack	74.5	50.0	17.2	0.0	32.7	1.0	10.5	5.7	24.5
Debagarh	54.2	34.0	14.1	0.4	19.5	1.2	9.5	3.3	20.0
Dhenkanal	70.6	51.2	13.6	0.0	37.5	0.5	10.4	2.6	19.4
Gajapati	51.7	42.8	7.1	0.2	34.9	1.4	4.2	1.6	8.9
Ganjam	48.3	40.0	8.0	0.9	31.1	0.6	6.2	1.2	8.3
Jagatsinghapur	66.5	45.6	15.6	0.1	29.9	0.9	10.5	4.2	20.9
Jajapur	51.3	38.2	10.6	0.6	26.9	0.6	9.0	1.0	13.2
Jharsuguda	54.9	43.5	14.0	0.1	29.3	0.9	10.2	3.0	11.4
Kalahandi	44.4	33.9	8.3	0.0	25.7	0.4	5.4	2.4	10.5
Kandhamal	47.1	34.9	10.4	1.3	22.9	1.5	6.6	2.2	12.2
Kendrapara	60.7	35.9	15.5	0.0	20.2	0.5	11.6	3.5	24.8
Kendujhar	55.1	42.0	10.7	0.3	30.7	0.5	8.4	1.7	13.1
Khordha	53.5	44.1	14.6	0.5	28.4	2.3	9.4	2.9	9.4
Koraput	55.6	42.0	8.6	0.2	31.0	1.3	4.0	3.3	13.6
Malkangiri	43.8	38.1	5.2	5.0	27.9	0.4	4.3	0.5	5.7
Mayurbhanj	53.3	40.4	10.9	0.0	29.4	0.7	7.1	3.0	12.9
Nabarangapur	44.2	37.7	9.5	0.0	28.1	0.1	7.7	1.6	6.5
Nayagarh	63.2	44.0	10.8	0.0	33.0	0.3	8.2	2.2	19.2
Nuapada	48.3	38.9	3.8	0.1	34.8	0.4	1.8	1.5	9.4
Puri	64.8	51.8	16.2	0.9	34.2	1.3	13.2	1.7	12.9
Rayagada	43.6	38.7	5.4	6.4	26.8	1.3	2.9	1.1	4.9
Sambalpur	61.9	47.4	15.4	0.6	31.5	0.8	9.8	4.8	14.4
Sonapur	53.0	40.7	9.6	0.4	30.4	0.8	7.4	1.4	12.3
Sundargarh	52.9	39.6	11.1	0.4	27.7	0.8	6.2	4.0	13.2
Orissa	54.7	41.9	12.1	0.5	28.9	0.9	8.4	2.7	12.8

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



The pattern of use of contraceptive methods in Orissa is different from the general existing pattern in India. The contraceptive prevalence rate of 13 percent for traditional methods in the state is much higher than that in other states of the country. The use of oral Pills exceeds 15 percent in the district of Baleshwar. The district in which the use of condom is more than 5 percent is Cuttack.

## 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 use 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 13 percent and this attains a peak of 74 percent in the age group, 35-39 years. A similar age pattern of contraceptive use is also observed both in case of modern and traditional methods. The use of traditional method is 15 percent for the women aged 35-39 years and 14 percent for the women aged 40-44 years and it is least (5 percent) for the women in younger age group 15-19 years. The use of modern methods ranges from 7 percent for women in the age group 15-19 years to 59 percent for women in the age groups 35-39 and 40-44 years.

<b>Table 6.7 USE OF CONTRACEPTION BY WOMEN</b>							
Percentage of currently married women in 15-44 years by current use and ever use of contraception according to selected demographic characteristics, Orissa, 2002-04							
Demographic Characteristic	Percentage of women/husbands using				Percentage of women/husbands by contraceptive status		Number of women
	Any modern method <sup>1</sup>	Any traditional method <sup>2</sup>	Any method	Not using any method	Ever used	Never used	
<b>Age-group</b>							
15-19	7.4	5.2	12.6	87.4	15.3	84.6	1,679
20-24	20.0	10.4	30.4	69.5	37.3	62.6	4,805
25-29	37.7	13.6	51.3	48.7	58.3	41.7	5,759
30-34	52.8	14.8	67.6	32.4	73.0	27.0	5,141
35-39	59.0	14.5	73.5	26.5	77.6	22.4	4,229
40-44	59.1	13.8	72.9	27.1	76.5	23.5	3,359
<b>Surviving children</b>							
0	3.1	2.9	6.0	94.0	8.3	91.7	3,179
1	23.9	15.4	39.2	60.7	46.1	53.8	4,864
2	49.5	16.3	65.8	34.1	71.2	28.8	6,807
3 or more	57.5	12.4	70.0	30.0	75.6	24.4	10,123
<b>Surviving sons</b>							
0	15.3	9.9	25.2	74.7	30.9	69.1	7,383
1	45.0	15.7	60.7	39.3	66.5	33.5	9,469
2 or more	62.4	12.2	74.5	25.5	79.2	20.8	8,121
<b>Surviving daughters</b>							
0	30.4	10.3	40.7	59.3	44.9	55.1	8,760
1	47.4	14.0	61.4	38.6	67.0	33.0	8,670
2 or more	48.9	14.4	63.3	36.7	69.9	30.1	7,542
<b>All women</b>	41.9	12.8	54.7	45.3	60.1	39.9	24,973

Note: <sup>1</sup> Include Female sterilization, Male sterilization, IUD, Pills and Condom.

<sup>2</sup> 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. The use of any method of contraception is 75 percent for the women who have two or more sons and is higher than the women who have two or more daughters (63 percent). The same trend can be observed in the case of use of any modern method which is 62 percent for the women who have two or more surviving sons and it is higher than the use among women who have two or more daughters (49 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 Orissa 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 20 percent and it gradually picks up with the age of husband, to a peak of 74 percent in the age group 45+ years. Similar age patterns of contraceptive use are observed both in the case of modern methods and traditional methods. Among the husbands in the age group 45 years and above the use of traditional methods is 14 percent and it is least (7 percent) among the husbands in the younger age group of below 25 years. The use of modern methods ranges from 14 percent for husbands below 25 years of age to 60 percent for the husbands in the age group 45 years and more.

<b>Table 6.8 USE OF CONTRACEPTION BY MEN</b>					
Percentage of husband of currently married women by current use and ever use of contraception by selected demographic variables, Orissa, 2002-04.					
Demographic Characteristics	Percentage of husbands/women using				Number of men
	Any modern method <sup>1</sup>	Any traditional method <sup>2</sup>	Any method	Not using any method	
<b>Age-group</b>					
<25	13.6	6.6	20.2	79.8	1,071
25-34	31.8	11.0	42.8	57.2	6,720
35-44	55.5	14.1	69.6	30.4	7,727
45+	59.8	14.2	74.0	26.0	3,820
<b>Surviving children</b>					
0	3.9	2.1	6.0	94.0	2,155
1	27.4	14.5	41.9	58.1	3,566
2	52.7	15.0	67.7	32.3	5,292
3 or more	60.1	13.1	73.2	26.8	8,327
<b>Surviving sons</b>					
0	17.2	9.7	26.9	73.1	5,210
1	48.8	14.8	63.6	36.4	7,407
2 or more	64.6	12.5	77.1	22.9	6,721
<b>Surviving daughters</b>					
0	34.3	9.5	43.8	56.2	6,404
1	51.4	13.3	64.7	35.3	6,839
2 or more	51.6	15.2	66.8	33.2	6,096
All men	45.8	12.6	58.4	41.6	19,339
Note: <sup>1</sup> Include Female sterilization, Male sterilization, IUD, Pills and Condom.					
<sup>2</sup> 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 Orissa. Among all the husbands interviewed, 70 percent reported about female methods. Reporting of female methods is higher in rural areas (74 percent) than in urban areas (63 percent). The reasons cited for not preferring the male methods are greater popularity of female methods (68 percent), fear of weakness (33 percent), fear of operation (4 percent), lack of sexual pleasure (2 percent) and fear of method failure (2 percent). Only one percent reported fear of impotency 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 fear of weakness. The expression for fear of weakness is higher in rural areas (36 percent) than in urban areas (29 percent). Popularity of female methods as a reason for not using male methods of contraception is more or less the same in urban areas and in rural areas (68 percent each).

<b>Table 6.9 REASONS FOR NOT USING MALE METHODS</b>			
Percentage of husbands with their choice of family planning methods and reasons for not accepting male methods according to residence, Orissa, 2002-04			
Female method users and reason for not accepting male methods	Total	Residence	
		Rural	Urban
Percentage of husband who have reported female methods	70.0	73.8	62.5
Number of men	11,297	7,439	3,858
Reasons for not accepting male methods*			
Fear of impotency	1.0	1.1	0.7
Lack of sexual pleasure	1.9	1.3	3.1
Fear of method failure	1.5	1.5	1.5
Fear of operation	3.9	4.0	3.6
Fear of weakness	33.4	35.5	28.6
Female methods are more popular	67.6	67.5	67.7
Other	8.5	7.9	9.8
Number of men	7,904	5,491	2,413

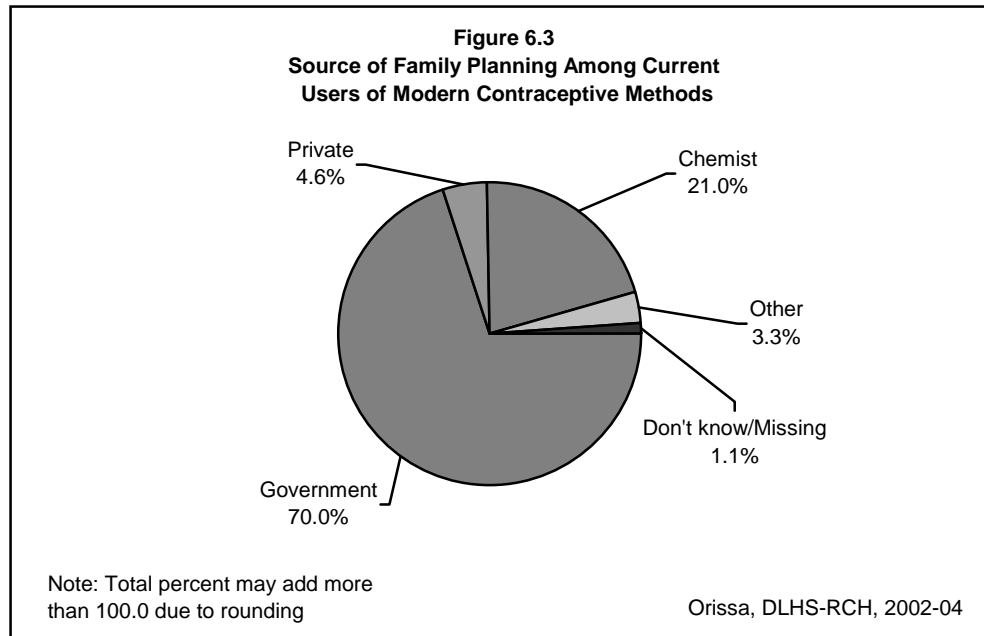
Note: \* Percentages may add to more than 100.0 because multiple responses could be recorded.

### 6.4 Source of Contraceptive Methods

To assess the various sources of contraceptive methods, DLHS-RCH collected information on source of obtaining methods. Table 6.10 and Figure 6.3 show the percent distribution of current users of modern contraceptives by source of contraceptives. Family planning methods and services in Orissa are provided primarily through a network of government hospitals. The services are also provided by private hospitals and clinics, as well as Chemists. Modern spacing methods like IUD, Pill and condom are available through both the government and private sectors. Community health Centres or primary health centres are the main source for female sterilization (36 percent) followed

by government/municipal hospitals (30 percent), family planning camps or RCH camp (24 percent) and private hospital (4 percent). For male sterilization as well, the aforesaid are the main sources with the exception of 3 percent obtaining the service from sub-centre. Among the IUD users, 30 percent reported the source as community health centres and 29 percent from the government/municipal hospital, 13 percent from private hospital and 2 percent from sub-centre. It is found that the chemist is the main source for Pills (76 percent) and condom (85 percent).

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## 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 28 percent of the sterilized women have problem with the contraceptive methods in use. The most common problems experienced by sterilized women are weakness or inability to work (60 percent), dizziness (50 percent), and body ache or backache (41 percent). Other problems reported include white discharge (25 percent), cramps (13 percent), irregular periods (9 percent), nausea or vomiting (8 percent) and excessive bleeding (6 percent). With regard to the modern spacing methods, 16 percent and 10 percent of the women had problems in using Pills and IUD respectively. The most common problems of Pill users were dizziness (53 percent), weakness or inability to work (42 percent), irregular periods (17 percent), white discharge (15 percent), and nausea or vomiting (6 percent).

<b>Table 6.11 HEALTH PROBLEMS WITH CURRENT USE OF CONTRACEPTION</b>			
Percentage of women informed about side effects, had side effects with the method by use of method, Orissa, 2002-04			
Health problems/side effect	Type of method		
	Female sterilizations	IUD/loop	Pill
Women who were informed about all the available methods	23.4	0.0	0.0
Women who were informed about the side effects before adoption of the method	28.1	49.5	18.1
Women who had side effect/health problem due to use of contraceptive method	28.0	10.1	15.7
Number of current users	7,219	236	2,109
<b>Type of health problems/side effects<sup>1</sup></b>			
Weakness/inability to work	60.1	*	42.2
Body ache/ backache	41.4	*	12.9
Cramps	12.7	*	5.3
Weight gain	4.2	*	8.4
Dizziness	49.6	*	52.6
Nausea/vomiting	7.5	*	5.7
Breast tenderness	1.4	*	1.0
Irregular periods	9.4	*	16.7
Excessive bleeding	6.0	*	3.8
Spotting	1.2	*	2.3
White discharge	25.1	*	14.6
Other	0.0	*	0.0
Number of users with side effects	2,018	24	331
Note: <sup>1</sup> 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 64 percent of the sterilized women sought treatment and 30 percent in the case of Pills. Regarding the satisfaction about the method, 92 percent of the sterilized women reported satisfaction with sterilization. In the case of spacing methods, 92 percent of women using Pills and 95 percent of women using IUD were satisfied with the respective methods.

Majority of the women who had sought treatment for contraceptive use related problems sought treatment from government hospitals/dispensary. For female sterilization related health problems, 31 percent sought treatment from government hospitals/dispensary, 22 percent from private hospitals/clinics, 24 percent from primary health centres, 12 percent from community health centres and 5 percent from Indian System of Medicine health facilities. Government hospital/dispensary is the source of treatment for 32 percent of women who had health problem in using Pills and private hospital or clinic is the source for 29 percent of women.

<b>Table 6.12 FOLLOW-UP VISIT AND SOUGHT TREATMENT FOR HEALTH PROBLEMS WITH CURRENT USE OF CONTRACEPTION</b>			
Percentage of women who had follow-up visit, satisfied with current method, and sought treatment with side effect with the method by use of method, Orissa, 2002-04			
Health problems/side effect	Type of method		
	Female sterilizations	IUD/loop	Pill
Women who had follow up visit by health worker after adoption of method	61.9	10.0	7.1
Women who are satisfied with method of current use	91.5	95.0	91.9
Number of current users	7,219	236	2,109
Women who sought treatment for the health problem	64.1	*	29.7
Number of women with side effects	2,018	24	331
<b>Source of treatments</b>			
<b>Government health facility</b>			
Government hospital/dispensary	30.7	*	31.8
UHC/UHP/UFWC	1.4	*	2.6
CHC/Rural hospital	11.8	*	8.7
PHC	24.1	*	8.9
Sub-centre	4.6	*	3.4
Out reach/MCP clinic in village	0.8	*	1.3
<b>Private health facility</b>			
NGO/trust hospital clinic	1.1	*	4.2
Private hospital/clinic	22.4	*	28.7
ISM health facility <sup>1</sup>	5.2	*	10.3
Chemist/Medical shop	5.5	*	9.5
Home remedy	2.5	*	2.1
Other	7.2	*	7.7
Number of women with side effects	1,293	12	98

Note: <sup>1</sup> Either government or Private. \* Based on very few cases.

## 6.7 Advice to Non-Users 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 14 percent of the women were advised by ANM/health worker to adopt any family planning method in Orissa. Among rural women, 15 percent were advised by ANM/health worker to adopt any method and it is higher than the urban women (11 percent) who were advised so.

<b>Table 6.13 ADVICE ON CONTRACEPTIVE USE</b>					
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, Orissa, 2002-04					
Advise/future intension to use	Total	Residence		Availability of health facility in the village <sup>1</sup>	
		Rural	Urban	No	Yes
Percentage of current non-users advised by ANM/health worker to use of contraceptive method	13.9	14.6	11.1	13.9	15.4
Number of non-users	10,852	8,539	2,313	4,702	3,837
Percent distribution of women who were advised by method					
Female sterilization	71.2	74.9	53.2	75.4	74.3
Male sterilization	5.9	5.5	7.8	4.9	6.3
IUD/loop	6.6	5.6	11.4	7.2	3.8
Pill	14.2	12.6	21.6	11.4	14.0
Condom/Nirodh	1.1	0.5	3.6	0.2	0.9
Rhythmic /periodic abstinence	0.1	0.1	0.2	0.2	0.0
Withdrawal	0.1	0.1	0.0	0.2	0.0
Other	0.9	0.7	2.1	0.6	0.7
Total percent	100.0	100.0	100.0	100.0	100.0
Number of non-users	1,506	1,249	258	656	593
Note: * Exclude women in menopause or those who have undergone hysterectomy.					
<sup>1</sup> 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 are dominated by female sterilization (71 percent). Only 14 percent were advised to adopt pill and 6 percent were advised to adopt IUD/loop as spacing method. Male sterilization has been advised to 7 percent. This pattern of advice emerges irrespective of residence and availability of health facility in the village.

### 6.7.1 Future Intentions

Among the non-users, 46 percent of women have expressed their intention to use any method of contraception in the future. The intention to use any method of contraception is higher in rural areas (47 percent) than in urban areas (43 percent).

Among the women who intended to use permanent methods of contraception, 45 percent preferred female sterilization whereas only less than two percent of the women preferred male sterilization. In case of temporary methods, the methods preferred by women are oral Pills (39 percent), rhythm/periodic abstinence, condoms, withdrawal and IUD (one percent each) and other methods (10 percent) respectively.

Fifty percent of the husbands intended to use contraception in the future, among them 52 percent belong to rural areas and 43 percent from urban areas. Method wise choice in intention to use contraception is dominated female sterilization being reported by 54 percent, followed by Pills (26 percent), condom (4 percent), rhythm/periodic abstinence (2 percent) and withdrawal (less than one percent).



<b>Table 6.14 FUTURE INTENTION TO USE</b>						
Percentage of current non-users* who were intended to use contraception in future by preferred method according to place of residence, Orissa, 2002-04						
Future intention to use/method	Women			Husband		
	Total	Rural	Urban	Total	Rural	Urban
Percentage of respondents who intend to use contraceptive in future	46.4	47.3	43.1	50.0	51.7	42.7
Number of non-users	10,852	8,539	2,313	7,927	6,402	1,525
<b>Percent distribution of non-user who were preferred to use family methods by preferred method</b>						
Female sterilization	44.5	45.6	39.8	53.8	53.9	53.4
Male sterilization	1.5	1.5	1.8	1.9	1.7	3.2
IUD/copper-T/loop	1.1	0.9	2.0	1.5	1.5	1.7
Oral pills	39.4	39.4	39.6	25.9	27.6	17.2
Condom/Nirodh	1.3	0.7	3.8	3.6	3.3	4.9
Rhythm/periodic abstinence	1.3	1.4	0.9	1.5	1.3	2.1
Withdrawal	1.0	1.1	0.9	0.9	0.9	1.4
Other	9.7	9.3	11.3	10.9	9.9	16.0
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 non-users	4,969	3,993	976	3,960	3,311	649

Note: \* 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. Among the current non-users, around 17 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 22 percent reported their intention to use contraceptives after two years. About 28 percent are not sure of their intention to use, whereas 25 percent reported no intention to use. The intention of using contraception is higher among the women who have two or more living children compared to the women who have either one or no living children. Around 45 percent of the women who have no living children reported that they are yet to decide about the use of contraceptives.

<b>Table 6.15 FUTURE USE OF CONTRACEPTION BY NUMBER OF LIVING CHILDREN</b>						
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, Orissa, 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	4.0	13.9	22.8	25.4	33.0	17.0
One to two years	2.8	6.8	8.9	11.2	8.9	7.0
More than two years	21.8	30.8	23.3	18.2	7.8	22.3
Does not intend to use	26.7	19.8	22.4	27.1	35.3	25.1
Not yet decided	44.5	28.5	22.5	17.9	15.0	28.4
Missing	0.1	0.2	0.1	0.2	0.1	0.1
Total percent	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	2,926	2,892	2,221	1,495	1,318	10,852
	Rural					
Intends to use in next 12 months	2.8	9.8	20.7	24.7	32.8	15.3
One to two years	2.6	6.8	9.3	12.3	9.9	7.4
More than two years	24.7	34.2	25.5	18.6	8.8	24.5
Does not intend to use	24.9	20.7	22.1	26.7	32.5	24.4
Not yet decided	44.9	28.3	22.3	17.3	16.0	28.3
Missing	0.2	0.2	0.1	0.3	0.1	0.2
Total percent	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	2,220	2,265	1,794	1,195	1,066	8,539
	Urban					
Intends to use in next 12 months	7.9	28.6	31.8	27.9	33.6	23.3
One to two years	3.7	6.7	7.2	6.7	4.8	5.7
More than two years	12.6	18.6	13.9	16.7	3.9	14.1
Does not intend to use	32.4	16.7	23.9	28.6	47.4	27.7
Not yet decided	43.3	29.4	23.1	20.0	10.4	29.2
Missing	0.1	0.0	0.1	0.0	0.0	0.0
Total percent	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	707	627	427	300	252	2,313

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

## 6.8 Reasons for Discontinuation and Non-Use of Contraception

Currently married non-pregnant women who were not using any contraceptive method at the time of survey were categorised as past users and never users according to their contraceptive experience. In DLHS-RCH, women who had discontinued contraceptive use were asked about the main reason for discontinuation. The survey also asked women who had never used contraceptives about the main reason for not doing so. Table 6.16 shows the main reason for not using contraceptives among both the past users and current non users. Among the past users, around 37 percent of the women mentioned that they discontinued the use because they had wanted child, dizziness (11 percent) method failed/became pregnant (8 percent), weakness/inability to work (7 percent), irregular periods (6 percent), method was inconvenient (4 percent) and other reasons (15 percent). For urban women 11 percent reported method failure/became pregnant as the reason for

discontinuation. In urban areas, 17 percent of women reported other reason for discontinuing the use while 13 percent of rural women reported so.

<b>Table 6.16 REASONS FOR DISCONTINUATION OF CONTRACEPTION</b>			
Percent distribution of women who were past users (current non-users) by reason for discontinuation of the contraceptive method according to place of residence, Orissa, 2002-04			
Reasons	Total	Place of residence	
		Rural	Urban
<b>Reason for discontinuation</b>			
Wanted child	36.6	35.6	38.4
Method failed/became pregnant	8.1	10.5	3.6
Supply not available	1.6	2.2	0.7
Difficult to get method	1.5	1.9	0.9
Weakness/inability to work	7.2	7.1	7.5
Body ache/ Backache	1.7	2.1	1.1
Cramps	0.1	0.0	0.2
Weight gain	0.4	0.4	0.4
Dizziness	10.8	6.4	19.1
Nausea/vomiting	0.6	0.7	0.3
Breast tenderness	2.7	3.1	2.0
Irregular periods	5.5	6.0	4.6
Excessive bleeding	1.8	2.0	1.3
Spotting	0.4	0.4	0.3
White discharge	0.8	0.9	0.5
Lack of pleasure	0.9	1.4	0.1
Method was inconvenient	4.1	2.7	6.5
Other	15.3	16.8	12.6
Total percent	100.0	100.0	100.0
Number of past users	1,348	875	473

### 6.8.1 Reasons for Not Using Contraceptive Methods

DLHS asked women and husbands who are currently not using any contraception about main reasons why they were not currently using a method. The reported main reasons for not using contraceptives are, health does not permit (13 percent), worry about side effects (5 percent), difficult to become pregnant (4 percent), lack of knowledge about family planning methods (3 percent), opposed to family planning (9 percent), against the religion (one percent) and afraid of sterilization (2 percent). About 54 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.

<b>Table 6.17 REASON FOR NOT USING CONTRACEPTIVE METHOD</b>						
Percentage of current non-users who were currently not using contraceptive method by reason according to place of residence, Orissa, 2002-04						
Reason	Women			Husband*		
	Total	Rural	Urban	Total	Rural	Urban
Lack of Knowledge about FP method	3.0	3.4	1.6	3.3	3.6	2.5
Against the Religion	1.3	1.4	1.1	3.3	3.2	3.5
Opposed to family planning	8.7	9.6	5.7	4.4	4.0	5.6
Not like existing method	1.3	1.5	0.9	0.5	0.4	0.6
Afraid of sterilization	2.1	2.3	1.5	1.2	1.3	0.7
Can not work after sterilization	1.1	1.3	0.5	1.4	1.7	0.5
Worry about side effects	4.9	4.8	5.3	8.3	8.4	8.2
Costs too much	2.6	2.6	2.4	2.8	3.0	2.3
Health does not permit	13.4	12.2	17.4	16.9	16.2	19.2
Hard/inconvenient to get method	1.7	2.0	0.6	1.0	1.3	0.0
Inconvenient to use method	1.0	0.8	1.6	0.9	0.7	1.3
Difficult to become pregnant	4.3	3.6	6.7	9.2	9.4	8.6
Wife is pregnant <sup>1</sup>	-	-	-	2.9	2.4	4.5
Other	54.3	54.2	54.6	44.0	44.4	42.4
Missing	0.2	0.2	0.0	0.1	0.1	0.1
Total percent	100.0	100.0	100.0	100.0	100.0	100.0
Number of current non-users	4,824	3,678	1,146	3,054	2,359	695

Note: <sup>1</sup> 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 Orissa by background characteristics.

The unmet need is higher for women below 20 years, mainly for spacing rather than for limiting. Unmet need is also relatively higher for women aged 20-24 years (13 percent) for both spacing and limiting. Among the older women of age 25-29 years, 6 percent have unmet need, and mostly for limiting. Among the women age 30 years and above, unmet need is mostly for limiting. The rural women have high unmet need (21 percent) than the urban women (16 percent). The unmet need for family planning is higher (22 percent) among the non-literate women than among the women with 0-9 years

of schooling (18 percent) and 10 or more years of schooling (13 percent) women. Hindu women have higher unmet need for family planning (19 percent) compared to the Muslim women (18 percent) or Christian women (12 percent). Unmet need for family planning is higher (23 percent) for Scheduled tribe followed by scheduled caste and other backward class (19 percent each) and other caste (15 percent).

<b>Table 6.18 UNMET NEED FOR FAMILY PLANNING SERVICES</b>				
Percentage of currently married women with unmet need for family planning services by selected background characteristics, Orissa, 2002-04				
Background Characteristic	Unmet need for FP			Number of women
	Spacing <sup>1</sup>	Limiting <sup>2</sup>	Total	
<b>Age</b>				
15-19	18.9	3.5	22.4	1,679
20-24	13.3	10.8	24.1	4,805
25-29	6.0	14.4	20.4	5,759
30-34	2.5	14.8	17.2	5,141
35-39	1.1	14.0	15.2	4,229
40-44	0.9	15.2	16.1	3,359
<b>Residence</b>				
Rural	6.8	13.7	20.5	17,760
Urban	4.2	11.6	15.8	7,212
<b>Education</b>				
Illiterate	6.6	15.0	21.5	12,145
0-9 @ years	5.7	12.6	18.3	9,062
10 years and above	4.9	8.3	13.2	3,726
<b>Religion</b>				
Hindu	6.1	13.2	19.3	23,836
Muslim	6.6	11.8	18.3	621
Christian	3.0	9.2	12.3	451
Others	12.7	0.4	13.1	65
<b>Caste/tribe#</b>				
Scheduled caste	6.0	13.4	19.4	4,526
Scheduled tribe	8.8	14.4	23.2	5,246
Other backward class	6.0	13.2	19.2	8,974
Others	3.6	11.6	15.2	6,067
<b>Number of living children</b>				
0	4.0	3.0	7.0	3,179
1	15.5	7.2	22.7	4,864
2	5.4	14.0	19.4	6,807
3	3.3	16.4	19.7	5,355
4+	1.7	20.9	22.6	4,768
<b>Standard of living Index</b>				
Low	7.3	14.6	21.9	14,805
Medium	5.0	12.9	17.9	6,228
High	2.9	7.6	10.5	3,939
<b>All women</b>	<b>6.0</b>	<b>13.1</b>	<b>19.1</b>	<b>24,973</b>
Note: <sup>1</sup> 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.				
<sup>2</sup> 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.				

Women in low standard of living house holds have highest (22 percent) unmet need than the women of medium (18 percent) and high standard of living (11 percent). Unmet need is much higher for the women with one living child (23 percent) than women with either no children (7 percent) or two or three children (19 percent each). Among the

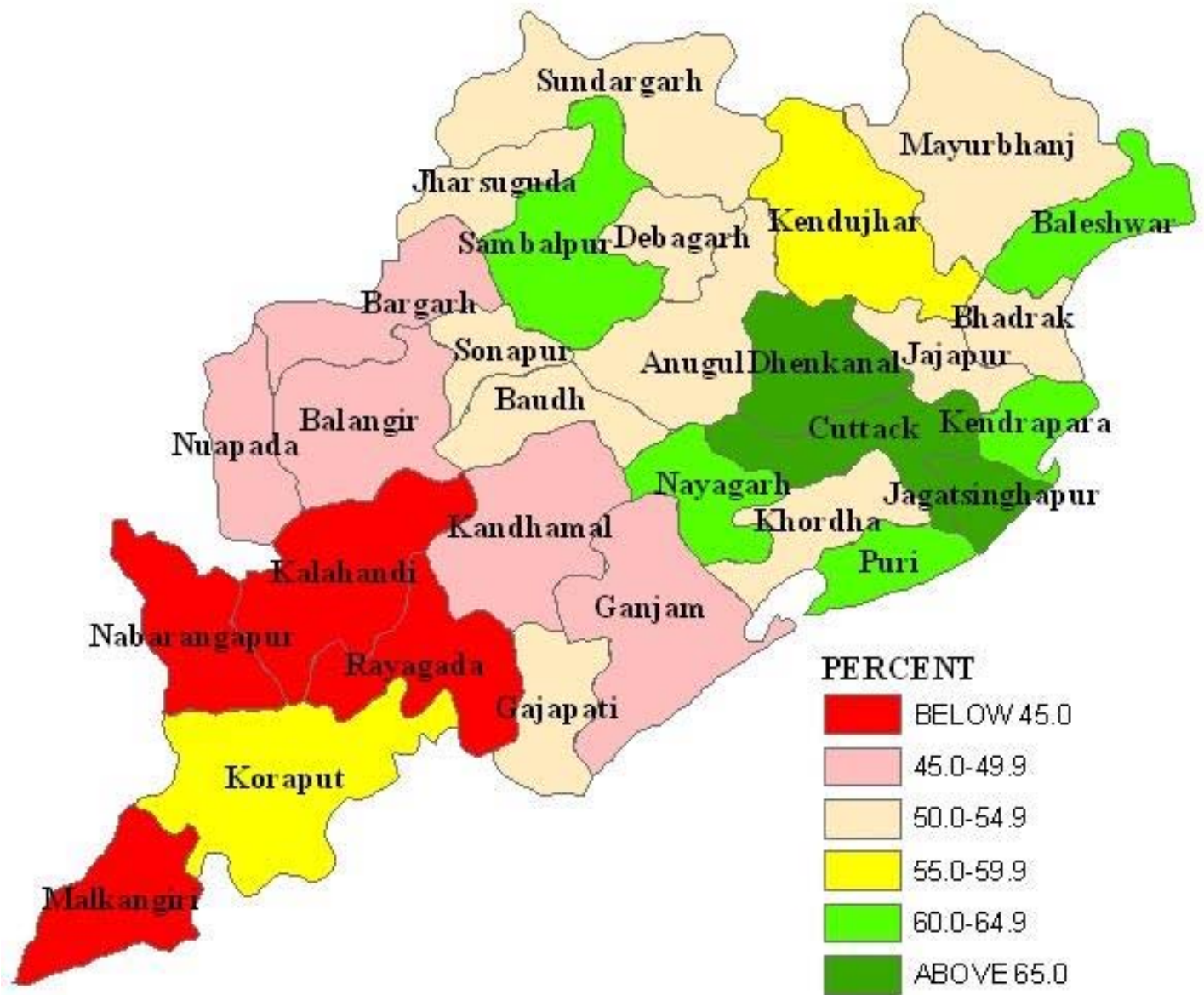
women with no children or one child the unmet need is mainly for spacing, where as for women with two children or more unmet need is exclusively for limiting.

### 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 19 percent and it ranges from 9 percent in Cuttack to 26 percent in Ganjam and Mayurbhanj. In 12, out of 30 districts unmet need for family planning is more than state average. Unmet need for limiting was lowest in Cuttack (6 percent) followed by Dhenkanal, Koraput (7 percent each) Nuapada (8 percent) and Sambalpur (10 percent), and highest in Jajapur (19 percent). Similarly, unmet need for spacing was lowest in Gajapati and Cuttack (2 percent) and highest in Anugul (9 percent). It may also be observed that except Koraput district, in all the districts of Orissa unmet need for limiting was more than spacing.

<b>Table 6.19 UNMET NEED BY DISTRICTS</b>			
Percentage of currently married women with unmet need by district Orissa, 2002-04			
Districts	Unmet need for		
	Spacing	Limiting	Total
Anugul	9.2	15.6	24.8
Balangir	5.5	13.1	18.5
Baleshwar	5.1	12.9	18.0
Bargarh	6.1	13.9	20.0
Baudh	7.9	12.2	20.1
Bhadrak	6.6	16.9	23.5
Cuttack	2.3	6.4	8.7
Debagarh	6.3	13.8	20.1
Dhenkanal	3.9	7.4	11.2
Gajapati	1.8	12.8	14.6
Ganjam	7.0	18.5	25.5
Jagatsinghapur	2.6	10.9	13.5
Jajapur	4.6	18.9	23.5
Jharsuguda	6.4	11.5	17.9
Kalahandi	4.7	12.5	17.2
Kandhamal	5.9	11.7	17.6
Kendrapara	5.7	12.1	17.7
Kendujhar	9.3	11.1	20.5
Khordha	6.9	16.6	23.5
Koraput	7.5	6.6	14.1
Malkangiri	5.8	7.5	13.3
Mayurbhanj	7.8	17.9	25.7
Nabarangapur	8.9	11.3	20.2
Nayagarh	4.7	11.4	16.1
Nuapada	6.9	8.4	15.4
Puri	3.4	12.7	16.0
Rayagada	8.2	10.4	18.6
Sambalpur	6.5	9.5	16.0
Sonapur	8.4	12.3	20.8
Sundargarh	5.0	10.9	16.0
Orissa	6.0	13.1	19.1

**MAP-6**  
**Current Use of Any Family Planning Method**



## CHAPTER VII

### ACCESSIBILITY AND PERCEPTION ABOUT GOVERNMENT HEALTH FACILITIES

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

#### 7.1 Home Visit by Health Workers

Table 7.1 shows the percentage of currently married women visited by health workers at home during the three months prior to the survey. Only 6 percent of the women in Orissa reported that the health worker visited them at their residence at least once in the last three months preceding the survey. Younger women seemed more likely to report a home visit than older women. Six percent of women in the age group 15-24 years reported at least one home visit compared to only 4 percent of women in the age group 35 years and older. The percentage of women in Orissa receiving home visits is higher in rural areas (7 percent) than in urban areas (2 percent). Women who were non-literate (6 percent) and women with a low standard of living (7 percent) seemed more likely to report home visits. More Christian women (7 percent) reported home visits than Hindu women (6 percent) and other religious groups (2 percent). There was not much variation by caste/tribe. Home visits were less common for women residing in the villages with a health facility.

Women who reported a home visit during the three months preceding the survey were asked who visited their household during the past three months and whether they were satisfied with the kind of services/advice received, and the time spent by these health workers. Among women who received services at home, 89 percent received services from ANM/LHV, seven percent from a doctor and 6 percent from male health worker. There were more rural-urban differentials by visit of households by health worker. Sixty percent of women who received services at home



were satisfied with the time spent with them and 82 percent of women were satisfied with the services or advice given to them.

<b>Table 7.1 HOME VISIT BY HEALTH WORKER</b>								
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, Orissa, 2002-04								
Background characteristic	Percentage with home visit	Number of women	Home visit by <sup>1</sup>			Percentage of women satisfied with		Number of women
			Doctor	ANM / LHV	Male health worker	Amount of time	Services/ advices	
<b>Age</b>								
15-24	6.2	6,485	5.7	89.6	4.3	57.1	82.9	405
25-34	6.1	10,900	7.1	89.9	5.4	62.2	82.7	660
35-44	4.1	7,588	8.6	86.4	7.4	58.0	79.0	312
<b>Residence</b>								
Rural	7.1	17,760	5.5	91.3	4.7	60.7	81.8	1,253
Urban	1.7	7,212	22.7	66.3	14.3	50.7	83.3	124
<b>Education</b>								
Non-literate	6.0	12,145	7.5	88.3	5.3	59.2	82.1	729
0-9 years@	5.4	9,062	5.9	91.7	4.9	60.2	82.8	493
10 and above	4.1	3,726	8.9	83.5	8.9	60.6	77.7	152
<b>Religion</b>								
Hindu	5.6	23,836	7.1	88.9	5.5	59.8	82.0	1,333
Muslim	1.9	621	*	*	*	*	*	12
Christian	6.9	451	(8.8)	(88.2)	(5.9)	(64.7)	(85.3)	31
Other	1.7	65	*	*	*	*	*	1
<b>Caste/tribe#</b>								
Scheduled caste	5.4	4,526	4.3	91.1	5.2	54.5	79.8	244
Scheduled tribe	7.1	5,246	6.1	90.6	4.9	65.7	87.5	371
Other backward class	5.7	8,974	6.0	89.7	6.2	58.0	79.5	512
Other	4.0	6,067	11.8	84.9	5.7	58.5	80.0	243
<b>Standard of living index</b>								
Low	6.5	14,805	5.7	90.8	4.8	60.3	83.1	955
Medium	5.5	6,228	8.5	87.0	5.4	57.0	77.7	343
High	2.0	3,939	17.2	76.0	15.4	65.7	86.3	79
<b>Availability of health facility<sup>2</sup> in the village</b>								
No	8.3	8,023	3.4	93.4	3.8	64.8	84.0	662
Yes	6.1	9,737	7.9	88.9	5.6	56.1	79.3	591
Total	5.5	24,973	7.1	89.0	5.5	59.8	81.9	1,377

Note: Total includes 37 women with missing information on women's education were not shown separately. <sup>1</sup> Percentage add to more than 100.0 due to multiple responses. @ Literate women with no years of schooling are included. # Total number may not add to N due to do not know and missing cases. <sup>2</sup> Includes sub-center, primary health center, Community health center or referral hospital, government hospital, and government dispensary within the village. ( ): Based on less than 50 unweighted cases. \*Percentage not shown: based on few cases.

The proportion of women who were satisfied with the amount of time spent, and advice provided by health workers varied across various background characteristics. As compared to older women, younger women were less likely to report about satisfaction with amount of time spent by the health workers during home visits. Fifty seven percent of women in the age group 15-24 years and 58 percent in

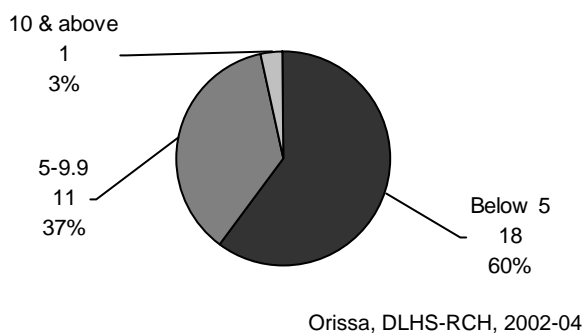
the age group 35 years and above as compared to 62 percent in the age group 25-34 years reported satisfaction with the time spent by health workers. Eighty three percent of women in the age group 15-24 years and 25-34 years reported satisfaction with services as compared to 79 percent of women in the age 35 years and older. Rural women (61 percent) were more likely than urban women (51 percent) to report that they were satisfied with the time spent by health workers during home visits, but they were less satisfied with service/ advice received. Women who were non-literate, women from Hindu religion and schedule caste women, and women with a medium standard of living are less likely to be satisfied with amount of time spent by health workers during home visits. Women residing in the village with availability of health facility are slightly less satisfied with the time spent than women from those villages where health facilities are not available.

## **7.2 Home Visit by Health Workers by Districts**

In half of the districts in Orissa, health workers visited less than 10 percent of the women at home (Table 7.2 and Figure 7.1). Except Rayagada district (11 percent), in all other districts less than one tenth of the women were visited by health workers. There are eleven districts where more than 5 percent and less than one tenth of women received home visits (Baleshwar, Bhadrak, Ganjam, Jharsuguda, Kendujhar, Koraput, Malkangiri, Mayurbhanj, Nuapada, Sonapur, Sundargarh,). In rest of the eighteen districts where less than 5 percent of women received home visits. Among women who were visited by health worker at home, more than three quarter of them were approached by ANM/LHV in almost all the districts. None in Cuttack was approached by male worker at home and the highest was recorded in Kandhamal (18 percent) district, and except Balagir (23 percent) and Debagarh (20 percent) percentage of women visited by doctor at home was below one fifth in almost all the districts.

In the districts of Anugul, Baleshwar, Bhadrak, Dhenkanal, Ganjam, Jagatsinghapur, Kalahandi, Kendrapara, Nayagarh, Puri and Sambalpur, less than half of the women reported that the worker had spent enough time with them. On the other hand, more than 90 percent women in Balangir (100 percent), Baudh (94 percent), Gajapati (93 percent) and Kendujhar (91 percent) reported satisfaction with services/advice given by health workers.

**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, Orissa, 2002-04

District	Percentage with home visit	Home visit by <sup>1</sup>			Percentage of women satisfied with	
		Doctor	ANM / LHV	Male health worker	Time spent	Service
Anugul	2.8	(15.6)	(87.6)	(11.1)	(62.1)	(76.9)
Balangir	4.8	22.8	77.2	1.9	86.2	100.0
Baleshwar	6.4	0.7	75.4	8.9	45.0	61.4
Bargarh	3.2	6.1	90.9	3.0	85.9	89.2
Baudh	4.9	0.0	97.9	2.1	77.9	93.9
Bhadrak	5.8	8.8	90.1	5.6	45.0	74.5
Cuttack	4.6	18.8	83.9	0.0	55.3	82.1
Debagarh	4.7	19.9	73.2	6.9	60.7	83.4
Dhenkanal	4.8	2.5	91.6	10.9	42.5	79.5
Gajapati	4.9	5.4	96.1	0.0	57.5	92.5
Ganjam	8.3	4.3	97.7	0.9	46.4	87.3
Jagatsinghapur	4.3	3.3	96.7	3.3	49.9	62.1
Jajapur	3.5	6.7	81.9	15.0	55.4	73.3
Jharsuguda	5.1	10.1	82.9	8.6	73.5	85.2
Kalahandi	2.6	(18.8)	(76.1)	(8.5)	(68.0)	(85.4)
Kandhamal	4.1	0.0	85.4	18.2	81.9	77.9
Kendrapara	3.7	0.0	90.2	9.8	34.7	46.2
Kendujhar	8.5	4.5	90.9	7.7	72.1	91.1
Khordha	3.1	0.0	97.6	3.7	67.9	85.7
Koraput	6.3	4.0	93.8	4.4	69.5	87.2
Malkangiri	7.2	6.4	90.1	8.3	58.9	75.7
Mayurbhanj	9.4	2.8	91.9	5.3	73.9	86.7
Nabarangapur	3.4	7.4	92.6	7.4	66.0	87.9
Nayagarh	4.8	6.9	82.3	13.0	39.9	82.3
Nuapada	5.4	8.2	94.0	0.0	60.5	89.0
Puri	4.8	1.3	94.7	5.3	47.1	78.4
Rayagada	11.4	5.7	93.4	2.6	69.8	89.9
Sambalpur	2.9	(13.2)	(86.8)	(0.0)	(68.8)	(84.3)
Sonapur	6.1	2.9	92.2	10.3	60.8	88.3
Sundargarh	7.0	13.5	85.7	5.9	54.3	70.8
Orissa	5.5	7.1	89.0	5.5	59.8	81.9

Note: <sup>1</sup> Percentage add to more than 100.0 due to multiple responses.

( ) Based on less number of cases.

### **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 803 pregnant woman or women with children born during the reference period, and other women include 441 current users and 133 current non-users, who were visited by health workers at home.

The major focus of discussion during home visits was immunization (30 percent) and family planning (25 percent). In addition, discussions were also made on treatment of health problems (18 percent), child care (16 percent), disease prevention and antenatal care (14 percent each), sanitation/cleanliness (11 percent). Discussions about family planning were mentioned more often by current non-users (30 percent) of contraception and pregnant women or women with child born after reference period (25 percent) and current users (23 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 in the past three months preceding the survey.

<b>Table 7.3 MATTER DISCUSSED DURING CONTACT WITH A HEALTH WORKER</b>				
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 <sup>1</sup> who discussed specific topics with the health worker Orissa, 2002-04				
Topic discussed	Pregnant women or women with children after reference period <sup>2</sup>	Other women		Total
		Current contraceptive users	Current nonusers	
<b>During home visit</b>				
Family planning	25.3	23.4	29.5	25.1
Breastfeeding	5.3	0.7	0.0	3.3
Supplementary feeding	6.7	2.9	2.1	5.0
Immunization	29.7	20.0	7.4	24.4
Nutrition	2.6	1.2	0.3	2.0
Diseases prevention	14.2	28.5	15.1	18.9
Treatment of health problem	18.3	30.8	27.7	23.2
Antenatal care	13.9	3.7	1.4	9.4
Delivery care	5.6	1.3	1.5	3.8
Postpartum care	7.5	2.1	2.1	5.2
Childcare	16.1	7.7	10.1	12.8
Sanitation / cleanliness	10.9	12.7	2.7	10.7
Oral rehydration	4.9	5.3	1.9	4.8
Other	13.3	22.9	16.3	16.7
Number of women	803	441	133	1,377
<b>During visit to health facility</b>				
Family planning	3.2	2.2	1.4	2.6
Breastfeeding	0.5	0.3	0.1	0.4
Supplementary feeding	1.5	0.9	0.7	1.2
Immunization	12.2	1.6	1.4	7.2
Nutrition	2.3	1.3	.9	1.8
Diseases prevention	13.3	24.6	27.8	19.0
Treatment of health problem	28.7	60.0	55.4	42.8
Antenatal care	19.2	2.5	4.9	11.7
Delivery care	7.1	0.6	2.7	4.3
Postpartum care	4.1	0.8	0.9	2.6
Childcare	22.3	13.8	7.1	17.5
Sanitation / cleanliness	3.3	3.9	0.8	3.2
Oral rehydration	0.9	0.3	0.1	0.6
Other	4.5	6.9	7.8	5.8
Number of women	1,975	1,274	472	3,720
Note: Percentage add to more than 100.0 due to multiple responses.				
<sup>1</sup> Women who visited private health facility are not included.				
<sup>2</sup> Reference period for phase I, January 1 <sup>st</sup> 1999 and for phase II, January 1 <sup>st</sup> 2001				

The topics discussed most often during visits to health facility by women include treatment of health problems (43 percent), disease prevention (19 percent), childcare (18 percent) antenatal care (12 percent), immunization (7 percent) and other health related topics (7 percent). Only three percent women reported that they discussed family planning during the visit. During visit to health facility, about twenty nine percent of the pregnant women or women with children born during reference period discussed about treatment of a health problem, 22 percent discussed about child care, 19 percent discussed about antenatal care, 13 percent discussed disease prevention and 12 percent discussed about immunization. A few pregnant women or women with children born after reference period also discussed about delivery care,

postpartum care, nutrition, oral re-hydration and breastfeeding during visit to health facility. A higher proportion of current users and non-users discussed about treatment of health problems, disease prevention, and other health related problems than pregnant women with children born 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 36 percent of women needed to visit health facility but did not visit in comparison with 26 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 (33 percent) than in rural areas (23 percent). Among them who visited any health facility, 29 percent of women reported that they had visited a private hospital, (22 percent in rural areas and 40 percent in urban areas).

<b>Table 7.4 VISIT TO HEALTH FACILITY</b>					
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, Orissa, 2002-04					
Health facility	Total	Residence		Availability of health facility <sup>1</sup> in the village	
		Rural	Urban	No	Yes
Percentage of women who needed to visit health facility and not visited	36.4	41.5	23.8	42.5	40.2
Percentage of women who needed to visit health facility and visited	25.9	22.8	33.4	22.1	23.7
Number of women	24,973	17,760	7,212	9,737	8,023
<b>Government health facility</b>					
Hospital / CHC / FRU /RH	30.3	26.5	36.8	26.8	26.1
Dispensary	4.3	4.7	3.7	4.9	4.5
Primary health center	16.6	24.3	3.5	24.4	24.3
Sub-center	2.8	4.1	0.6	3.1	5.2
<b>Private health facility</b>					
Hospital	28.7	22.0	40.0	21.6	22.6
Dispensary	7.2	7.5	6.8	8.0	7.0
ISM <sup>2</sup> hospital/dispensary	7.3	7.9	6.3	8.8	6.9
Other	2.7	3.0	2.2	2.7	3.3
Total percent	100.0	100.0	100.0	100.0	100.0
Number of women	6,462	4,054	2,408	2,150	1,904
Note: CHC: Community health center, FRU: First referral unit, RH: Referral Hospital					
<sup>1</sup> Includes sub-center, primary health center, Community health center or referral hospital, government hospital, and government dispensary within the village					
<sup>2</sup> Either government or private health facility of Indian System of Medicine					

More than a half of the women visited a government health facility, of which 30 percent visited government health facility such as, hospital/CHC/FRU/RH, 17 percent visited primary health centre, 4 percent visited government dispensary and 3

percent visited sub-centres. Seven 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. Fifty six percent of currently married women in Kendrapara and Kendujhar, needed to visit a health facility, but they did not visit. Out of 30, in 8 districts i.e. Balangir, Baudh, Cuttack, Debagarh, Dhenkanal, Kandhamal, Kendrapara and Nayagarh more than one third of the women visited health facility for their health problems. In Malkangiri only 8 percent of women visited health facility when needed. Among them who visited health facility, less than a half of women visited government health facility in 4 districts (Ganjam, Jharsuguda, Khordha and Rayagada), and except Kandhamal and Malkangiri, in all the districts more than one fifth of the women visited private health facility in three months before the survey.

<b>Table 7.5 VISIT TO HEALTH FACILITY BY DISTRICT</b>				
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, Orissa, 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
Anugul	23.5	25.6	63.6	35.9
Balangir	29.9	34.0	53.7	44.7
Baleshwar	38.1	24.8	52.2	44.2
Bargarh	45.0	22.9	58.3	37.9
Baudh	50.2	33.3	65.5	30.7
Bhadrak	43.6	21.3	51.4	48.2
Cuttack	39.7	34.1	50.9	46.4
Debagarh	40.0	35.8	68.3	30.0
Dhenkanal	47.7	34.4	58.7	40.0
Gajapati	40.5	28.2	60.7	37.1
Ganjam	13.0	24.6	47.3	51.0
Jagatsinghapur	37.9	32.9	53.1	46.9
Jajapur	47.2	28.0	50.1	48.3
Jharsuguda	33.7	29.5	46.6	50.9
Kalahandi	48.0	28.8	65.3	34.2
Kandhamal	31.2	34.9	79.4	18.0
Kendrapara	55.5	33.7	61.9	36.1
Kendujhar	56.1	19.0	71.8	24.2
Khordha	51.7	25.4	46.3	52.6
Koraput	39.3	24.2	65.7	31.3
Malkangiri	48.5	8.1	79.3	18.0
Mayurbhanj	38.6	20.7	55.5	41.9
Nabarangapur	40.9	17.6	63.1	36.5
Nayagarh	24.9	36.5	62.5	30.8
Nuapada	47.8	19.6	76.2	20.3
Puri	46.5	28.9	51.1	47.6
Rayagada	22.3	21.3	49.1	49.5
Sambalpur	18.7	21.4	53.5	44.0
Sonapur	16.5	20.4	72.2	26.1
Sundargarh	26.6	24.1	53.9	37.9
Orissa	36.4	25.9	54.9	42.4

## 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 three months prior to the survey. Those who visited the government health facility were asked to indicate 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 the same is presented in Table 7.6. Women in general perceived that the



quality of services, personal manner as well technical skills and quality of physician, ANM/nurse and other staff was good. Majority of the respondents perceived that personal manner (courtesy, respect, sensitivity, and friendliness) and technical skills (thoroughness, carefulness, and competence) of the physician, nurses and other staff were good, a few respondents mentioned that personal manner of doctor (15 percent), nurse (9 percent), and other staff including paramedical staff (7 percent) was excellent.

<b>Table 7.6 QUALITY OF GOVERNMENT HEALTH FACILITY</b>			
Percentage of women who visited government health facility and rated quality and availability of services during most recent visit to a government health facility in the three months preceding the survey, Orissa, 2002-04			
Quality indicator	Poor	Good	Excellent
The convenience of the health facility location	10.2	77.3	12.5
Length <sup>1</sup> of time spend towards waiting	11.7	73.5	14.8
Personal manner <sup>2</sup> of the physician <sup>5</sup>	3.5	81.9	14.6
The technical skills and quality <sup>3</sup> of the physician <sup>5</sup>	3.3	82.7	14.0
Personal manner <sup>2</sup> of nurse	5.6	85.2	9.2
The technical skills and quality <sup>3</sup> of nurse	5.4	87.4	7.2
Personal manner of other staff <sup>5</sup>	3.6	89.6	6.8
The technical skills and quality of other <sup>4</sup> staff	4.1	89.8	6.1
The explanation of what was done to her	4.9	85.7	9.4
Medical, surgical and diagnostic equipment	5.1	87.2	7.7
General comfort	3.9	87.3	8.8

Note: <sup>1</sup> Poor indicate long waiting time, good indicate average waiting time, and excellent indicate short waiting time  
<sup>2</sup> Courtesy, respect, sensitivity, friendliness  
<sup>3</sup> Thoroughness, carefulness, competence  
<sup>4</sup> Including paramedical staff  
<sup>5</sup> 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. Seventeen percent of the currently married women reported inconvenient location of the centre 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 (19 percent) than urban women (14 percent), and women from those village where health facilities are available (18 percent). About one third reported that they did not feel necessity to visit the government health centre due to poor quality of service, 26 percent in rural areas and 40 percent in urban areas. Other reasons for not visiting government health centres include: time is not suited (10 percent), doctor/ health workers do not examine properly (9 percent), medicine rarely/not given or of bad quality (6 percent), heavy rush and non-availability or rare availability of doctors/ health workers (4 percent each).

<b>Table 7.7 REASON FOR NOT PREFERRING GOVERNMENT HEALTH FACILITY</b>					
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, Orissa, 2002-04					
Reason	Total	Residence		Availability of health facility <sup>1</sup> in the village	
		Rural	Urban	No	Yes
Not conveniently located	16.8	18.8	14.4	19.2	18.4
Time is not suited	9.9	9.1	10.9	9.3	8.8
Poor quality of services	32.4	25.8	40.2	25.7	25.9
Heavy rush	3.9	3.7	4.1	3.9	3.4
Non/rare-availability of doctors/health workers	3.8	4.6	2.9	3.2	6.4
Doctors/health workers do not examine properly	8.6	9.4	7.6	9.0	10.0
Medicine not/rarely given or of bad quality	6.4	8.7	3.7	8.5	9.0
Doctors/paramedical staff does not behave properly	0.2	0.3	0.0	0.1	0.4
Services are charged	2.8	3.8	1.7	4.0	3.5
Referred by government doctor	2.0	1.7	2.5	2.1	1.2
Other	13.1	14.2	12.0	15.0	13.1
Total percent	100.0	100.0	100.0	100.0	100.0
Number of women	2,743	1,483	1,260	811	671

Note: <sup>1</sup> 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 health worker to adopt family planning method and method advised during any of the contact. Seventeen percent of current non-users said that they had advice or discussion on method of family planning with ANM or health worker (Table 7.8). The most frequently discussed method was female sterilization (71 percent) while 14 percent reported discussion about pills. Six percent of women received advice to adopt male sterilization while one percent mentioned about advice regarding adopting condom as a contraceptive method. Discussions about traditional method, such as rhythm or withdrawal were rare. There is not much variation by type 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 8 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 rural women than urban women had problems in getting a supply of condom.

<b>Table 7.8 ADVISE TO ADOPT FAMILY PLANNING METHOD</b>			
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, Orissa, 2002-04			
Method	Total	Rural	Urban
Percentage of non-users who were advised to adopt family planning method	13.9	14.6	11.1
Number of women	10,852	8,539	2,313
<b>Method</b>			
Female Sterilization	71.2	74.9	53.2
Male Sterilization	5.9	5.5	7.8
IUD	6.6	5.6	11.4
Pills	14.2	12.6	21.6
Condom	1.1	0.5	3.6
Rhythm	0.1	0.1	0.2
Withdrawal	0.1	0.1	0.0
Other method	0.9	0.7	2.1
Total percent	100.0	100.0	100.0
Number of women	1,506	1,249	258

<b>Table 7.9 AVAILABILITY OF REGULAR SUPPLY OF CONDOMS/PILLS</b>		
Percentage of current condom or pill users who ever had a problem getting a supply of condoms/pills by residence, Orissa, 2002-04		
Method/residence	Percentage who had a problem getting supply	Number of users
<b>Condom</b>		
Rural	10.3	1,211
Urban	5.0	898
Total	8.0	2,109
<b>Pills</b>		
Rural	7.5	217
Urban	2.6	458
Total	4.2	675

## 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 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 23 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. More than one fourth of sterilized women received such information through ANM or health worker in the government health facilities compared to around 22 percent of women who were sterilized in private health facilities, and 18 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. About 11 percent of such women were informed about alternative methods by others but not by a health worker working in government or private health sector.

<b>Table 7.10 INFORMATION OF OTHER MODERN METHOD BEFORE STERILIZATION</b>				
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, Orissa, 2002-04				
Source of sterilization	Total	Rural	Urban	Number of users
Government health facility	25.9	28.6	20.0	4,980
Family planning or RCH camp/ village session	17.9	18.3	13.7	1,787
Private health facility	22.3	24.2	21.6	326
Other	11.3	15.8	7.8	214
Total	23.4	25.1	19.0	7,350
Note: Total includes 9 and 34 women who said that they sterilized at mobile clinic, and who do not know including missing information of place/source of sterilization, are not shown separately.				

<b>Table 7.11 INFORMATION ON SIDE EFFECT AND FOLLOW-UP FOR CURRENT METHOD</b>			
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, Orissa, 2002-04			
Information/follow-up	Total	Rural	Urban
<b>Told about side effects</b>			
Sterilization	28.1	30.5	21.9
Other modern method	19.1	21.5	16.7
Any modern method	25.5	28.5	19.7
<b>Received follow-up</b>			
Sterilization	61.5	72.0	34.4
Other modern method	7.0	11.8	2.3
Any modern method	45.6	58.8	20.7

Another important facet of informed contraceptive choice is being fully informed about any side effects and any other problems associated with the method. In Orissa, only 26 percent of users of any modern method were informed about possible side effects or health problems associated with their current method. Thirty one percent of acceptors of sterilization in rural area and 22 percent in urban area reported that they were informed about side effects. Among users of modern method other than sterilization, 22 percent of rural users and 17 percent of urban users were informed about side effects. It is clear from the results that ANM or health workers in Orissa 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 two times higher than among the users of modern methods. About seventy two percent of sterilization users in rural areas and about 34 percent in urban areas reported that they received follow-up services by ANM or health worker. Only 7 percent of the users of other modern method received follow-up services. In all, only 59 percent of the users of any modern method in rural areas and only 21 percent in urban areas received the 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.

<b>Table 7.12 QUALITY OF CARE INDICATORS FOR CONTRACEPTIVE USERS BY DISTRICT</b>						
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, Orissa, 2002-04						
District	Percentage informed about other methods before getting sterilization <sup>1</sup>	Percentage told about side effects or other problems with method <sup>2</sup>		Percentage who received follow-up <sup>2</sup>		Percentage non-user told ever had advised to adopt contraceptive method
		Sterilization	Other modern method	Sterilization	Other modern method	
Anugul	24.4	16.5	16.7	35.7	2.0	12.0
Balangir	31.8	32.7	26.8	63.2	4.0	10.9
Baleshwar	28.0	20.1	19.7	47.2	7.8	6.6
Bargarh	15.6	26.7	24.0	78.1	3.6	15.8
Baudh	15.2	18.5	21.3	81.6	12.3	16.6
Bhadrak	33.6	34.3	19.4	58.7	7.8	11.6
Cuttack	31.2	25.1	12.9	57.4	4.9	12.6
Debagarh	27.2	29.5	21.1	73.5	7.1	14.8
Dhenkanal	16.9	21.0	15.5	72.1	3.0	8.7
Gajapati	12.5	14.7	16.9	79.5	30.1	9.1
Ganjam	33.5	35.2	24.6	72.4	15.4	13.8
Jagatsinghapur	16.2	32.5	17.8	77.9	5.0	5.3
Jajapur	18.8	26.4	14.9	64.8	1.2	13.8
Jharsuguda	18.6	16.1	26.8	67.0	9.6	16.1
Kalahandi	11.7	30.7	13.0	75.3	6.2	12.7
Kandhamal	8.1	29.6	26.5	71.6	13.0	27.5
Kendrapara	33.0	38.4	25.8	62.2	4.2	10.0
Kendujhar	8.7	21.6	11.2	61.2	7.8	13.0
Khordha	20.3	30.9	20.8	74.2	3.2	7.7
Koraput	2.3	14.1	15.1	54.6	6.4	12.3
Malkangiri	26.3	29.9	21.7	35.3	19.1	12.6
Mayurbhanj	27.7	25.4	23.0	44.3	9.9	27.7
Nabarangapur	15.8	22.0	13.9	67.3	15.2	11.3
Nayagarh	12.7	16.3	19.8	67.4	1.2	6.8
Nuapada	15.8	21.7	5.7	61.7	8.3	4.2
Puri	16.7	37.2	14.2	68.4	5.5	5.7
Rayagada	42.0	22.2	30.2	39.3	18.5	30.7
Sambalpur	39.2	31.9	12.4	50.9	2.6	18.2
Sonapur	29.0	26.2	16.1	53.2	10.0	18.8
Sundargarh	32.3	37.7	26.4	59.4	10.3	15.4
Orissa	25.5	28.1	19.1	61.5	7.0	14.0

Note: <sup>1</sup> At the time of accepting the current method.

<sup>2</sup> By a health worker or ANM/Nurse after accepting the current method.

The percentage of sterilization-users who were told about alternate method is lowest in Koraput (2 percent) and highest in Rayagada (42 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 14 percent in Koraput to a high of 38 percent in Kendrapara and in Sundargarh. For other modern contraceptive methods, more than one fourth of users in Balangir, Jharsuguda, Kandhamal, Kendrapara, Rayagada and Sundargarh and a minimum of 6 percent of users in Nuapada were told about the side effects of the method. Follow-up services are much better for acceptors of sterilization than for other modern methods in most of the districts of Orissa. Table 7.12 also shows district wise variation in the percentage of current non-users who were ever advised to adopt contraceptive methods, which varies from a low of 4 percent in Nuapada to a high of 31 percent in Rayagada.

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

## 7.12 Quality of Care of Maternal Health Care

Information on few other aspects of quality of care in terms of maternal care was also collected. Women with last live/still birth during the three years preceding the survey were asked whether the Doctor/ANM/health worker advised them 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 visit, at least once within six weeks of delivery. The same information is presented in Table 7.13.

<b>Table 7.13 ADVISED TO HAVE DELIVERY AT HEALTH FACILITY AND FOLLOW-UP SERVICES FOR POSTPARTUM CHECK-UP</b>			
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, Orissa, 2002-04			
Advise/follow-up service	Total	Rural	Urban
Percentage of women who were advised to have delivery at health facility	26.2	21.8	39.9
Percentage of women who were visited within 2 weeks of delivery	14.8	17.6	6.0
Percentage of women who were visited at least once within 6 weeks of delivery	18.5	21.9	7.9
Number of women	9,278	7,003	2,275
Note: * Women who had live birth/still birth after 1.1.1999/2001 Total includes 2, 13, and 8 missing cases in advised to have delivery at health facility, visited within 2 weeks of delivery and visited at least once within 6 weeks of delivery.			

Around one fourth of the women with last live/still birth during the 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 (40 percent) were more likely than rural areas (22 percent) to get advised to deliver their child at health facility.

In district wise variation, the percentage varies from as low as 7 percent in Malkangiri to as high as 43 percent in Cuttack (Table 7.14). In sixteen of the 30 districts, less than one fourth women were advised to deliver their child in health facility.

<b>Table 7.14 QUALITY OF CARE INDICATORS FOR MATERNAL CARE</b>			
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, Orissa, 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
Anugul	22.7	8.4	9.0
Balangir	32.0	12.4	14.7
Baleshwar	22.3	8.8	22.5
Bargarh	25.7	18.3	20.0
Baudh	21.8	25.8	26.5
Bhadrak	21.4	9.9	11.8
Cuttack	42.8	9.8	14.1
Debagarh	30.9	8.9	15.8
Dhenkanal	26.4	10.5	14.5
Gajapati	17.4	25.0	24.7
Ganjam	26.3	13.8	16.8
Jagatsinghapur	36.3	6.7	8.4
Jajapur	23.5	7.8	8.5
Jharsuguda	32.1	18.1	17.7
Kalahandi	26.1	12.1	16.9
Kandhamal	25.2	15.1	18.6
Kendrapara	28.9	14.2	18.2
Kendujhar	19.0	23.2	26.9
Khordha	33.5	4.2	5.1
Koraput	20.2	24.7	26.5
Malkangiri	7.3	28.2	30.6
Mayurbhanj	27.6	16.8	22.6
Nabarangapur	9.5	17.6	23.5
Nayagarh	22.8	13.7	13.4
Nuapada	24.8	19.9	21.9
Puri	34.1	6.0	11.9
Rayagada	23.0	35.6	41.8
Sambalpur	31.2	13.1	15.4
Sonapur	24.5	15.4	20.7
Sundargarh	25.8	21.5	25.3
Orissa	26.2	14.8	18.5

Note: \* Women who had live birth/still birth after 1.1.1999/2001

Fifteen percent of the women reported that they were visited by an ANM within two weeks of delivery; such visit was only 6 percent in urban areas and 18 percent in rural areas. Only 22 percent of the women in rural areas and 8 percent in urban areas received at least one follow-up service within six weeks of delivery. Not more than one-third women received postpartum check-up within 2 weeks of delivery in any district of Orissa, except Rayagada district and the proportion of women who had at least one postpartum check-up within six weeks of delivery varied from a low of 5 percent in Khordha to high of 42 percent in Rayagada (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 Awareness of RTI/STI

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

Table 8.1 shows the percentage of women aware of RTI/STI by background characteristics. About half of the women (48 percent) in Orissa were aware of RTI/STI. The proportion of women who were aware of RTI/STI is much higher in urban areas (63 percent) than in rural areas (42 percent) (*See Figure 8.1*). Awareness of RTI/STI is much lower among younger women, non-literate women, women from Christian religion, scheduled tribe women and women from households with a low standard of living. Awareness of RTI/STI increases from 33 percent among non-literate women to 78 percent among women who completed 10 or more years of schooling. The standard of living index shows a positive relationship with awareness of RTI/STI, ranging from 37 percent among women with a low standard of living to 72 percent among women with a high standard of living.

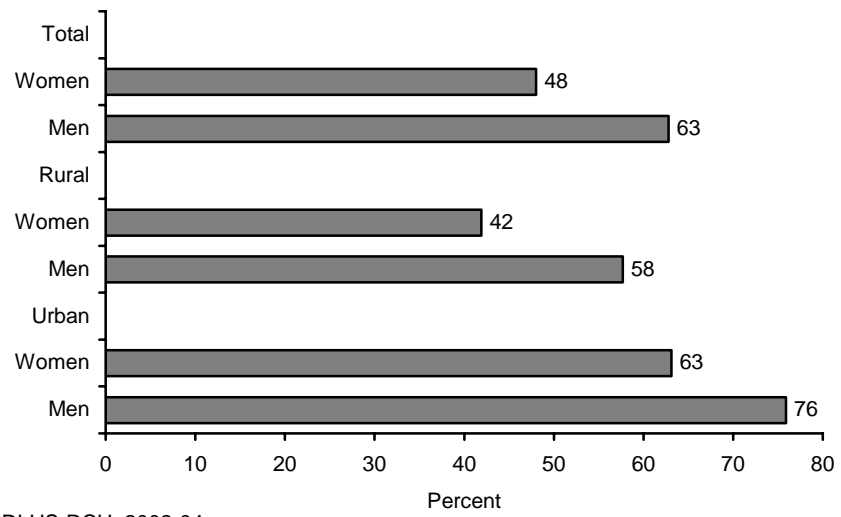
Those women who had heard of RTI/STI were further asked about the source of information of RTI/STI, which is presented in Table 8.1. More than three-quarters of the women reported that they received information on RTI/STI from friends or relatives (76 percent). Other sources of information of RTI/STI as reported by women include television (23 percent), newspaper or books or magazines (17 percent), radio (8 percent) and slogans or posters or pamphlets or wall hoardings (5 percent). Only 4 percent of women received this information from doctors and 5 percent from health workers, and about 11 percent of the women reported that they had heard of RTI/STI from another source.



Table 8.2 shows the percentage of husbands of currently married women who heard of RTI/STI by specific source of information according to some selected background characteristics. In Orissa, the percentage of men who heard of RTI/STI is higher than that of women (*Figure 8.1*). More than three fifth (63 percent) of the men heard of RTI/STI. Men from urban areas and older men had relatively more awareness of RTI/STI. Men who belong to Christian religion and mainly from scheduled tribes are less likely to report awareness of RTI/STI. The awareness of RTI/STI is higher among men in Orissa. The level of awareness of RTI/STI increases with an increase in education level and standard of living. Thirty seven percent of non-literate men were aware of RTI/STI as compared to 89 percent of men who had completed 10 or more years of schooling. More than half (52 percent) of the men from households with a low standard of living were aware of RTI/STI as compared to 87 percent of men with a high standard of living.

Relatives or friends are the most prominent source of RTI/STI for men in Orissa. Seventy two percent of men who knew about RTI/STI received information from relatives or friends. Other important sources of information about RTI/STI are the television (41 percent) followed by newspaper or books or magazines (31 percent), radio (24 percent) and slogans or posters or pamphlets or wall hoardings (19 percent). Twelve percent of the men received this information from a doctor, 6 percent from health workers, 4 percent from community meetings and 1 percent mentioned that they had received information about RTI/STI from school teachers. About 5 percent of the men reported that they heard of RTI/STI from other sources. Relatives or friends are the most important source of information of RTI/STI in all the groups. Men from rural areas, non-literate men, Christian men, men from scheduled-tribes, men with a low standard of living and younger men are more prone to receive information from relatives or friends. Electronic media such as 'television' is also an important source of information of RTI/STI for men who are from urban areas and belong to Muslim religion as well 'other' castes category. The differences in getting knowledge of RTI/STI from television by educational level and standard of living household are quite visible. Only sixteen percent of non-literate men had heard of RTI/STI from television, which increased to 62 percent for men who have completed 10 or more years of schooling.

**Figure 8.1**  
**Awareness of RTI/STI by Sex According to Residence**



Orissa, DLHS-RCH, 2002-04

<b>Table 8.1 SOURCE OF KNOWLEDGE ABOUT RTI/STI AMONG WOMEN</b>													
Percentage of currently married women age 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, Orissa, 2002-04.													
Background Characteristic	Percentage who have heard about RTI/STI	Number of Women	Among those who have heard about RTI/STI, percentage who received information from.										Number of women who have heard about RTI/STI
			Radio	Television	Newspaper / Books/ Magazines	Slogan/ Pamphlets/ Posters/ Wall Hoardings	Doctor	Health worker	School teacher	Community Meeting	Relative/ Friends	Others	
<b>Age group (years)</b>													
15-19	34.4	1,679	5.8	16.7	11.8	2.5	2.9	3.7	0.1	3.2	79.5	12.6	578
20-24	44.4	4,805	8.9	24.5	16.5	5.4	3.1	4.3	0.5	3.9	76.2	10.2	2,133
25-29	50.0	5,759	8.9	26.3	19.0	6.3	3.9	5.5	0.8	3.7	75.9	10.7	2,882
30-34	51.1	5,141	8.0	22.7	16.7	5.6	4.2	5.2	0.7	4.0	75.6	11.5	2,625
35-39	50.5	4,229	6.4	22.6	14.9	3.9	4.1	3.8	0.4	4.1	76.9	12.2	2,138
40-44	48.7	3,359	7.4	20.4	15.6	3.5	3.9	3.0	0.4	5.0	76.7	11.5	1,636
<b>Residence</b>													
Rural	41.9	17,760	9.9	19.9	12.0	4.9	3.7	5.6	0.6	3.9	80.4	9.4	7,439
Urban	63.1	7,212	4.5	28.7	23.9	5.1	4.1	2.6	0.5	4.3	69.7	14.3	4,553
<b>Education</b>													
Non-literate	33.0	12,145	2.9	5.6	3.3	1.1	2.3	4.6	0.4	3.4	86.7	11.5	4,011
0-9@ years	56.0	9,062	8.6	23.1	14.1	4.3	3.4	4.3	0.6	4.6	77.4	13.1	5,078
10 and above	77.6	3,726	13.6	48.0	39.2	11.6	6.7	4.6	0.8	3.9	60.0	7.7	2,893
<b>Religion</b>													
Hindu	48.0	23,836	8.1	23.3	16.5	5.0	3.7	4.5	0.6	4.0	76.4	11.4	11,439
Muslim	53.2	621	4.0	26.4	14.7	2.7	9.3	2.4	0.2	4.8	75.4	7.6	331
Christian	41.8	451	4.0	16.1	16.4	7.9	3.7	7.5	0.6	3.0	74.5	9.1	188
Other	53.2	65	(5.7)	(34.3)	(34.3)	(2.9)	(2.9)	(2.9)	(0.0)	(0.0)	(77.1	(14.3)	35
<b>Caste/tribe#</b>													
Scheduled caste	48.7	4,526	4.9	12.9	8.0	3.5	2.8	4.2	0.4	3.5		13.4	2,204
Scheduled tribe	28.9	5,246	4.0	8.2	7.0	3.2	3.5	9.5	1.0	5.3	81.6	13.3	1,517
Other backward class	48.5	8,974	10.1	25.6	16.7	4.9	3.2	4.0	0.4	3.8	79.8	10.3	4,353
Other	63.3	6,067	8.7	32.2	24.6	6.8	5.3	3.3	0.7	4.0	77.3	10.2	3,841
<b>Standard of living index</b>													
Low	37.0	14,805	6.3	8.8	5.6	2.7	3.0	5.1	0.4	4.1		11.7	5,484
Medium	59.0	6,228	10.6	28.5	17.4	5.2	3.4	4.3	0.7	4.1	84.4	12.3	3,676
High	71.9	3,939	7.5	44.5	36.4	9.2	6.0	3.5	0.7	3.9	74.6	8.9	2,833
Total	48.0	24,973	7.9	23.3	16.5	5.0	3.8	4.5	0.6	4.0	63.0	11.3	11,992
											76.3		

Note: Total includes 39 cases with missing information on education, were not shown separately. # Total figure may not add to N due to do not know and missing cases

( ) Based on less than 50 unweighted cases@ Literate women with no year of schooling are also included.

<b>Table 8.2 SOURCE OF KNOWLEDGE ABOUT RTI/STI AMONG MEN</b>													
Percentage of husband 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, Orissa, 2002-04.													
Background characteristic	Percentage who have heard about RTI/STI	Number of men	Among those who have heard about RTI/STI, percentage who received information from.										Number of men who have heard about RTI/STI
			Radio	Television	Newspaper/ Books/ Magazines	Slogan/ Pamphlets/ Posters/ Wall Hoardings	Doctor	Health worker	School teacher	Community Meeting	Relative/ Friends	Others	
<b>Age group (years)</b>													
< 25	48.1	1,071	19.4	33.3	18.8	16.7	9.5	4.5	0.8	3.9	75.4	4.6	516
25-34	63.1	6,720	25.7	41.4	31.2	19.4	11.7	5.4	0.8	2.7	73.5	4.5	4,238
35-44	64.3	7,727	23.9	44.0	31.3	18.9	12.5	7.2	1.1	4.5	72.1	4.9	4,971
45+	63.4	3,820	20.2	37.8	32.4	17.3	11.3	6.8	1.6	2.9	70.2	7.0	2,421
<b>Residence</b>													
Rural	57.7	13,934	27.5	36.9	22.0	14.3	12.1	6.6	1.0	3.5	76.6	5.0	8,042
Urban	75.9	5,405	15.9	50.2	48.5	27.4	11.4	5.9	1.2	3.4	64.0	5.5	4,104
<b>Education</b>													
Non-literate	36.8	5,671	11.6	16.4	3.2	4.9	6.2	2.8	0.4	3.4	84.0	4.4	2,087
0-9@ years	65.8	9,106	21.9	36.5	21.1	14.7	11.3	6.1	1.2	3.3	75.6	5.4	5,996
10 and above	89.2	4,547	32.1	61.5	59.8	31.6	15.7	8.6	1.2	3.8	61.6	5.2	4,057
<b>Religion</b>													
Hindu	62.9	18,465	24.1	41.3	30.7	18.7	11.9	6.4	1.1	3.5	72.8	4.9	11,611
Muslim	72.4	468	10.6	45.4	34.0	18.8	10.9	4.5	0.5	4.3	58.6	10.3	339
Christian	44.8	357	17.4	38.0	37.2	13.0	13.0	5.9	0.3	3.2	76.5	11.4	160
Other	(75.0)	48	(6.5)	(54.8)	(41.9)	(19.4)	(6.5)	(0.0)	(0.0)	(0.0)	(71.0)	(3.2)	36
<b>Caste/tribe<sup>#</sup></b>													
Scheduled caste	62.5	3,610	23.9	37.1	22.8	16.2	11.1	8.0	1.8	4.4	76.2	6.4	2,257
Scheduled tribe	43.8	4,126	12.9	18.1	14.8	10.4	10.9	6.0	0.6	3.5	80.9	5.2	1,807
Other backward class	64.8	6,863	25.0	41.6	30.1	17.5	11.3	5.9	1.1	2.9	72.5	4.7	4,445
Other	77.2	4,637	27.4	55.5	45.3	25.8	13.8	6.3	0.8	3.6	65.3	5.0	3,580
<b>Standard of living index</b>													
Low	51.6	11,644	21.0	25.6	14.9	11.3	10.3	5.5	1.1	3.7	78.8	5.7	6,011
Medium	75.5	4,757	28.6	54.9	36.5	21.0	13.4	6.8	1.0	2.7	69.6	4.6	3,592
High	86.6	2,938	22.6	59.8	61.1	32.8	13.4	7.7	1.2	4.0	61.1	4.8	2,543
Total	62.8	19,339	23.6	41.4	31.0	18.7	11.9	6.4	1.1	3.5	72.4	5.2	12,146
Note: # Total figure may not add to N due to do not know and missing cases													
Note: Total includes 14 cases with missing information on education were not shown separately. @ Literate men with no year of schooling are also included. ( ) Based on less than 50 unweighted cases.													

### 8.1.1 Knowledge of Mode of Transmission of RTI/STI

Women who were aware of RTI/STI were asked about the mode of transmission. This is presented in Table 8.3. Among women who reported knowledge of RTI/STI, more than half (56 percent) did not know anything further about the mode of transmission of this disease. This proportion is relatively higher among rural women, young women, non-literate women, and women from other than Hindu and Muslim religions, women from scheduled-tribes and women coming from households with low standard of living. Fifty seven percent of rural women do not know about the mode of transmission of RTI/STI compared to 54 percent of urban women. About 23 percent and 13 percent of women mentioned heterosexual intercourse and lack of personal hygiene as mode of transmission of RTI/STI respectively. Only 3 percent of women reported homosexual intercourse and 1 percent reported other modes of transmission of RTI/STI.

<b>Table 8.3 SOURCE OF KNOWLEDGE ABOUT MODE OF TRANSMISSION OF RTI/STI AMONG WOMEN</b>						
Percentage of currently married women age 15-44 who have heard of RTI/STI, knowledge of mode of transmission by selected background characteristics, Orissa, 2002-04						
Background characteristic	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 personal hygiene	Other		
<b>Age</b>						
15-19	3.5	17.5	15.3	8.6	63.1	578
20-24	2.5	25.4	10.3	12.8	57.5	2,133
25-29	2.3	25.2	12.8	13.5	55.1	2,882
30-34	2.3	22.9	15.3	15.3	53.4	2,625
35-39	3.0	22.2	11.4	16.6	55.2	2,138
40-44	1.8	20.3	12.4	15.2	58.2	1,636
<b>Residence</b>						
Rural	2.7	22.0	10.3	14.6	57.4	7,439
Urban	2.0	25.0	16.6	13.9	53.7	4,553
<b>Education</b>						
Non-literate	2.0	10.9	9.5	14.6	67.0	4,011
0-9@ years	2.3	23.3	12.4	13.2	56.9	5,078
10 years and above	3.4	39.8	17.8	15.7	39.1	2,893
<b>Religion</b>						
Hindu	2.4	23.1	12.6	14.3	56.0	11,439
Muslim	3.1	22.0	14.1	16.6	53.8	331
Christian	1.4	25.2	13.7	10.2	59.0	188
Other	(5.7)	(40.0)	(20.0)	(17.1)	(37.1)	35
<b>Caste/tribe<sup>#</sup></b>						
Scheduled caste	1.4	16.3	10.7	14.3	63.3	2,204
Scheduled tribe	1.9	17.6	13.1	7.7	67.8	1,517
Other backward class	3.5	23.8	11.4	15.7	53.8	4,353
Other	2.0	28.2	15.1	15.5	49.6	3,841
<b>Standard of living index</b>						
Low	2.3	15.8	10.6	13.9	63.4	5,484
Medium	2.5	25.1	11.6	14.3	54.9	3,676
High	2.6	34.8	18.4	15.1	43.1	2,833
Total	2.5	23.1	12.7	14.3	56.0	11,992
Note: Total includes 11 cases with missing information on education were not shown separately. # Total figure may not add to N due to do not know and missing cases. ( ) Based on less than 50 unweighted cases @ Literate women with no year of schooling are also included.						

Table 8.4 presents the knowledge of mode of transmission of RTI/STI among men. Among men who had heard of RTI/STI, more than one fifth (21 percent) mentioned that they did not know any thing about the mode of transmission of this disease. The percentage of men who did not know about the mode of transmission is higher among younger men, non-literate men, Hindu men, men from scheduled tribes, and men from households with a low standard of living. Among the men who knew the modes of transmission of RTI/STI, 56 percent mentioned heterosexual intercourse, fifteen percent reported lack of personal hygiene, and only 3 percent mentioned homosexual intercourse, and 21 percent reported other modes of transmission.

<b>Table 8.4 SOURCE OF KNOWLEDGE ABOUT MODE OF TRANSMISSION OF RTI/STI AMONG MEN</b>						
Percentage of husbands of currently married women who have heard of RTI/STI , knowledge of mode of transmission by selected background characteristics Orissa , 2002-04						
Background characteristic	Percentage by knowledge of mode of transmission					Number of men who have heard of RTI/STI
	Homosexual intercourse	Heterosexual intercourse	Lack of personal hygiene	Other	Do not know	
<b>Age</b>						
<25	4.2	50.9	12.1	13.9	26.0	516
25-34	3.2	56.2	15.3	14.2	21.5	4,238
35-44	3.1	57.4	16.4	14.6	19.4	4,971
45+	3.0	55.4	13.8	15.6	21.2	2,421
<b>Residence</b>						
Rural	2.1	51.3	14.7	14.1	22.9	8,042
Urban	5.3	66.1	16.6	15.6	16.5	4,104
<b>Education</b>						
Non-literate	1.0	33.0	10.4	15.5	35.2	2,087
0-9@ years	1.5	51.2	14.6	13.1	24.0	5,996
10 years and above	6.8	76.0	18.9	16.4	8.5	4,057
<b>Religion</b>						
Hindu	3.2	55.8	15.4	14.7	20.9	11,611
Muslim	2.0	68.2	10.5	14.6	18.1	339
Christian	4.7	63.7	19.4	9.4	17.0	160
Other	(3.2)	(64.5)	(9.7)	(12.9)	(25.8)	36
<b>Caste/tribe<sup>#</sup></b>						
Scheduled caste	2.3	50.9	15.5	14.6	22.0	2,257
Scheduled tribe	1.9	37.0	14.3	10.4	36.7	1,807
Other backward class	2.8	56.4	13.9	16.1	19.7	4,445
Other	4.9	69.4	17.6	15.1	13.1	3,580
<b>Standard of living index</b>						
Low	1.6	42.7	13.7	13.5	28.7	6,011
Medium	3.4	66.3	15.4	14.2	15.6	3,592
High	6.6	74.4	19.0	17.9	9.4	2,543
Total	3.2	56.3	15.3	14.6	20.8	12,146
Note: Total includes 7 cases with missing information on education were not shown separately. @ Literate men with no years of schooling are also included. # Total figure may not add to N due to do not know and missing cases.						

## 8.2 Prevalence of RTI/STI

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

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

Table 8.5 and Figure 8.2 show that more than one-third of currently married women (32 percent) reported at least one reproductive health problem. The problems reported by women were 'low backache' (15 percent), 'pain in lower abdomen' (10 percent), 'itching over vulva' (7 percent), 'painful sexual intercourse, and 'frequent / painful passage of urine' (6 percent each) and 'involuntary escape of urine while coughing or sneezing' (5 percent). Other symptoms of reproductive health reported by women were 'fever' (10 percent), 'boils/ ulcers/ warts around vulva' (3 percent), 'swelling in the groin' and 'some mass coming out of vagina' (2 percent each). Very few women reported 'swelling / lump in breast', and 'bleeding after sexual intercourse'. The prevalence of reproductive health problems is common among rural and urban women.

<b>Table 8.5 SYMPTOMS OF RTI/STI AMONG WOMEN</b>			
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, Orissa, 2002-04			
Symptoms	Total	Residence	
		Rural	Urban
Percentage of women reported any RTI/STI symptoms	32.3	32.8	31.0
Symptoms			
Itching over vulva	7.1	7.5	6.1
Boils/ ulcers/ warts around vulva	3.0	3.3	2.2
Pain in lower abdomen not related to menses	10.2	10.8	8.8
Low backache	15.2	14.9	16.1
Pain during sexual intercourse	5.6	6.6	3.1
Bleeding after sexual intercourse	1.1	1.3	0.6
Swelling in the groin	1.7	1.8	1.2
Frequent / painful passage of urine	6.2	7.1	3.9
Fever	9.9	10.6	8.1
Some mass coming out of vagina	1.7	2.0	0.9
Any involuntary escape of urine while coughing or sneezing	5.0	5.4	3.9
Swelling / lump in breast	1.0	1.1	0.8
Number of women	24,973	17,760	7,212

**Figure 8.2**  
**Symptoms of RTI/STI among Women**

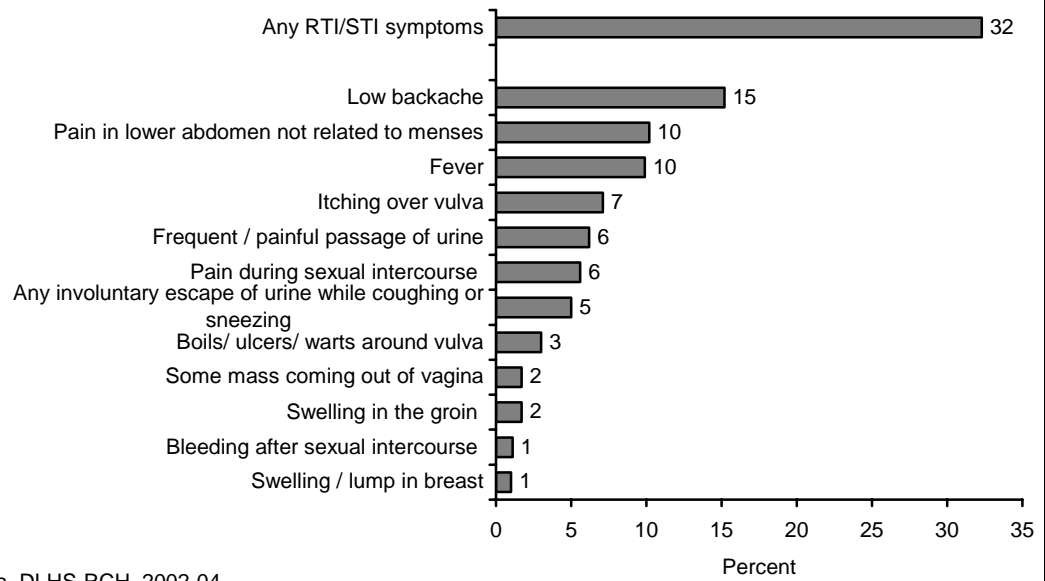
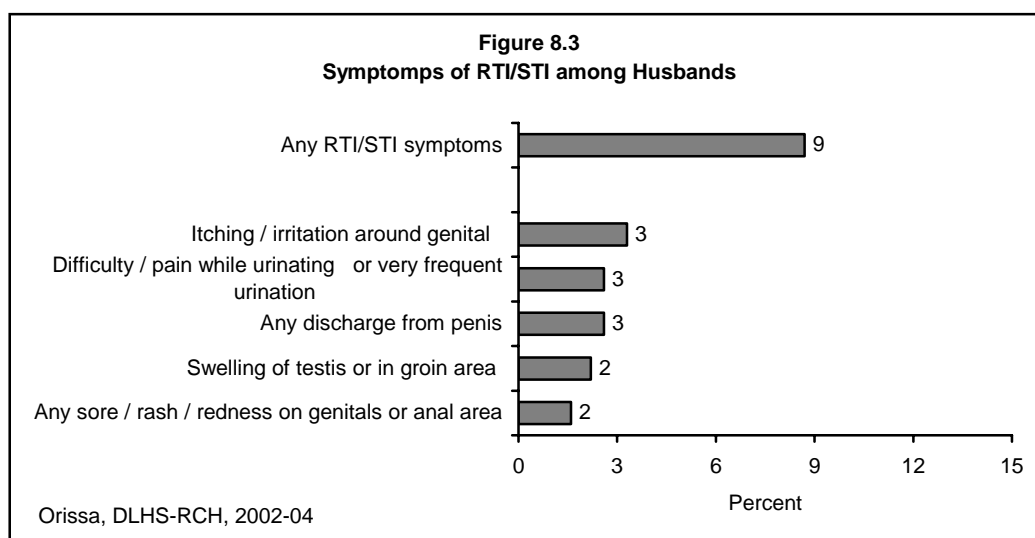




Figure 8.3 and Table 8.6 show the prevalence of reproductive health problems among husbands of currently married women. The prevalence of RTI/STI among men was judged by the reporting of symptoms. Nine percent of men reported experiencing at least one symptom of reproductive health problem in the last three months preceding the survey. The prevalence of reproductive health problems is higher among rural men (10 percent) than among urban men (6 percent). The specific problem of reproductive health experienced by men is ‘difficulty / pain while urinating or very frequent urination’, ‘discharge from penis’ and ‘itching / irritation around genital’ (3 percent each), ‘sore / rash / redness on genitals or anal area’ and ‘swelling of testes or in groin area’ (2 percent each).



Among men who reported reproductive health problems, 37 percent sought treatment. Higher proportion of urban men sought treatment (40 percent) than their rural counterparts (36 percent). Among them only 54 percent visited a government health facility, including a primary health centre (3 percent) and sub-centre (2 percent) and 22 percent visited a private health facility. A sizeable proportion of men were treated by the Indian system of medicine (12 percent) while 14 percent obtained treatment from a chemist or medical shop, and 13 percent of the men reported that they were treated at other sources. A relatively higher proportion of men from rural areas utilised the government health facility and private health facility. Seeking treatment from chemist or medical shop is much higher among urban men (29 percent) than among rural men (10 percent). A large proportion of men saw a doctor (60 percent), 63 percent in urban areas and 51 percent in rural areas. Nine percent of men were seen by a male health worker, 6 percent by a traditional healer, 5 percent by an ISM practitioner, and 2 percent by relative or friends. Four percent of the men used home remedies and 14 percent of the men went to a chemist. Another 11 percent of the men obtained treatment from other sources.

<b>Table 8.6 SYMPTOMS OF RTI/STI AMONG MEN</b>			
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, Orissa, 2002-04			
Symptoms and treatment	Total	Residence	
		Rural	Urban
Percentage of men reported any RTI/STI symptoms	8.7	9.7	6.4
<b>Symptoms</b>			
Any discharge from penis	2.6	3.1	1.3
Any sore / rash / redness on genitals or anal area	1.6	1.8	1.2
Difficulty / pain while urinating or very frequent urination	2.6	3.1	1.5
Swelling of testis or in groin area	2.2	2.6	1.1
Itching / irritation around genital	3.3	3.2	3.5
Number of Men	19,339	13,934	5,405
Percentage of men sought treatment for any RTI/STI <sup>1</sup>	36.7	35.8	40.1
Number of Men	1,689	1,345	344
<b>Percentage sought treatment at health facility<sup>2</sup></b>			
Government health facility <sup>3</sup>	54.1	59.0	37.1
Primary health centre	2.6	3.1	0.9
Sub centre	2.3	2.4	2.2
Private health facility <sup>4</sup>	21.5	23.7	13.9
ISM <sup>5</sup> facility	12.2	11.4	14.8
Chemist/ medical shop	14.0	9.6	29.1
Other	13.3	13.4	13.2
<b>Percentage obtained treatment from<sup>2</sup></b>			
Doctor	60.4	63.1	51.2
Male health worker	9.1	10.0	6.0
Traditional healer	5.5	5.8	4.5
Relative/friends	1.8	2.0	1.1
ISM practitioner	5.1	5.8	2.6
Home remedy	4.1	3.3	6.8
Chemist medical shop	14.5	10.1	30.0
Other	11.1	12.6	5.7
Number of men	619	482	138
Note: <sup>1</sup> Based on men with any symptoms of RTI/STI			
<sup>2</sup> Percentage may add more than 100.0 due to multiple responses			
<sup>3</sup> Includes Government municipal hospital, dispensary, UHC/ UHP /UWFC, CHC/ rural hospital, Primary health centre, sub-centre. <sup>4</sup> Includes private hospital/ clinic, non-governmental / trust hospital/clinic. <sup>5</sup> Either government or private hospital/clinic of Indian system of medicine.			

The DLHS-RCH also collected information from currently married women on symptoms of RTIs, that is, abnormal vaginal discharge, texture, colour and odour of discharge in the three months preceding the survey. The prevalence of reproductive health problems among currently married women is estimated from women's experiences. Table 8.7 shows the asymptotic prevalence of vaginal discharge related problems among currently married women in Orissa during the three months preceding the survey according to residence. Eight percent of the women reported problems related to vaginal discharge. The prevalence of vaginal discharge problem is slightly higher among rural women (9 percent) than among urban women (6 percent).

<b>Table 8.7 ABNORMAL VAGINAL DISCHARGE</b>			
Percentage of currently married women aged 15-44 who reported had any abnormal vaginal discharge during three months prior to survey and percentage who sought treatment and source of treatment according to residence, Orissa, 2002-04			
Symptoms and treatment	Total	Residence	
		Rural	Urban
Percentage of women reported abnormal vaginal discharge	8.2	9.2	5.9
Number of Women	24,973	17,760	7,212
Percentage of women sought treatment for vaginal discharge <sup>1</sup>	28.2	25.8	37.1
Number of Women	2,056	1,630	426
<b>Percentage sought treatment at health facility<sup>2</sup></b>			
Government health facility <sup>3</sup>	37.1	38.0	34.6
Primary health centre	8.1	10.4	1.8
Sub centre	2.3	3.0	0.5
Private health facility <sup>4</sup>	35.9	32.9	44.0
ISM <sup>5</sup> facility	16.6	16.0	18.4
Home remedy	5.1	5.9	2.9
Other	13.9	15.9	8.4
<b>Percent distribution of women who obtained treatment from<sup>2</sup></b>			
Doctor	79.1	76.4	86.3
ANM/nurse/midwife/LHV	6.3	6.0	6.9
Other health professionals <sup>6</sup>	6.0	7.3	2.4
Other	8.6	10.2	4.4
Total percent	100.0	100.0	100.0
Number of women	579	421	158
Note: <sup>1</sup> Based on women who reported having vaginal discharge. <sup>2</sup> Based on women who sought treatment for vaginal discharge. <sup>3</sup> Includes Government municipal hospital, dispensary, UHC/ UHP /UWFC, CHC/ rural hospital, Primary health centre, sub-centre and out reach/ MCP clinic in village. <sup>4</sup> Includes private hospital/ clinic, non-governmental / trust hospital/clinic, chemist/ medical shop. <sup>5</sup> Either government or private hospital/clinic of Indian system of medicine, <sup>6</sup> Includes <i>dai</i> (trained or untrained), relative or friends and chemist/ medical shop.			
Note: Total include 8 woman missing information on abnormal vaginal discharge, 2 women on treatment of vaginal discharge			

Among the women who had reported symptoms of vaginal discharge, 28 percent sought treatment. This proportion is higher in urban areas (37 percent) compared to rural areas (26 percent). More than one third women visited Private health facility (36 percent) and Government health facilities (37 percent) including Primary Health Centre (8 percent) and Sub Centre (2 percent). Only 16 percent approached ISM facility, 5 percent took home remedies and 13 percent of the women visited other places for treatment. The proportion of women who visited a private health facility is higher in urban areas (44 percent) than in rural areas (33 percent), and the proportion of women who visited a facility rendering the Indian system of medicine, is slightly higher in urban areas (18 percent) than in rural areas (16 percent). A significantly higher proportion (79 percent) of women in the state of Orissa obtained treatment from doctors for their problems. Six percent women were treated by ANM/Nurse/Midwife /LHV and other health professionals.

### 8.3 Menstruation Related Problems

Table 8.8 shows the percentage of women who had menstruation problems and who sought treatment during the three months preceding the survey. The Table shows that around 28 percent women in Orissa had menstruation problems, and the figures are 29 percent and 24 percent in the rural and urban areas respectively.

<b>Table 8.8 MENSTRUATION RELATED PROBLEMS</b>			
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, Orissa, 2002-04			
Symptoms and treatment	Total	Residence	
		Rural	Urban
Percentage of women with any menstruation related problem	18.4	20.1	14.6
Number of Women	19,474	13,541	5,932
<b>Symptoms<sup>1</sup></b>			
No period	6.5	6.3	7.3
Painful period	13.0	13.2	12.3
Frequent or short period	13.5	13.6	13.2
Delayed period	32.3	33.0	30.2
Prolonged bleeding	4.1	4.4	3.0
Excessive bleeding	11.9	11.8	12.3
Continuous bleeding	4.7	3.5	8.3
Scanty bleeding	39.6	39.5	40.0
Inter-menstrual bleeding	9.6	9.3	10.6
Percentage of women sought treatment who had any menstruation related problems	32.1	28.9	41.9
Number of Women	3,590	2,724	866
<b>Percentage sought treatment at health facility<sup>6</sup></b>			
Government health facility <sup>2</sup>	50.8	52.3	47.6
Primary health centre	14.7	20.4	2.3
Sub centre	1.9	2.7	0.0
Private health facility <sup>3</sup>	37.4	36.6	39.3
ISM <sup>4</sup> facility	9.7	8.3	12.7
Other	6.1	7.4	3.2
<b>Percentage of women obtained treatment from<sup>6</sup></b>			
Doctor	85.0	83.3	88.6
ANM/nurse/midwife/LHV	7.1	6.8	7.7
Other health professionals <sup>5</sup>	5.7	6.8	3.2
Other	4.3	5.5	1.8
Number of women who are currently menstruating	1,152	788	363
Note: <sup>1</sup> Based on women who reported any menstruation related problems. <sup>2</sup> Includes Government municipal hospital, dispensary, UHC/ UHP /UWFC, CHC/ rural hospital, Primary health centre, sub-centre and out reach/ MCP clinic in village. <sup>3</sup> Includes private hospital/ clinic, non-governmental / trust hospital/clinic, chemist/ medical shop. <sup>4</sup> Either government or private hospital/clinic of Indian system of medicine, <sup>5</sup> Includes <i>dai</i> (trained or untrained), relative or friends and chemist/ medical shop. <sup>6</sup> Multiple responses. ( ) Based on less than 50 unweighted cases. Note: Total includes 2 woman missing information on menstruation related problem, 2 women on sought treatment of menstruation related problem			

Among the women who had reported menstrual problems in Orissa, 40, 32, and 14 percent reported scanty bleeding, delayed periods and frequent or short period as symptoms respectively. The magnitude of these symptoms is more or less the same among urban as well as rural women. Scanty bleeding and painful periods are the main menstrual problems prevalent in Orissa. Among the women who had menstrual problems, around one third (32 percent) sought treatment, and the figures for urban and rural areas are 42 percent and 30 percent respectively. The Government health facility and Private health facility are the main sources of treatment for menstrual problems. About 51 percent of the women sought treatment at a Government health facility, 37 percent at private health facility and 10 percent sought treatment at an ISM facility. Six percent of the women were treated at other health facility, which holds true for both urban and rural areas. Most of the women went to a doctor for treatment (85 percent) with the figure for urban and rural areas being 89 and 83 percent respectively.

#### **8.4 Prevalence of RTIs/STIs by District**

Table 8.9 presents the prevalence of RTIs/STIs among currently married women and their husbands by districts. The proportion of women who reported symptoms of RTIs/STIs is lowest in Sambalpur (16 percent) and highest in Jaipur (50 percent). The proportion of women who reported problems related to abnormal vaginal discharge range from 1 percent in Nuapada to 23 percent in Baleshwar.

<b>Table 8.9 REPRODUCTIVE HEALTH CARE INDICATORS BY DISTRICT</b>					
Percentage of currently married women and their husbands who reported reproductive health problems and percentage who sought treatment for the problems by district, Orissa, 2002-04					
District	Percentage of women			Percentage of men	
	With any symptoms of RTI/STI	Reported any abnormal vaginal discharge	Sought treatment for abnormal vaginal discharge	With any symptoms of RTI/STI	Sought treatment for RTI/STI problems
Anugul	30.6	2.7	(37.8)	11.9	28.6
Balangir	19.8	2.1	(37.2)	3.7	(54.0)
Baleshwar	43.3	23.4	23.9	6.2	49.4
Bargarh	35.2	1.6	(19.5)	7.5	56.6
Baudh	26.3	6.9	17.4	11.0	50.3
Bhadrak	48.2	15.7	19.0	12.7	28.2
Cuttack	39.1	9.0	27.1	6.3	34.9
Debagarh	32.5	4.3	17.0	5.1	40.1
Dhenkanal	41.2	13.4	21.9	9.2	52.5
Gajapati	26.4	5.2	25.7	2.2	(32.8)
Ganjam	25.3	9.1	38.2	12.6	43.5
Jagatsinghapur	33.6	9.6	27.1	4.0	(44.4)
Jajapur	50.4	11.6	26.8	24.4	31.9
Jharsuguda	25.3	5.3	28.4	4.2	33.6
Kalahandi	33.9	4.9	35.5	7.2	16.2
Kandhamal	38.3	5.0	29.3	11.5	34.8
Kendrapara	35.9	21.4	29.1	11.5	31.8
Kendujhar	28.7	5.1	44.1	9.8	31.8
Khordha	18.2	3.1	36.3	5.6	24.6
Koraput	30.4	2.7	(35.1)	3.0	(36.3)
Malkangiri	31.0	8.0	25.8	9.9	26.5
Mayurbhanj	43.3	12.5	33.7	15.8	41.4
Nabarangapur	18.8	3.3	28.7	3.7	49.9
Nayagarh	32.5	10.0	25.1	4.7	33.3
Nuapada	19.5	1.1	(35.4)	4.3	26.1
Puri	35.3	11.4	25.7	6.0	31.0
Rayagada	22.5	2.5	(30.6)	4.1	36.3
Sambalpur	16.0	2.8	(33.4)	7.7	44.2
Sonapur	22.5	2.2	(32.2)	14.0	46.2
Sundargarh	33.4	8.0	20.8	11.7	29.8
Orissa	32.3	8.2	28.2	8.7	36.7

Note: ( ) Based on less number of cases.

In comparison to women, fewer men from all districts of Orissa reported symptoms of RTIs/STIs. Men from Gajapati, Koraput, Nabarangapur, Balangir and Jagatsinghpur (2 - 4 percent) reported the lowest prevalence of symptoms of RTIs/STIs and men from Jaipur (24 percent) reported the highest prevalence.

The percentage of women who sought treatment for RTIs (abnormal vaginal discharge) ranges from 17 percent in Debagarh to 44 percent in Kendujhar, with the range being 16 percent in Kalahandi to 57 percent in Bargarh in case of men.

## 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

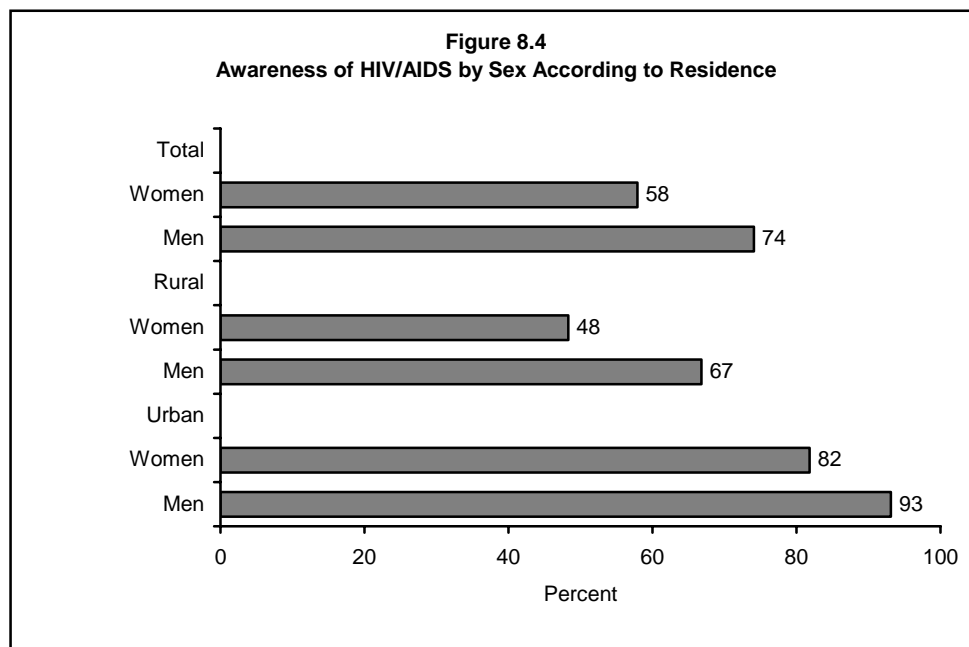
Table 8.10 shows the percentage of women who had heard about HIV/AIDS by some selected background characteristics. Fifty eight percent of currently married women in Orissa have heard of HIV/AIDS.

Knowledge of HIV/AIDS is much lower among rural women, non-literate women, Christian women, women from scheduled tribes, women from households with a low standard of living, and younger women. Eighty two percent of urban women had heard about HIV/AIDS compared to only 48 percent of rural women. Knowledge of HIV/AIDS steadily increased with increase in educational level and household standard of living. Less than one-third of non-literate women (30 percent) had heard of HIV/AIDS against 98 percent of women who had completed 10 or more years of schooling. Similarly a little less than two-fifth of the women (38 percent) with a low standard of living had heard of HIV/AIDS against 96 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. Other religion women (78 percent) were more aware of HIV/AIDS compared to women from Muslim (71 percent), Hindu (59 percent) and Christian (50 percent). Women from 'other caste' category were more knowledgeable about HIV/AIDS (84 percent) than women belonging to other backward classes (63 percent), scheduled-caste (56 percent) and scheduled tribe women (21 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 television. About 72 percent of women reported that television was their source of information about HIV/AIDS, followed by relatives or friends (60 percent), radio (22 percent), newspapers, books or magazines (19 percent) and slogans or pamphlets, posters or wall hoardings (13 percent). Six percent of the women reported that a doctor and health worker had informed them about HIV/AIDS. A comparatively higher proportion of rural women received information about HIV/AIDS from the radio, doctor, health worker, and relatives or friends.

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



More than ninety percent of urban men had heard about HIV/AIDS as compared to only two third 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, Christian men, men from scheduled tribes, and men who belong to households with a low standard of living. A similar trend is observed in the case of women. More than two-fifths of non-literate men had heard of HIV/AIDS, and it increased up to 82 percent for literate men and up to 99 percent in case 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 Orissa, the most prominent source of information of HIV/AIDS were relatives or friends (69 percent)



followed by television (66 percent). Other important sources of HIV/AIDS are the newspapers, books or magazines (39 percent), radio (33 percent) and slogans or pamphlets, posters or wall hoardings (31 percent). Fifteen percent of men reported that a doctor had informed them about HIV/AIDS and 8 percent men had received information of HIV/AIDS from a health worker.

About 5 percent reported that they were informed through community meetings and one percent received such information from a school teacher. Comparatively, a higher proportion of rural men received information about HIV/AIDS from the radio, health worker, schoolteacher and relative or friends than urban men. The information on awareness of HIV/AIDS through mass media, such as television and newspapers, and books or magazines, was received more by middle aged men (aged 34 -44), urban men, and men from other religions 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, relatives or friends were the main source of information for rural men, younger men below age 25, non-literate men, Hindu men, men from a scheduled castes men and men from households with a low standard of living.

**Table 8.10 SOURCE OF KNOWLEDGE ABOUT HIV/AIDS AMONG WOMEN**

Percentage of currently married women age 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, Orissa, 2002-04.

Background characteristic	Percentage who have heard about HIV/AIDS	Number of Women	Among those who have heard about HIV/AIDS, percentage who received information from.										Number of women who have heard about HIV/AIDS	
			Radio	Television	Newspaper / Books/ Magazines	Slogan/ Pamphlets/ Posters/ Wall Hoardings	Doctor	Health worker	School teacher	Community Meeting	Relative/ Friends	Others		
<b>Age group (years)</b>														
15-19	48.1	1,679	17.2	62.4	10.6	7.9	3.3	5.1	1.9	4.3	63.1	3.9	808	
20-24	58.6	4,805	23.5	70.9	19.4	12.9	5.2	6.3	1.2	5.8	61.4	5.3	2,817	
25-29	60.4	5,759	22.9	74.5	20.9	14.5	5.7	7.0	0.8	5.5	60.8	4.8	3,478	
30-34	59.1	5,141	23.1	72.7	20.4	12.4	6.1	6.9	0.9	5.5	59.7	5.5	3,041	
35-39	57.5	4,229	21.6	73.6	18.9	12.1	5.9	5.9	1.1	5.6	57.2	5.3	2,431	
40-44	56.4	3,359	18.9	71.8	19.0	11.7	5.8	5.2	1.1	5.2	60.0	3.9	1,894	
<b>Residence</b>														
Rural	48.3	17,760	29.2	61.4	13.3	11.1	6.0	8.3	1.0	5.3	66.1	5.1	8,571	
Urban	81.8	7,212	11.5	88.0	28.1	14.8	5.1	3.5	1.1	5.7	51.3	4.7	5,897	
<b>Education</b>														
Non-literate	30.1	12,145	16.3	46.2	2.6	4.5	4.5	6.8	0.5	5.9	67.7	5.7	3,650	
0-9@ years	78.8	9,062	22.7	74.2	12.5	10.4	4.5	6.2	0.8	5.4	61.2	5.3	7,144	
10 and above	98.1	3,726	26.4	94.4	49.6	25.2	8.9	6.2	2.0	5.3	50.3	3.5	3,655	
<b>Religion</b>														
Hindu	57.8	23,836	22.6	72.3	19.2	12.7	5.6	6.3	1.0	5.4	60.6	4.9	13,788	
Muslim	71.0	621	10.2	76.8	18.9	7.6	4.9	4.3	1.5	6.5	50.3	2.6	441	
Christian	41.9	451	11.0	55.9	29.2	18.7	13.0	13.5	0.8	10.8	51.4	12.4	189	
Other	78.4	65	10.4	71.9	21.8	7.6	0.0	1.9	0.0	2.0	52.4	4.1	51	
<b>Caste/tribe<sup>#</sup></b>														
Scheduled caste	56.0	4,526	20.8	58.9	9.8	10.1	5.2	6.1	0.7	5.0	68.6	6.1	2,536	
Scheduled tribe	21.0	5,246	16.4	46.3	12.8	10.7	7.3	15.8	1.1	9.4	59.1	9.0	1,102	
Other backward class	62.6	8,974	23.5	71.9	16.8	11.4	5.2	5.8	1.1	4.9	61.1	4.8	5,620	
Other	84.2	6,067	22.4	84.5	28.4	15.7	6.0	5.0	1.2	5.5	55.6	3.7	5,106	
<b>Standard of living index</b>														
Low	37.9	14,805	24.9	47.3	7.5	9.0	5.0	8.6	0.7	6.1	70.5	6.5	5,612	
Medium	81.4	6,228	22.6	81.7	15.1	10.2	5.3	5.4	0.9	5.1	57.5	4.8	5,071	
High	96.1	3,939	16.9	96.4	42.6	21.4	6.9	4.1	1.7	5.0	48.2	2.8	3,785	
<b>Total</b>	<b>57.9</b>	<b>24,973</b>	<b>22.0</b>	<b>72.2</b>	<b>19.4</b>	<b>12.6</b>	<b>5.6</b>	<b>6.3</b>	<b>1.0</b>	<b>5.5</b>	<b>60.1</b>	<b>4.9</b>	<b>14,468</b>	

Note: Total includes 39 cases with missing information on education were not shown separately.

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

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

<b>Table 8.11 SOURCE OF KNOWLEDGE ABOUT HIV/AIDS AMONG MEN</b>													
Percentage of husband 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, Orissa, 2002-04.													
Background Characteristic	Among those who have heard about HIV/AIDS, percentage who received information from.												Number of men who have heard about HIV/AIDS
	Percentage who have heard about HIV/AIDS	Number of men	Radio	Television	Newspaper / Books/ Magazines	Slogan/ Pamphlets / Posters/ Wall Hoardings	Doctor	Health worker	School teacher	Community Meeting	Relative/ Friends	Others	
<b>Age group (years)</b>													
< 25	71.1	1,071	29.9	53.3	27.2	27.3	15.2	6.2	2.2	7.3	74.3	4.9	762
25-34	77.6	6,720	36.8	65.7	38.1	31.5	14.5	7.8	1.3	4.4	70.4	6.0	5,216
35-44	74.3	7,727	35.7	67.7	40.1	31.0	14.8	9.2	1.5	5.4	67.7	5.5	5,742
45+	68.5	3,820	33.2	66.6	40.1	30.5	14.5	8.8	1.5	4.4	64.7	6.2	2,617
<b>Residence</b>													
Rural	66.8	13,934	41.4	57.7	27.7	23.2	14.0	8.7	1.6	4.8	71.5	5.2	9,304
Urban	93.1	5,405	24.0	81.3	59.0	45.1	15.9	8.0	1.2	5.4	63.0	6.8	5,032
<b>Education</b>													
Non-literate	41.6	5,671	21.7	34.9	4.3	11.0	8.1	4.6	0.6	4.1	78.0	5.4	2,359
0-9@ years	82.1	9,106	33.2	61.2	27.6	23.8	14.2	7.8	1.2	4.2	70.3	6.2	7,477
10 and above	98.8	4,547	45.9	90.3	75.3	53.2	18.8	11.6	2.3	6.8	60.5	5.2	4,492
<b>Religion</b>													
Hindu	73.8	18,465	36.0	66.1	38.5	30.5	14.8	8.6	1.5	5.0	68.6	5.7	13,626
Muslim	91.8	468	22.5	72.9	41.0	37.6	12.3	4.4	0.2	4.3	66.1	3.0	430
Christian	66.7	357	25.1	48.2	39.0	36.0	13.6	8.5	0.6	5.8	66.8	11.5	238
Other	(87.5)	48	(19.5)	(78.0)	(53.7)	(39.0)	(12.2)	(1.6)	(0.0)	(7.2)	(64.4)	(7.8)	42
<b>Caste/tribe<sup>#</sup></b>													
Scheduled caste	76.2	3,610	37.0	60.2	26.9	26.0	17.4	9.2	1.7	5.1	72.1	5.8	2,752
Scheduled tribe	43.9	4,126	22.7	35.8	23.0	22.9	15.0	9.8	1.2	5.1	70.0	6.0	1,813
Other backward class	78.4	6,863	36.2	66.5	37.1	27.1	12.7	8.1	1.6	4.5	68.4	6.5	5,384
Other	92.9	4,637	38.9	81.6	54.8	42.0	15.4	7.8	1.1	5.4	65.9	4.7	4,307
<b>Standard of living index</b>													
Low	60.1	11,644	34.2	45.3	19.3	19.9	13.3	8.1	1.3	4.6	73.0	6.1	6,999
Medium	93.2	4,757	36.9	80.8	45.4	31.3	14.2	7.9	1.2	4.9	66.0	5.9	4,434
High	98.8	2,938	35.5	93.4	75.3	56.6	18.6	10.1	2.1	6.0	61.4	4.6	2,903
Total	74.1	19,339	35.3	66.0	38.7	30.9	14.7	8.4	1.4	5.0	68.5	5.8	14,336

Note: Total includes 8 cases with missing information on education were not shown separately. @ Literate men with no year of schooling are also included. ( ) Based on less than 50 cases. # Total figure may not add to N due to do not know and missing cases.

## 8.5.2 Knowledge of Mode of Transmission about HIV/AIDS

Women who were aware of HIV/AIDS were asked about the mode of transmission and this is presented in Table 8.12. Among women who reported awareness of HIV/AIDS, 20 percent of them did not know about the mode of transmission. This proportion is relatively higher among rural women, younger women, non-literate women, Christian women, women from scheduled castes and women with a low standard of living. About one fourth (24percentage) of the rural women do not know about the mode of transmission of HIV/AIDS compared to 14 percent of urban women.

<b>Table 8.12 SOURCE OF KNOWLEDGE ABOUT MODE OF TRANSMISSION OF HIV/AIDS AMONG WOMEN</b>								
Percentage currently married women age 15-44 who have heard of HIV/AIDS , knowledge of mode of transmission by selected background characteristics, Orissa, 2002-04								
Background characteristic	Percentage by knowledge of mode of transmission						Do not know	Number of women who have heard of HIV/AIDS
	Homo sexual intercourse	Hetero sexual intercourse	Needles/ blade/ skin puncture	Mother to child	Transfusion of infected blood	Other		
<b>Age</b>								
15-19	2.8	68.0	23.2	3.8	15.2	1.9	27.6	808
20-24	3.5	77.2	46.1	6.8	24.6	3.0	18.6	2,817
25-29	3.4	78.7	45.2	7.0	25.9	3.3	17.6	3,478
30-34	3.1	77.7	46.1	6.2	26.1	3.0	18.8	3,041
35-39	3.0	73.7	41.9	4.9	24.4	4.3	20.9	2,431
40-44	2.3	72.6	39.8	5.3	22.5	4.2	22.1	1,894
<b>Residence</b>								
Rural	2.8	71.6	35.7	4.0	17.0	3.4	23.7	8,571
Urban	3.5	82.3	53.7	9.0	35.2	3.3	13.9	5,897
<b>Education</b>								
Non-literate	2.1	57.2	16.4	2.0	8.1	2.3	38.2	3,650
0-9@ years	2.7	76.6	40.6	4.0	19.4	3.1	19.0	7,144
10 years and above	5.0	93.6	74.5	14.1	50.4	5.0	2.7	3,655
<b>Religion</b>								
Hindu	3.1	76.0	43.3	5.9	24.5	3.4	19.7	13,788
Muslim	2.2	75.8	35.7	9.5	21.9	2.8	20.8	441
Christian	3.6	72.4	41.6	6.1	22.7	6.9	22.5	189
Other	3.2	87.2	52.1	2.3	24.5	2.6	5.3	51
<b>Caste/tribe#</b>								
Scheduled caste	1.8	63.7	24.5	2.9	12.8	2.7	32.7	2,536
Scheduled tribe	3.9	65.4	27.4	4.8	14.7	1.6	31.2	1,102
Other backward class	3.0	76.3	43.4	5.3	22.2	3.6	19.0	5,620
Other	3.7	84.1	55.4	8.7	34.9	3.9	11.5	5,106
<b>Standard of living index</b>								
Low	2.3	63.8	23.7	2.3	11.2	3.1	32.0	5,612
Medium	3.2	78.2	44.1	5.0	22.2	3.2	17.3	5,071
High	4.2	91.1	70.4	13.0	46.9	4.0	4.9	3,785
Total	3.1	76.0	43.1	6.0	24.4	3.4	19.7	14,468
Note: Total includes 19 cases missing information on education were not shown separately. @ Literate women with no year of schooling are also included. # Total figure may not add to N due to do not know and missing cases.								

Among women who reported different ways of transmission of HIV/AIDS, a large proportion (76 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 (43 percent), transfusion of infected blood (24 percent), mother to child, if pregnancy occurs during a stage of HIV (6 percent); only 3 percent of the women mentioned that homosexual intercourse could also be a mode of transmission. Three percent stated that there were other ways of transmission of HIV/AIDS.

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, Muslim men and men from other religions, scheduled-tribes, and men from households with a low standard of living.

<b>Table 8.13 SOURCE OF KNOWLEDGE ABOUT MODE OF TRANSMISSION OF HIV/AIDS AMONG MEN</b>								
Percentage of husbands of currently married women who have heard of HIV/AIDS , knowledge of mode of transmission by selected background characteristics, Orissa, 2002-04								
Background characteristic	Percentage by knowledge of mode of transmission						Do not know	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		
<b>Age</b>								
<25	5.9	78.1	27.7	1.6	12.3	6.2	14.2	762
25-34	5.8	82.6	44.2	4.1	21.2	6.3	9.4	5,216
35-44	6.3	80.5	45.0	4.1	21.8	5.8	11.9	5,742
45+	6.1	77.4	41.9	4.3	19.7	6.9	13.0	2,617
<b>Residence</b>								
Rural	3.8	77.4	35.3	3.6	15.0	4.5	13.9	9,304
Urban	10.4	86.5	58.0	4.8	31.1	9.3	6.6	5,032
<b>Education</b>								
Non-literate	3.0	61.9	15.2	1.8	5.2	4.3	25.6	2,359
0-9@ years	3.3	79.5	33.4	2.2	12.0	5.2	12.5	7,477
10 years and above	12.4	92.2	74.4	8.2	43.2	8.8	2.0	4,492
<b>Religion</b>								
Hindu	6.1	80.3	43.6	4.0	20.4	6.0	11.4	13,626
Muslim	5.1	91.2	35.4	3.2	26.1	10.0	7.1	430
Christian	8.2	74.9	36.3	5.1	22.6	8.8	14.6	238
Other	(5.6)	(89.8)	(62.2)	(2.0)	(42.4)	(19.8)	(10.6)	42
<b>Caste/tribe<sup>#</sup></b>								
Scheduled caste	3.5	80.5	33.4	3.2	13.6	6.4	11.9	2,752
Scheduled tribe	4.6	63.3	24.1	1.9	9.6	3.9	23.6	1,813
Other backward class	4.9	80.8	42.6	3.2	18.3	4.9	11.3	5,384
Other	10.0	87.8	58.5	6.4	33.1	8.7	5.9	4,307
<b>Standard of living index</b>								
Low	3.2	72.3	24.6	2.0	8.7	4.9	17.7	6,999
Medium	5.0	86.7	50.7	4.3	22.5	5.3	6.8	4,434
High	14.8	91.3	76.8	8.3	46.6	10.8	3.1	2,903
Total	6.1	80.6	43.2	4.0	20.7	6.2	11.3	14,336

Note: Total includes 8 cases with missing information on education were not shown separately.  
 ( ) Based on less than 50 cases.  
 @ Literate men with no year of schooling are also included. # Total figure may not add to N due to do not know and missing cases.

Among those who reported ways of transmission of HIV/AIDS, 81 percent mentioned heterosexual intercourse as a mode of transmission. All the groups reported that heterosexual intercourse was the main mode of transmission of HIV/AIDS. Other modes reported by men are transmission through needle or blade or skin puncture (43 percent), transfusion of infected blood (21 percent), mother to child, if pregnancy occurs during a stage of HIV (4 percent), and only 6 percent of men mentioned that homosexual intercourse could also be a mode of transmission of HIV/AIDS. Eleven 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 6.14 by some selected background characteristics.

Among women who reported about awareness of HIV/AIDS, more than one-quarter 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. Forty-four percent of non-literate women reported that they did not know of any way to avoid infection as compared to 12 percent of women who had completed ten or more years of schooling. Similarly, 37 percent of women with low a standard of living stated that they did not know of any way to avoid infection as compared to 14 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 (58 percent) said that “sex with only one partner is the way to avoid it”. Other ways to prevent HIV/AIDS mentioned by women were ‘using a condom correctly during each sexual intercourse’ and ‘sterilizing needles and syringe before injecting’ (26 percent each), ‘checking blood prior to transfusion’ (21 percent), and 5 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 were mentioned more 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 6.15 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, 10 percent did not know of any method to avoid infection, compared to 27 percent women in the state.

In Orissa a higher proportion of men reported that ‘sex with only one partner’ is the way to avoid HIV/AIDS, a majority of men (74 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 age 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, Orissa, 2002-04

Background characteristic	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	
<b>Age</b>								
15-19	64.1	7.7	16.5	21.9	2.7	7.1	30.2	808
20-24	72.1	12.5	27.2	41.5	5.4	6.6	21.9	2,817
25-29	73.1	13.5	27.4	41.2	5.5	9.0	19.9	3,478
30-34	72.2	12.6	27.5	41.1	4.4	7.8	21.3	3,041
35-39	70.4	12.8	25.7	38.3	4.7	8.9	22.9	2,431
40-44	67.1	12.0	22.1	35.0	4.3	6.9	24.7	1,894
<b>Residence</b>								
Rural	67.5	8.8	18.8	31.4	3.2	9.4	26.1	8,571
Urban	76.0	17.9	36.0	49.7	7.2	5.7	16.7	5,897
<b>Education</b>								
Non-literate	52.9	3.6	7.9	14.0	1.3	7.7	41.3	3,650
0-9@ years	71.5	9.2	20.8	36.0	3.2	8.4	21.8	7,144
10 years and above	88.1	27.7	53.6	69.5	11.4	7.1	4.0	3,655
<b>Religion</b>								
Hindu	71.0	12.2	25.9	38.8	4.7	8.0	22.3	13,788
Muslim	70.8	17.2	24.5	37.6	7.9	5.6	22.8	441
Christian	67.5	18.8	26.5	39.9	5.9	9.1	26.5	189
Other	80.5	13.3	24.5	52.1	1.7	9.1	4.7	51
<b>Caste/tribe</b>								
Scheduled caste	59.8	6.9	13.2	22.4	2.3	8.5	34.6	2,536
Scheduled tribe	57.2	10.6	16.6	23.9	3.4	7.2	34.5	1,102
Other backward class	71.0	10.3	23.7	38.7	4.2	8.6	21.7	5,620
Other	79.7	18.1	36.6	50.7	7.2	7.1	13.8	5,106
<b>Standard of living index</b>								
Low	59.2	5.8	11.9	20.3	1.9	9.1	34.3	5,612
Medium	73.7	9.8	23.9	39.2	3.7	7.5	20.7	5,071
High	84.8	26.0	48.9	65.8	10.6	6.7	6.6	3,785
Total	71.0	12.5	25.8	38.9	4.8	7.9	22.3	14,468

Note: Total includes 19 cases with missing information on education were not shown separately.

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

Other ways to prevent HIV/AIDS mentioned by men are ‘sterilizing needles and syringe before injecting’ (25 percent), ‘using a condom correctly during each sexual intercourse’ (23 percent each) and ‘checking blood prior to transfusion’ (22 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. Hindu 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, Orissa, 2002-04

Background characteristic	Percentage reported HIV/AIDS can be avoided by:							Number of men
	Sex with only one partner	Using condoms correctly during each sexual intercourse	Checking blood prior to transfusion	Sterilizing needles and syringes for injection	Avoiding pregnancy when having HIV/AIDS	Other	Do not know to avoid HIV/AIDS	
<b>Age</b>								
<25	77.3	11.3	8.3	15.9	10.4	8.4	14.6	762
25-34	81.6	16.7	17.1	28.9	18.7	10.6	9.2	5,216
35-44	78.7	15.3	17.6	29.8	17.8	10.5	12.2	5,742
45+	77.2	13.4	17.1	28.7	18.7	12.2	11.8	2,617
<b>Residence</b>								
Rural	75.2	11.3	13.1	23.8	13.5	12.6	13.5	9,304
Urban	87.2	22.5	23.8	37.3	26.0	7.2	6.8	5,032
<b>Education</b>								
Non-literate	59.2	5.6	4.4	7.4	5.8	11.0	24.5	2,359
0-9@ years	76.9	10.0	10.4	20.2	13.2	11.5	12.5	7,477
10 years and above	94.1	29.0	34.0	53.6	32.0	9.4	2.0	4,492
<b>Religion</b>								
Hindu	79.2	14.6	16.6	28.5	18.2	10.9	11.2	13,626
Muslim	87.8	30.6	21.7	31.3	7.1	5.3	6.9	430
Christian	72.2	20.1	21.5	27.5	17.2	9.8	15.0	238
Other	(85.3)	(30.3)	(25.8)	(33.1)	(27.5)	(6.1)	(12.7)	42
<b>Caste/tribe<sup>#</sup></b>								
Scheduled caste	78.1	11.2	12.4	20.6	12.1	12.0	11.4	2,752
Scheduled tribe	63.1	6.4	7.0	13.5	12.5	9.6	23.5	1,813
Other backward class	78.5	13.3	15.3	28.0	17.5	11.4	11.3	5,384
Other	88.3	24.2	25.9	40.9	24.1	9.8	5.5	4,307
<b>Standard of living index</b>								
Low	70.1	7.4	7.7	14.9	9.1	12.5	17.0	6,999
Medium	84.8	16.7	18.4	31.6	21.9	9.7	7.3	4,434
High	93.4	31.9	36.5	56.8	32.7	8.2	3.1	2,903
Total	79.4	15.2	16.8	28.6	17.9	10.7	11.2	14,336

Note: Total includes 8 cases with missing information on education were not shown separately.

<sup>#</sup> Total figure may not add to N due to do not know and missing cases. ( ) Based on less than 50 cases.

## 8.5.4 Misconceptions about HIV/AIDS

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

Table 8.16 shows the percentage of women with misconceptions about transmission of 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 in rural areas (45 percent) than in urban areas (36 percent). Non-literate women, women who completed nine years of schooling, women from households with a low standard of living, Hindu women, and women from other backward classes mentioned this method of transmission more often. Other misconceptions about the transmission of HIV/AIDS were ‘stepping on urine/stool’ (30 percent), ‘sharing eating utensils’ (24 percent), ‘sharing clothes’ (22 percent), ‘kissing’ (17 percent), ‘hugging’ (13 percent), and ‘shaking hands’ (12 percent). The percentage of all these misconceptions is also higher among women who belong to scheduled tribes, scheduled castes, Hindu women, non-literate women and women with a low standard of living.

<b>Table 8.16 MISCONCEPTION ABOUT TRANSMISSION OF HIV/AIDS AMONG WOMEN</b>								
Among currently married women age 15-44 who have heard about HIV/AIDS, the percentage of women having misconception about the transmission of HIV/AIDS by selected background characteristics, Orissa, 2002-04								
Background characteristic	Percentage having misconception about the transmission of HIV/AIDS							Number of women
	Shaking hands	Hugging	Kissing	Sharing clothes	Sharing eating utensils	Stepping on Urine / stool	Mosquito, flea, or bedbugs biting	
<b>Residence</b>								
Rural	14.6	16.6	19.2	26.8	29.3	35.0	45.0	8,571
Urban	7.4	8.1	12.7	15.4	16.9	22.7	36.1	5,897
<b>Education</b>								
Non-literate	17.4	18.7	21.2	28.4	31.1	34.3	38.8	3,650
0-9@ years	11.9	13.7	16.7	23.6	25.6	32.5	43.6	7,144
10 years and above	5.6	6.5	11.8	13.0	14.8	20.7	39.5	3,655
<b>Religion</b>								
Hindu	11.8	13.3	16.6	22.2	24.3	30.0	41.6	13,788
Muslim	8.3	9.5	13.2	21.4	20.0	28.1	35.8	441
Christian	9.6	11.7	16.8	19.3	22.5	27.6	40.2	189
Other	9.0	9.6	32.4	31.6	50.4	51.2	37.2	51
<b>Caste/tribe#</b>								
Scheduled caste	14.3	16.3	18.4	25.6	29.0	33.3	40.8	2,536
Scheduled tribe	14.3	16.7	17.5	24.2	25.2	30.9	39.1	1,102
Other backward class	11.4	13.0	16.6	22.8	24.8	30.9	42.6	5,620
Other	10.0	10.9	15.3	19.1	21.1	26.9	40.9	5,106
<b>Standard of living index</b>								
Low	16.4	17.9	20.5	29.1	31.8	36.0	43.2	5,612
Medium	11.0	12.9	16.1	22.0	23.5	30.5	42.5	5,071
High	5.5	6.3	11.4	12.2	14.1	20.4	37.1	3,785
Total	11.7	13.1	16.6	22.2	24.3	30.0	41.4	14,468
Note: Total includes 19 cases with missing information on education were not shown separately.								
@ Literate women with no year of schooling are also included. # Total figure may not add to N due to do not know and missing cases.								

Table 8.17 presents the percentage of men with misconceptions about the transmission 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. Fifty-five percent of the men in India felt so. The percentage that reported that HIV/AIDS could be transmitted through the biting by mosquitoes or flees or bedbugs was much higher among rural men (59 percent) than among urban men (51 percent). Literate men who have completed nine years of schooling, men from households with a low standard of living, Hindu men, and

scheduled caste men are of the impression that HIV/AIDS spreads when one is bitten by mosquitoes, fleas or bedbugs. Other misconceptions about the spread of HIV/AIDS are 'stepping on urine/stool' (41 percent) 'sharing eating utensils' (37 percent), 'sharing clothes' (35 percent), 'kissing' (33 percent each), 'hugging' (25 percent), and 'shaking hands' (19 percent). All the misconceptions reported by men are relatively higher than those reported by women. The prevalence of these misconceptions is higher among men who belong to scheduled 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 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, Orissa, 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	
<b>Residence</b>								
Rural	23.3	30.0	36.2	40.8	42.4	46.4	59.2	9,304
Urban	10.5	15.5	28.2	24.5	26.5	31.8	50.8	5,032
<b>Education</b>								
Non-literate	24.6	32.0	38.4	45.7	46.3	48.3	56.5	2,359
0-9@ years	23.1	29.4	36.9	40.2	41.5	46.3	60.6	7,477
10 years and above	8.6	13.6	24.8	20.8	23.9	29.1	48.9	4,492
<b>Religion</b>								
Hindu	19.1	25.3	33.6	35.3	37.0	41.5	56.4	13,626
Muslim	9.8	14.4	28.1	29.5	33.9	38.7	54.3	430
Christian	18.7	24.1	32.6	30.1	30.7	35.8	50.5	238
Other	13.4	20.1	26.2	29.6	38.9	35.8	70.9	42
<b>Caste/tribe#</b>								
Scheduled caste	24.9	31.7	38.7	44.3	46.3	50.5	62.1	2,752
Scheduled tribe	20.5	28.8	31.9	38.3	37.8	41.5	52.2	1,813
Other backward class	18.8	25.0	32.4	34.6	36.7	40.4	55.8	5,384
Other	14.4	19.0	31.9	28.5	30.7	36.4	55.0	4,307
<b>Standard of living index</b>								
Low	25.6	32.6	38.8	44.5	45.4	49.2	59.8	6,999
Medium	15.7	21.9	30.6	31.8	34.2	39.7	56.8	4,434
High	7.2	10.8	24.5	17.1	20.1	24.5	47.0	2,903
<b>Total</b>	<b>18.8</b>	<b>24.9</b>	<b>33.4</b>	<b>35.0</b>	<b>36.8</b>	<b>41.3</b>	<b>56.3</b>	<b>14,336</b>

Note: Total includes 8 cases with missing information on education were not shown separately. @ Literate men with no year of schooling are also included. ( ) Based on less than 50 cases# Total figure may not add to N due to do not know and missing cases.

### 8.5.5 Knowledge of Curability of HIV/AIDS

Table 8.18 shows the percentage distribution of currently married women and their husbands who have heard about HIV/AIDS by knowledge of curability of the same, according to some selected background characteristics. Around 23 percent women and 34 percent men have the notion that HIV/AIDS is curable, whereas 55 percent women and 49 percent men replied that it is not curable. Twenty-two percent women and 17 percent men do not have any idea regarding the curability of the disease. It can be safely asserted from the figures that both men and women of urban areas having high level of education,

belonging to Christian religion and other backward classes and from households of high standard of living are showing better performance as far as the knowledge of curability of HIV/AIDS is concerned.

<b>Table 8.18 KNOWLEDGE OF CURABILITY ABOUT HIV/AIDS</b>								
Among currently married women and their husband, who have heard about HIV/AIDS, Percent distribution of respondents by knowledge of curability about HIV/AIDS, according to some selected background characteristics, Orissa, 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	
<b>Residence</b>								
Rural	26.2	48.4	25.4	8,571	38.0	42.4	19.6	9,304
Urban	18.6	64.0	17.4	5,897	27.6	60.4	12.0	5,032
<b>Education</b>								
Non-literate	24.2	40.8	35.0	3,650	38.6	31.9	29.5	2,359
0-9@ years	24.0	53.5	22.5	7,144	37.3	43.7	18.9	7,477
10 years and above	20.3	71.1	8.6	3,655	27.1	65.8	7.1	4,492
<b>Religion</b>								
Hindu	23.0	55.0	22.0	13,788	34.5	48.4	17.1	13,626
Muslim	28.7	46.4	24.9	441	36.8	50.8	12.4	430
Christian	19.0	57.2	23.8	189	22.3	55.4	22.2	238
Other	19.6	57.3	23.1	51	(22.0)	(65.9)	(12.2)	42
<b>Caste/tribe#</b>								
Scheduled caste	24.8	44.7	30.5	2,536	40.1	41.7	18.2	2,752
Scheduled tribe	30.1	42.3	27.6	1,102	36.2	37.8	26.1	1,813
Other backward class	23.4	55.2	21.4	5,620	34.7	47.1	18.2	5,384
Other	20.6	61.9	17.5	5,106	29.7	59.7	10.6	4,307
<b>Standard of living index</b>								
Low	26.4	43.4	30.2	5,612	39.9	37.0	23.1	6,999
Medium	23.2	56.2	20.5	5,071	32.0	54.8	13.3	4,434
High	18.2	69.7	12.1	3,785	24.5	67.7	7.8	2,903
Total	23.1	54.8	22.1	14,468	34.3	48.7	17.0	14,336

Note: Total includes 8 cases with missing information on education were not shown separately. @ Literate persons with no year of schooling are also included. # Total figure may not add to N due to do not know and missing cases. ( ) Based on less than 50 cases

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

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

According to DLHS, 48 percent and 58 percent of women were aware of RTI/STI and HIV/AIDS respectively and the corresponding figures for husbands of eligible women are 63 and 74 percent respectively. The awareness of RTI/STI and HIV/AIDS among men is higher than that among women by 14 and 16 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 Khordha (76 percent), followed by Kendrapara (74 percent) and Puri (73 percent) to the lowest in Gajapati (12 percent). Among men the highest level of awareness of

RTI/STI was reported in Cuttack (83 percent), followed by Kendrapara (83 percent) and Khordha (82 percent) and to the lowest in Gajapati (29 percent).

<b>Table 8.19 AWARENESS OF RTI/STI AND HIV/AIDS BY DISTRICT</b>				
Percentage of currently married women and their husbands aware of RTI/STI and HIV/AIDS by district, Orissa, 2002-04				
District	Percentage of women		Percentage of men	
	Aware of RTI/STI	Aware of HIV/AIDS	Aware of RTI/STI	Aware of HIV/AIDS
Anugul	33.4	54.5	59.2	73.7
Balangir	50.0	45.0	63.6	69.2
Baleshwar	62.2	81.5	75.5	92.7
Bargarh	33.1	37.9	54.8	56.1
Baudh	61.1	56.7	65.1	77.8
Bhadrak	29.2	64.7	76.5	89.8
Cuttack	56.7	90.4	82.9	96.5
Debagarh	43.6	55.5	60.8	74.6
Dhenkanal	60.4	77.3	68.4	82.6
Gajapati	12.1	40.2	29.1	58.5
Ganjam	38.0	50.6	54.3	77.0
Jagatsinghapur	57.5	87.0	78.6	94.7
Jajapur	43.3	72.9	59.6	84.1
Jharsuguda	50.5	62.0	61.6	76.1
Kalahandi	43.9	43.9	57.2	58.9
Kandhamal	46.9	44.1	53.9	61.5
Kendrapara	73.8	90.0	82.8	96.0
Kendujhar	35.4	45.7	50.3	65.7
Khordha	75.6	84.1	81.5	95.3
Koraput	21.3	36.1	38.9	54.6
Malkangiri	27.5	14.2	32.9	26.3
Mayurbhanj	45.5	46.7	58.5	66.7
Nabarangapur	40.2	32.1	61.6	48.8
Nayagarh	52.4	64.6	59.7	77.2
Nuapada	34.0	32.4	49.3	54.9
Puri	73.2	81.9	72.7	92.3
Rayagada	33.7	34.2	41.1	50.0
Sambalpur	49.0	54.1	69.4	65.7
Sonapur	41.2	41.1	66.8	68.4
Sundargarh	41.9	47.8	57.1	60.8
Orissa	48.0	57.9	62.8	74.1

Table 8.19 also presents the proportion of currently married women aged 15-44 and their husbands who are aware of HIV/AIDS in the districts of Orissa state. Among women, awareness about HIV/AIDS ranges from the highest of 90 percent each in Cuttack and Kendrapara to the lowest of 14 percent in Malkangiri. With the exception of Malkangiri, Nabarangapur, Nuapara, Rayagada, Koraput and Bargarh in every district a minimum of two-fifth of the women reported awareness of HIV/AIDS. A higher level of awareness of HIV/AIDS among men exceeding 90 percent was reported in Puri, Baleshwar, Jagatsinghapur, Khordha, Kendrapara and Cuttack.

## **APPENDIX – A**

### **SAMPLING ERROR ESTIMATION**

## Estimation of 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 is 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 take into consideration the design appropriateness and non-response rates. DLHS-RCH estimator of a programme indicators has been design as

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

where the cell (h, j, i) stands for i<sup>th</sup> observational unit in j<sup>th</sup> primary sampling unit (PSU) in h<sup>th</sup> stratum, basically rural-urban areas of a district are taken as strata. W<sub>hij</sub> is the sampling weight of (h, j, i)<sup>th</sup> 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 the estimation of variance of programme indicator ( r ) has been obtained after Taylor series linearisation as

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

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

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

and n<sub>h</sub> 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**

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

Sampling errors, Orissa, 2002-04								
Variables	Estimate (R)	Sampling error (SE)	Number of cases		Design Effect	Relative Error (%)	95% Conf. Interval	
			Unweighted	Weighted			R-1.96 SE	R+1.96 SE
<b>Contraceptive Prevalence Rate (Currently Married Women age 15-44)</b>								
Total	0.547	0.004	24,971	24,972	1.898	0.8	0.539	0.556
Rural	0.499	0.004	17,760	17,760	1.386	0.9	0.490	0.508
Urban	0.666	0.010	7,211	7,212	3.451	1.6	0.645	0.686
<b>Unmet Need (Currently Married Women age 15-44)</b>								
Total	0.191	0.004	24,971	24,973	2.116	1.9	0.184	0.198
Rural	0.205	0.004	17,760	17,760	1.432	1.8	0.198	0.212
Urban	0.158	0.009	7,211	7,213	4.277	5.6	0.140	0.175
<b>Received Any Antenatal Check up (last live/still birth of past 3 years)</b>								
Total	0.759	0.006	9,179	9,277	1.770	0.8	0.747	0.770
Rural	0.727	0.006	6,905	7,002	1.396	0.9	0.714	0.739
Urban	0.857	0.014	2,274	2,275	3.609	1.6	0.830	0.885
<b>Received 3+ Antenatal Check up (last live/still birth of past 3 years)</b>								
Total	0.473	0.007	9,179	9,279	1.887	1.5	0.459	0.487
Rural	0.413	0.007	6,905	7,003	1.413	1.7	0.399	0.427
Urban	0.659	0.019	2,274	2,276	3.677	2.9	0.621	0.696
<b>Institutional Delivery (last live/still birth of past 3 years)</b>								
Total	0.344	0.007	9,179	9,278	2.053	2.1	0.330	0.357
Rural	0.252	0.006	6,905	7,003	1.426	2.5	0.239	0.264
Urban	0.627	0.019	2,274	2,275	3.415	3.0	0.590	0.664
<b>Safe Delivery (last live/still birth of past 3 years)</b>								
Total	0.435	0.007	9,179	9,278	1.928	1.6	0.421	0.449
Rural	0.351	0.007	6,905	7,003	1.413	1.9	0.337	0.364
Urban	0.695	0.018	2,274	2,275	3.609	2.6	0.659	0.731
<b>Received BCG Vaccination (last and last but one living children, age 12-23 months)</b>								
Total	0.904	0.007	2,867	2,874	1.448	0.7	0.891	0.917
Rural	0.903	0.007	2,127	2,171	1.313	0.8	0.888	0.917
Urban	0.908	0.015	740	703	1.896	1.6	0.879	0.937
<b>Received Measles (last and last but one living children, age 12-23 months)</b>								
Total	0.678	0.013	2,867	2,874	2.054	1.8	0.654	0.703
Rural	0.680	0.012	2,127	2,171	1.381	1.7	0.656	0.703
Urban	0.673	0.035	740	703	4.225	5.3	0.603	0.743
<b>Birth order 3+ (birth in last three years)</b>								
Total	0.421	0.007	9,837	10,033	1.987	1.7	0.407	0.434
Rural	0.449	0.007	7,406	7,533	1.427	1.5	0.435	0.462
Urban	0.336	0.019	2,431	2,500	4.102	5.7	0.298	0.373



Sampling errors, Orissa, 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
<b>Contraceptive Prevalence Rate (Currently Married Women age 15-44)</b>							
Anugul	0.547	0.018	852	852	3.3	0.512	0.583
Balangir	0.462	0.019	791	791	4.1	0.425	0.500
Baleshwar	0.604	0.016	972	972	2.6	0.572	0.637
Bargarh	0.494	0.018	868	868	3.6	0.459	0.529
Baudh	0.531	0.033	767	767	6.2	0.467	0.595
Bhadrak	0.533	0.017	936	936	3.2	0.500	0.567
Cuttack	0.745	0.015	863	863	2.0	0.715	0.775
Debagarh	0.541	0.018	841	841	3.3	0.507	0.576
Dhenkanal	0.706	0.016	867	867	2.3	0.674	0.737
Gajapati	0.517	0.023	740	740	4.4	0.471	0.562
Ganjam	0.483	0.018	858	858	3.7	0.447	0.519
Jagatsinghapur	0.665	0.017	803	803	2.6	0.631	0.698
Jajapur	0.513	0.018	875	875	3.5	0.479	0.548
Jharsuguda	0.549	0.018	781	781	3.3	0.513	0.585
Kalahandi	0.444	0.019	821	821	4.3	0.407	0.481
Kandhamal	0.471	0.019	772	772	4.0	0.434	0.507
Kendrapara	0.607	0.018	888	888	3.0	0.573	0.642
Kendujhar	0.551	0.019	787	787	3.4	0.514	0.587
Khordha	0.535	0.022	868	868	4.1	0.493	0.577
Koraput	0.556	0.018	799	799	3.2	0.520	0.592
Malkangiri	0.438	0.018	856	856	4.1	0.402	0.474
Mayurbhanj	0.533	0.018	811	811	3.4	0.498	0.568
Nabarangapur	0.442	0.018	842	842	4.1	0.407	0.478
Nayagarh	0.632	0.017	854	854	2.7	0.598	0.666
Nuapada	0.483	0.018	828	828	3.7	0.448	0.518
Puri	0.648	0.017	869	869	2.6	0.615	0.680
Rayagada	0.436	0.020	746	746	4.6	0.396	0.476
Sambalpur	0.619	0.018	802	802	2.9	0.583	0.655
Sonapur	0.530	0.018	843	843	3.4	0.495	0.565
Sundargarh	0.529	0.019	771	771	3.6	0.492	0.565

Sampling errors, Orissa, 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
<b>Unmet Need (Currently Married Women age 15-44)</b>							
Anugul	0.248	0.016	852	852	6.5	0.218	0.279
Balangir	0.185	0.015	791	791	8.1	0.156	0.215
Baleshwar	0.180	0.013	972	972	7.2	0.155	0.205
Bargarh	0.200	0.014	868	868	7.0	0.172	0.228
Baoudh	0.201	0.029	767	767	14.4	0.145	0.258
Bhadrak	0.235	0.015	936	936	6.4	0.207	0.264
Cuttack	0.087	0.010	863	863	11.5	0.067	0.107
Debagarh	0.201	0.014	841	842	7.0	0.173	0.228
Dhenkanal	0.112	0.011	867	867	9.8	0.091	0.134
Gajapati	0.146	0.018	740	740	12.3	0.112	0.181
Ganjam	0.255	0.016	858	858	6.3	0.224	0.286
Jagatsinghapur	0.135	0.012	803	803	8.9	0.111	0.160
Jajapur	0.235	0.015	875	875	6.4	0.205	0.264
Jharsuguda	0.179	0.014	781	781	7.8	0.151	0.207
Kalahandi	0.172	0.015	821	821	8.7	0.143	0.200
Kandhamal	0.176	0.014	772	772	8.0	0.148	0.204
Kendrapara	0.177	0.014	888	888	7.9	0.150	0.205
Kendujhar	0.205	0.015	787	787	7.3	0.175	0.234
Khordha	0.235	0.019	868	868	8.1	0.196	0.273
Koraput	0.141	0.013	799	799	9.2	0.116	0.167
Malkangiri	0.133	0.013	856	856	9.8	0.107	0.158
Mayurbhanj	0.257	0.016	811	811	6.2	0.226	0.289
Nabarangapur	0.202	0.015	842	842	7.4	0.173	0.231
Nayagarh	0.161	0.013	854	854	8.1	0.136	0.186
Nuapada	0.154	0.013	828	828	8.4	0.128	0.179
Puri	0.160	0.013	869	869	8.1	0.135	0.186
Rayagada	0.186	0.016	746	746	8.6	0.155	0.217
Sambalpur	0.160	0.014	802	802	8.8	0.134	0.187
Sonapur	0.208	0.014	843	843	6.7	0.179	0.236
Sundargarh	0.160	0.014	771	771	8.8	0.133	0.187

Sampling errors, Orissa, 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
<b>Received Any Antenatal Check up (last live/still birth of past 3 years)</b>							
Anugul	0.744	0.025	327	330	3.4	0.694	0.794
Balangir	0.875	0.020	291	290	2.3	0.835	0.915
Baleshwar	0.676	0.026	358	360	3.8	0.625	0.726
Bargarh	0.880	0.019	321	319	2.2	0.842	0.917
Baudh	0.867	0.021	288	320	2.4	0.825	0.909
Bhadrak	0.727	0.024	387	390	3.3	0.681	0.773
Cuttack	0.864	0.023	250	257	2.7	0.820	0.908
Debagarh	0.727	0.027	270	265	3.7	0.673	0.780
Dhenkanal	0.802	0.026	257	261	3.2	0.751	0.854
Gajapati	0.749	0.037	273	279	4.9	0.677	0.822
Ganjam	0.764	0.024	357	356	3.1	0.717	0.812
Jagatsinghapur	0.792	0.028	214	217	3.5	0.736	0.847
Jajapur	0.724	0.028	299	305	3.9	0.670	0.778
Jharsuguda	0.862	0.023	240	241	2.7	0.817	0.908
Kalahandi	0.744	0.026	311	317	3.5	0.692	0.796
Kandhamal	0.694	0.026	347	356	3.7	0.642	0.745
Kendrapara	0.795	0.025	331	337	3.1	0.747	0.844
Kendujhar	0.722	0.026	337	330	3.6	0.672	0.773
Khordha	0.809	0.029	302	311	3.6	0.752	0.867
Koraput	0.715	0.026	320	325	3.6	0.664	0.767
Malkangiri	0.543	0.028	389	403	5.2	0.488	0.597
Mayurbhanj	0.777	0.025	298	296	3.2	0.728	0.826
Nabarangapur	0.578	0.029	328	330	5.0	0.522	0.634
Nayagarh	0.719	0.030	269	271	4.2	0.661	0.777
Nuapada	0.787	0.024	297	299	3.0	0.739	0.835
Puri	0.839	0.023	258	263	2.7	0.794	0.885
Rayagada	0.720	0.029	322	333	4.0	0.663	0.776
Sambalpur	0.870	0.022	275	271	2.5	0.826	0.914
Sonapur	0.845	0.020	368	367	2.4	0.806	0.883
Sundargarh	0.753	0.026	295	302	3.5	0.701	0.805

Sampling errors, Orissa, 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
<b>Received 3+ Antenatal Check up (last live/still birth of past 3 years)</b>							
Anugul	0.512	0.029	327	330	5.7	0.455	0.569
Balangir	0.555	0.032	291	289	5.8	0.492	0.617
Baleshwar	0.462	0.028	358	359	6.1	0.408	0.516
Bargarh	0.555	0.029	321	320	5.2	0.498	0.612
Baudh	0.521	0.056	288	320	10.7	0.411	0.632
Bhadrak	0.427	0.026	387	390	6.1	0.375	0.478
Cuttack	0.576	0.032	250	258	5.6	0.512	0.639
Debagarh	0.489	0.031	270	265	6.3	0.428	0.550
Dhenkanal	0.574	0.032	257	262	5.6	0.510	0.637
Gajapati	0.446	0.038	273	278	8.5	0.371	0.522
Ganjam	0.515	0.028	357	355	5.4	0.460	0.571
Jagatsinghapur	0.576	0.035	214	216	6.1	0.508	0.643
Jajapur	0.428	0.030	299	305	7.0	0.370	0.486
Jharsuguda	0.560	0.033	240	241	5.9	0.494	0.625
Kalahandi	0.407	0.030	311	318	7.4	0.349	0.465
Kandhamal	0.370	0.027	347	355	7.3	0.317	0.423
Kendrapara	0.536	0.030	331	337	5.6	0.478	0.594
Kendujhar	0.390	0.028	337	330	7.2	0.335	0.444
Khordha	0.473	0.036	302	312	7.6	0.401	0.544
Koraput	0.379	0.028	320	324	7.4	0.325	0.434
Malkangiri	0.254	0.023	389	404	9.1	0.209	0.300
Mayurbhanj	0.481	0.030	298	297	6.2	0.422	0.539
Nabarangapur	0.338	0.028	328	330	8.3	0.283	0.392
Nayagarh	0.389	0.031	269	270	8.0	0.329	0.450
Nuapada	0.470	0.030	297	298	6.4	0.412	0.528
Puri	0.607	0.031	258	264	5.1	0.546	0.669
Rayagada	0.441	0.031	322	333	7.0	0.381	0.501
Sambalpur	0.661	0.031	275	272	4.7	0.600	0.721
Sonapur	0.573	0.027	368	367	4.7	0.520	0.626
Sundargarh	0.430	0.030	295	302	7.0	0.372	0.488

Sampling errors, Orissa, 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
<b>Institutional Delivery (last live/still birth of past 3 years)</b>							
Anugul	0.371	0.029	327	328	7.8	0.315	0.427
Balangir	0.379	0.031	291	292	8.2	0.318	0.440
Baleshwar	0.280	0.025	358	359	8.9	0.231	0.329
Bargarh	0.321	0.027	321	322	8.4	0.267	0.374
Baudh	0.344	0.058	288	293	16.9	0.230	0.459
Bhadrak	0.352	0.026	387	388	7.4	0.302	0.402
Cuttack	0.522	0.033	250	251	6.3	0.458	0.586
Debagarh	0.324	0.029	270	271	9.0	0.268	0.381
Dhenkanal	0.476	0.033	257	258	6.9	0.412	0.540
Gajapati	0.213	0.030	273	274	14.1	0.155	0.271
Ganjam	0.327	0.026	357	358	8.0	0.275	0.378
Jagatsinghapur	0.615	0.034	214	215	5.5	0.549	0.682
Jajapur	0.362	0.029	299	300	8.0	0.305	0.418
Jharsuguda	0.372	0.032	240	241	8.6	0.309	0.436
Kalahandi	0.306	0.029	311	312	9.5	0.249	0.363
Kandhamal	0.324	0.026	347	348	8.0	0.273	0.375
Kendrapara	0.423	0.029	331	332	6.9	0.365	0.480
Kendujhar	0.199	0.023	337	338	11.6	0.154	0.244
Khordha	0.529	0.036	302	304	6.8	0.458	0.600
Koraput	0.193	0.023	320	321	11.9	0.149	0.237
Malkangiri	0.107	0.017	389	390	15.9	0.074	0.140
Mayurbhanj	0.324	0.028	298	299	8.6	0.269	0.380
Nabarangapur	0.251	0.025	328	329	10.0	0.201	0.301
Nayagarh	0.383	0.031	269	270	8.1	0.323	0.443
Nuapada	0.249	0.026	297	298	10.4	0.198	0.300
Puri	0.606	0.031	258	259	5.1	0.545	0.667
Rayagada	0.202	0.025	322	323	12.4	0.153	0.252
Sambalpur	0.443	0.032	275	276	7.2	0.380	0.506
Sonapur	0.298	0.024	368	369	8.1	0.251	0.346
Sundargarh	0.322	0.028	295	296	8.7	0.267	0.378

Sampling errors, Orissa, 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
<b>Safe Delivery (last live/still birth of past 3 years)</b>							
Anugul	0.421	0.029	327	331	6.9	0.364	0.478
Balangir	0.546	0.032	291	290	5.9	0.484	0.609
Baleshwar	0.371	0.027	358	360	7.3	0.319	0.424
Bargarh	0.507	0.029	321	319	5.7	0.449	0.564
Baudh	0.451	0.058	288	320	12.9	0.338	0.564
Bhadrak	0.451	0.027	387	390	6.0	0.399	0.503
Cuttack	0.573	0.032	250	256	5.6	0.510	0.637
Debagarh	0.399	0.031	270	264	7.8	0.339	0.458
Dhenkanal	0.531	0.033	257	261	6.2	0.467	0.595
Gajapati	0.327	0.036	273	278	11.0	0.256	0.399
Ganjam	0.460	0.028	357	356	6.1	0.404	0.515
Jagatsinghapur	0.692	0.032	214	217	4.6	0.629	0.755
Jajapur	0.439	0.030	299	305	6.8	0.380	0.497
Jharsuguda	0.606	0.032	240	240	5.3	0.543	0.670
Kalahandi	0.392	0.030	311	318	7.7	0.333	0.452
Kandhamal	0.420	0.028	347	355	6.7	0.366	0.474
Kendrapara	0.530	0.030	331	338	5.7	0.472	0.588
Kendujhar	0.254	0.025	337	328	9.8	0.205	0.303
Khordha	0.583	0.036	302	312	6.2	0.512	0.653
Koraput	0.228	0.024	320	325	10.5	0.181	0.275
Malkangiri	0.169	0.021	389	402	12.4	0.128	0.209
Mayurbhanj	0.374	0.029	298	296	7.8	0.317	0.431
Nabarangapur	0.324	0.027	328	330	8.3	0.270	0.377
Nayagarh	0.442	0.032	269	271	7.2	0.380	0.504
Nuapada	0.354	0.029	297	297	8.2	0.297	0.410
Puri	0.677	0.030	258	263	4.4	0.618	0.735
Rayagada	0.340	0.029	322	334	8.5	0.282	0.398
Sambalpur	0.581	0.032	275	271	5.5	0.518	0.643
Sonapur	0.401	0.026	368	368	6.5	0.350	0.453
Sundargarh	0.462	0.030	295	303	6.5	0.403	0.522

Sampling errors, Orissa, 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
<b>Received BCG Vaccination (last and last but one living children, age 12-23 months)</b>							
Anugul	0.886	0.032	90	93	3.6	0.824	0.948
Balangir	0.950	0.024	81	81	2.6	0.903	0.998
Baleshwar	0.972	0.014	110	110	1.5	0.944	1.000
Bargarh	0.938	0.024	98	94	2.5	0.892	0.984
Baudh	0.960	0.019	85	89	2.0	0.924	0.997
Bhadrak	0.892	0.029	125	128	3.2	0.836	0.948
Cuttack	0.971	0.020	67	67	2.1	0.931	1.011
Debagarh	0.887	0.041	53	52	4.6	0.807	0.968
Dhenkanal	0.975	0.016	72	75	1.6	0.944	1.005
Gajapati	0.891	0.044	82	86	5.0	0.804	0.978
Ganjam	0.873	0.033	103	104	3.7	0.809	0.936
Jagatsinghapur	0.610	0.060	63	64	9.8	0.493	0.728
Jajapur	0.762	0.045	98	101	5.9	0.674	0.850
Jharsuguda	0.954	0.023	74	77	2.4	0.909	0.998
Kalahandi	0.915	0.027	89	96	2.9	0.862	0.967
Kandhamal	0.913	0.026	107	105	2.9	0.861	0.964
Kendrapara	0.942	0.025	89	85	2.7	0.892	0.992
Kendujhar	0.844	0.035	108	103	4.2	0.775	0.913
Khordha	0.983	0.012	92	93	1.2	0.959	1.006
Koraput	0.934	0.029	90	92	3.1	0.878	0.990
Malkangiri	0.837	0.036	119	124	4.3	0.767	0.907
Mayurbhanj	0.921	0.029	84	84	3.1	0.865	0.978
Nabarangapur	0.894	0.035	87	91	3.9	0.826	0.963
Nayagarh	0.793	0.052	69	74	6.6	0.691	0.896
Nuapada	0.896	0.034	84	84	3.8	0.830	0.962
Puri	0.915	0.030	88	85	3.3	0.857	0.974
Rayagada	0.865	0.039	91	102	4.5	0.790	0.941
Sambalpur	0.936	0.031	68	68	3.4	0.874	0.997
Sonapur	0.952	0.020	104	100	2.1	0.914	0.991
Sundargarh	0.892	0.035	75	74	4.0	0.823	0.961

Sampling errors, Orissa, 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
<b>Received Measles (last and last but one living children, age 12-23 months)</b>							
Anugul	0.694	0.049	90	93	7.1	0.597	0.790
Balangir	0.757	0.048	81	81	6.4	0.663	0.852
Baleshwar	0.768	0.040	110	110	5.2	0.689	0.847
Bargarh	0.791	0.040	98	94	5.1	0.712	0.870
Baudh	0.807	0.048	85	89	5.9	0.713	0.900
Bhadrak	0.627	0.043	125	128	6.9	0.542	0.711
Cuttack	0.884	0.037	67	67	4.1	0.813	0.956
Debagarh	0.671	0.061	53	52	9.0	0.552	0.790
Dhenkanal	0.760	0.051	72	75	6.7	0.660	0.859
Gajapati	0.665	0.062	82	86	9.3	0.543	0.787
Ganjam	0.648	0.048	103	104	7.4	0.554	0.741
Jagatsinghapur	0.505	0.061	63	64	12.1	0.385	0.625
Jajapur	0.523	0.050	98	101	9.6	0.424	0.621
Jharsuguda	0.780	0.048	74	77	6.1	0.687	0.874
Kalahandi	0.730	0.049	89	96	6.8	0.633	0.827
Kandhamal	0.724	0.043	107	105	5.9	0.640	0.809
Kendrapara	0.635	0.053	89	85	8.4	0.530	0.739
Kendujhar	0.567	0.049	108	103	8.6	0.472	0.663
Khordha	0.681	0.068	92	93	9.9	0.549	0.814
Koraput	0.522	0.053	90	92	10.2	0.418	0.626
Malkangiri	0.545	0.049	119	124	8.9	0.450	0.640
Mayurbhanj	0.715	0.048	84	84	6.7	0.621	0.808
Nabarangapur	0.664	0.052	87	91	7.8	0.562	0.766
Nayagarh	0.689	0.058	69	74	8.4	0.575	0.803
Nuapada	0.587	0.053	84	84	9.1	0.482	0.691
Puri	0.796	0.043	88	85	5.4	0.712	0.881
Rayagada	0.618	0.057	91	102	9.2	0.507	0.729
Sambalpur	0.749	0.056	68	68	7.5	0.639	0.859
Sonapur	0.689	0.046	104	100	6.7	0.599	0.779
Sundargarh	0.696	0.053	75	74	7.7	0.592	0.801



Sampling errors, Orissa, 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
<b>Birth order 3+ (birth in last three years)</b>							
Anugul	0.342	0.027	348	351	7.9	0.289	0.395
Balangir	0.342	0.029	315	319	8.5	0.285	0.399
Baleshwar	0.338	0.025	385	388	7.4	0.288	0.387
Bargarh	0.409	0.028	338	336	6.8	0.353	0.465
Baudh	0.408	0.052	316	331	12.7	0.305	0.511
Bhadrak	0.438	0.025	441	448	5.7	0.389	0.486
Cuttack	0.343	0.029	285	290	8.5	0.287	0.400
Debagarh	0.398	0.029	293	288	7.3	0.341	0.455
Dhenkanal	0.255	0.027	293	298	10.6	0.202	0.307
Gajapati	0.510	0.037	297	294	7.3	0.437	0.584
Ganjam	0.461	0.028	380	387	6.1	0.407	0.515
Jagatsinghapur	0.328	0.032	221	223	9.8	0.264	0.391
Jajapur	0.458	0.029	321	328	6.3	0.400	0.515
Jharsuguda	0.420	0.031	261	260	7.4	0.358	0.481
Kalahandi	0.485	0.030	323	331	6.2	0.427	0.544
Kandhamal	0.460	0.026	384	396	5.7	0.408	0.511
Kendrapara	0.334	0.027	362	366	8.1	0.281	0.388
Kendujhar	0.470	0.027	386	379	5.7	0.417	0.523
Khordha	0.386	0.036	312	329	9.3	0.315	0.458
Koraput	0.474	0.029	320	322	6.1	0.417	0.530
Malkangiri	0.521	0.027	412	428	5.2	0.469	0.574
Mayurbhanj	0.407	0.028	334	332	6.9	0.352	0.461
Nabarangapur	0.477	0.029	329	334	6.1	0.420	0.534
Nayagarh	0.374	0.030	283	283	8.0	0.315	0.433
Nuapada	0.409	0.029	302	302	7.1	0.352	0.466
Puri	0.265	0.028	266	271	10.6	0.210	0.320
Rayagada	0.511	0.030	348	365	5.9	0.453	0.569
Sambalpur	0.377	0.032	273	270	8.5	0.315	0.439
Sonapur	0.462	0.027	381	382	5.8	0.410	0.514
Sundargarh	0.487	0.029	328	339	6.0	0.431	0.543

**APPENDIX - B**

**DLHS-RCH STAFF, ORISSA**

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## NOTES

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