

**WORK STATUS AND UTILIZATION OF ANTENATAL CARE
AMONG RURAL AND URBAN POOR WOMEN IN
KHORDHA AND SUNDARGARH, ODISHA**

*Thesis submitted to Jawaharlal Nehru University
for award of the degree of*

DOCTOR OF PHILOSOPHY

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DECLARATION

I, Sasmita Jena, hereby declare that the thesis entitled “**Work Status and Utilisation of Antenatal Care among Rural and Urban Poor Women in Khordha and Sundargarh, Odisha**” submitted by me for the award of the degree of **DOCTOR OF PHILOSOPHY** is my bonafide work and that it has not been submitted so far in part or in full, for any degree or diploma of this university or any other university.

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DEDICATED
TO
FAMILY MEMBERS

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ABBREVIATIONS

AHS	Annual Health Survey
ANC	Antenatal care
ANM	Auxiliary Nurse Midwifery
ASHA	Accredited Social Health Activist
AWW	Anganwadi Worker
APL	Above Poverty Line
BPL	Below Poverty Line
CHC	Community Health Centre
DLHS	District Level Household Survey
HIMS	Health Management Information System
IFA	Iron and Folic Acid
IIPS	International Institute for Population Sciences
IMR	Infant Mortality Rate
JSY	Janani Suraksha Yojna
MMR	Maternal Mortality Ratio
MCH	Maternal and Child Health
MoHFW	Ministry of Health and Family Welfare
NPP	National Population Policy
NFHS	National Family Health Survey
NRHM	National Rural Health Mission
OBC	Other Backward Classes
PNC	Postnatal Care
PHC	Primary Health Centre
RGI	Registrar General of India
SC	Scheduled Caste
SC	Sub-Centre
SRS	Sample Registration System
ST	Scheduled Tribe
TT	Tetanus Toxoid
UHND	Urban Health and Nutrition Day
VHND	Village Health and Nutrition Day
WHO	World Health Organisation

CHAPTER 1

INTRODUCTION

“However much a mother may love her children, it is all but impossible for her to provide high-quality child care, if she herself is poor and oppressed, illiterate, uninformed, anaemic and unhealthy, and has five or six other children, lives in a slum or shanty, has neither clean water nor safe sanitation, and is without the necessary support either from health services, or from her society, or from the father of her children”.

- Vulimiri Ramalingaswami, “The Asian Enigma”

Women’s health is very important for the development of any country. She takes care of the health of the whole family. Woman is the pilot around which a family rotates. Good health of the children depends on the good health of their mothers. As Jawaharlal Nehru put it, ‘one can tell the condition of a nation by looking at the status of its women’. Thus, women’s good health is the top indicator of any country’s overall development. Yet, women are discriminated against from womb to tomb. In most Indian families, a daughter is seen as a liability, and she is made to believe that she is inferior and secondary to men. Sons are considered as assets to their families. ‘May you be the mother of a hundred sons’ is a common Hindu wedding blessing. According to Manu, ‘In childhood a female must be subject to her father, in youth to her husband, when her lord is dead, to her sons; a woman must never be independent’ (Jain et al, 1997: 39).

In all fields, women experience inferior status. Women suffer from hunger and poverty in greater numbers and to a great degree than men. Looking at the situation of hunger and poverty in India, there are seven major areas of discrimination against women (Singh, 2012). They are as follows -

- **Malnutrition:** Malnutrition is the one of major problems in India because in India, women eat last and least all throughout their lives, even when pregnant and lactating. Malnourished women give birth to malnourished children and this way the cycle continues.
- **Poor Health:** Women take less healthcare than men in India. Most of the pregnant women are dying during child birth in India. Working conditions and environmental pollution also affect women’s health.

- Lack of Education: In India, families are less likely to educate girls than boys, and more likely to pull them out of school because of fear of violence.
- Overwork: Women work longer hours and their work is more labourious than men's, yet their work is unrecognized.
- Unskilled: Women's primary employment is in agriculture which is an unskilled job.
- Mistreatment: Now a days there has been increase in violence against women in India, in terms of rapes, assaults and dowry related murders. Fear of violence overcomes the desires of all women. Female infanticide and sex-selective abortions are other forms of violence that affect Indian society.
- Powerlessness: Women lack the social power to decide whom they will marry, and are sometimes married off as children.

Among all the above dimensions, this research aims to understand the health component of women. In general, people, and society at large underestimate the importance of women's health. Women have high mortality rates, particularly during childhood and in their reproductive years (Chandrasekhar, 2014).

Better health of women is essential not only for women but also for their families. Women in poor health status are more likely to give birth to underweight babies. In traditional families in developing countries like India, women are the only caregivers to children and elderly. Finally, a woman's health affects the entire household's economic wellbeing, as a woman in poor health will be less productive in the labour force (Victoria, 1998).

Among all dimensions, the health of women is neglected the most. In many families, the health of women is neglected due to traditional practices prevalent in India. The health of women is given less importance than men.

There may be several reasons why women's health is considered as inferior to men. **Firstly**, women's health is affected directly or indirectly by social evils like polygamy, infanticide, child marriage, widowhood, rape, harassment, violence, illiteracy, malnutrition, unemployment, underemployment, exploitation, child labour, dependency, dowry, sati, prostitution, trafficking, the Devadasi system and divorce etc. **Secondly**, poverty is one of the major factor affecting women's health. Near about 70 percent of world's poor are women. Women in developing countries

including India are not engaged in paid jobs as majority of them are involved in household chores, or household agricultural activities without direct economic benefits. Most women are also working in unorganized sectors with more return in “kind” rather than “cash”. Poor women are more likely to face frequent illness because of poor nutrition, bad living conditions and reduced access to health care. When they get sick, they miss work or lose job, then they become poorer. They live in poor conditions in villages and slums. Overwork with low wages, fatigue, restlessness, inadequate and non-nutritious diet, ignorance of diseases and medical care affects health of women in lower strata. With raising life expectancy among women, number of women living in old age is increasing continuously. These group of women irrespective of their economic conditions, experience higher level of disability, depression and poor quality of life at later stages of their life. **Thirdly**, lack of education and awareness coupled with poor decision making power leads to poor health among women. There is also a strong correlation between illiteracy and women’s health. Children of illiterate mothers are twice malnourished compared to children of literate mothers. The education and place of residence also has a direct role in morbidity and mortality among women (Kushwah, 2013). They lack knowledge of hygiene and environment which affects their health. Slum and rural women are more in contact with poor quality water so they are regularly affected by water borne diseases and pollution. **Finally**, climate change also affects women’s health (Balambal, 2011). Due to climate change, women need to work for longer hours to fetch water and wood for fuel and they tend to suffer more in natural disasters as well.

1.1 Importance of antenatal care in women’s health

Pregnancy is one of the most important periods in a woman’s life because she is producing another human being. For this reason, a mother is allowed the highest importance in Indian society. As the greatest poet of the modern India Rabindra Nath Tagore says, mother is the *‘living God on the earth’*.

Antenatal care is the care a pregnant woman receives during her pregnancy. It helps for the better growth of foetus as well as the health of pregnant women. The main aim of antenatal care is to reduce maternal and infant mortality, causes due to pregnancy (Park, 2007).

There are different components to ANC. The first component is that pregnant women should visit health facilities at least once a month during the first 7 months, followed by at least twice a month during the next month and thereafter, at least once in a week, if everything is determined to be normal by the doctor. Second component of antenatal care is that pregnant women should receive two doses of tetanus toxoid at the time of pregnancy, first dose at 16-20 weeks, followed by second dose at 20-24 weeks of pregnancy. The minimum interval between the 2 doses should be one month. The second dose should be preferably given one month before the expected date of delivery. Third component of antenatal care is that pregnant women should consume 100 or more Iron and Folic acid tablets during their pregnancy. It is the only vitamin supplement that is recommended for pregnant women. Folic acid is very essential for the development of healthy red blood cells and it decreases the chance of a baby being born with neural tube defects. A baby's brain and spinal cord are formed from the neural tube very early in the pregnancy. It is thus important for pregnant women to start taking folic acid before pregnancy or as soon as pregnancy is confirmed. It should be continued for at least the first 12 weeks (Park, 2007).

Food and iron supplementation have great and crucial impact on maternal health. Consumption of nutritious food increases the weight of mother, reduces occurrence of anemia and related complications during pregnancy while increasing the weight of the child. Further, child survival is correlated with weight at birth which is in turn correlated to the weight gain of the mother during pregnancy. On average, a normal healthy woman gains about 12 kg weight during pregnancy. Several studies have indicated that weight gain of poor Indian women averaged around 6.5 kg during pregnancy. Thus, pregnancy necessitates the need for considerable extra calories and nutrition requirements (Dawn and Mitra 1990; Iyengar 1975).

Blood pressure measurements and urine analysis are also very essential during antenatal care visits. Identifying pregnancy related hypertension requires at least one blood pressure reading before the twentieth week of pregnancy. This requirement necessitates at least one early or first trimester antenatal care visit (Carroli et al. 2001). In the course of routine antenatal care, women can be screened and treated for sexually transmitted and urinary tract infections that may lead to preterm birth or may complicate delivery (Jowett, 2000). Several other indirect infections can cause

maternal mortality and morbidity, including HIV/AIDS, hepatitis, malaria and tuberculosis. These can also be detected and treated during antenatal care visits.

If a basic obstetric history is collected during antenatal care, women at risk for complicated deliveries can be referred to health centres and hospitals. In late pregnancy, antenatal visits can help to identify women at risk for difficult deliveries so that they can be directed to appropriate delivery care (Carroli et al. 2001).

A final important function of antenatal care visits is to encourage women to choose institutional delivery care, that is, “skilled attendance’ during child birth (Gay et al. 2003; Barber 2006). Skilled attendants include midwives, doctors and nurses with expertise in managing normal deliveries and diagnosing, managing or appropriately referring obstetric complications (WHO et al. 1999). A review of the evidence in support of skilled assistance at delivery suggests that 16 to 33 percent of all maternal deaths could be avoided through prevention of the four main life threatening obstetric complications - obstructed labour, eclampsia, sepsis, and hemorrhage by skilled attendants (Graham et al. 2001).

Most of the maternal deaths occur after child birth and mostly within 24 hours of delivery. About a quarter take place during pregnancy and about 15 percent occur at the time of delivery. The common complications during pregnancy and labour are obstructed labour, hemorrhage, eclampsia, infection and abortion (Pillai, 1993). Most of these complications, along with anemia, account for the overwhelming majority of all maternal deaths reported from developing countries (WHO, 1991).

Maternal mortality is a leading cause of premature death and disability among women of childbearing age in developing countries (Lopez et al. 2006). The maternal mortality ratio (MMR) exhibits the greatest disparity between developed and developing countries of all the commonly used human development indicators (Mora and Nestel 2000).

The regional variations in the deaths of mothers in the states of Uttar Pradesh, Bihar, Jharkhand, Madhya Pradesh, Chattisgarh, Odisha, Rajasthan and Assam show that the percentage of maternal deaths is 6 times higher than in the Southern states. Taken together the EAG States and Assam account for 257 as the maternal mortality ratio

shows in Table 1.1. Schemes for nutrition, supplementary feeding, literacy, the right to educations and health care remain hollow expressions without any meaning as long as women (and chiefly adolescents) have no control over pregnancy (Chandra, 2012).

Table 1.1 Levels of Maternal Mortality Ratio by States in India, 2010-12

India /States	Maternal Mortality Ratio per 100,000 live birth
India	178
Assam	328
Bihar/Jharkhand	219
Madhya Pradesh/Chhattisgarh	230
Odisha	235
Rajasthan	255
Uttar Pradesh/Uttarakhand	292
EAG* states and Assam	257
Andhra Pradesh	110
Karnataka	144
Kerala	66
Tamil Nadu	90
Southern States	105
Gujarat	122
Haryana	146
Maharashtra	87
Punjab	155
West Bengal	117
Others	136
Other States	127

*EAG (Empowered Action Group) states are Bihar, Jharkhand, Chhattisgarh, Madhya Pradesh, Orissa, Rajasthan, Uttar Pradesh and Uttarakhand.

Source: Special Bulletin on Maternal Mortality in India 2010-12 (SRS, 2013) Office of Registrar General, India.

Importance of antenatal care is also due to its impact on infant mortality rate. Proper health care during antenatal, natal and postnatal periods drastically reduce incidents of infant mortality. Health of mothers is very vital for not only the well-being of mothers, but also for the well-being of infants. It is a major endogenous determinant of infant mortality. A woman with poor health condition may deliver a weak child and immediately the probability of the child's survival becomes very low. In contrast, a woman who is healthy and takes nutritious diet and proper medical care will deliver a healthy child with high probability. Pregnant women also have to take regular advice from the doctor regarding her health and also to facilitate the healthy development of the foetus, she has to take iron and folic acid tablets apart from taking T.T. immunizations. Non-utilisation of medical facilities during pregnancy leads to very high occurrence of infant mortality. Medical check-ups by pregnant women on regular

intervals during each trimester of pregnancy is very important for the well-being of both mothers and new born babies. Frequent medical check-ups help to identify pregnancy complications and to closely monitor the health conditions of pregnant women (Bajkhaif & Mahadevan, 1993). Prenatal and neonatal mortality are overwhelmingly due to maternal factors, especially poor nutrition and inadequate ante and intra-natal care. Various studies report that premature birth and low birth weight are directly responsible for about one-quarter of all infant deaths and are associated factors in about 50 percent of all neonatal deaths (Roy Choudhary and Jayaswal 1989; Agarwal and Agarwal 1987; Singh and Paul 1988).

1.2 Work status of women

A worker, according to the 2011 Census, is a person whose main activity was participation in any economically productive activity. Such participation could be physical or mental in nature. It also included unpaid work on farms or in family enterprises. Workers were mainly classified as main and marginal workers on the basis of their work. Those workers who had worked for the major part of the year were called as main workers. Major part of the year meant six months (183 days) or more. Those who had not worked for the major part of the year were called as marginal workers. A person who worked on another person's land for wages in money, kind or share of crop was regarded as an 'agricultural labourer'.

Table 1.2 Total workers in India according to 2011 Census

Population/ Workers	Persons	Male	Female	
Total	Population	1,21,05,69,573	62,31,21,843	58,74,47,730
	Workers	48,17,43,311	33,18,65,930	14,98,77,381
	Percentage of Workers	39.79	53.26	25.51
Rural	Population	83,34,63,448	42,76,32,643	40,58,30,805
	Workers	34,85,97,535	22,67,63,068	12,18,34,467
	Percentage of Workers	41.83	53.03	30.02
Urban	Population	37,71,06,125	19,54,89,200	18,16,16,925
	Workers	13,31,45,776	10,51,02,862	2,80,42,914
	Percentage of Workers	35.31	53.76	15.44

Source: Office of the Registrar General, India. Note: Workers include both main workers and marginal workers

Table 1.3 Percentage of female main workers to total female population under broad categories- 1981-2011 Census of India

Census Year	Percentage to Total Female Population				
	Female main workers	Cultivators	Agricultural Labourers	Household Industry	Other workers
1981	13.99	4.65	6.46	0.64	2.24
1991	15.93	5.51	7.05	0.55	2.82
2001	14.68	5.11	4.51	0.95	4.11
2011	25.5	24.0	41.1	5.7	29.2

Source: Office of the Registrar General, India.

Table 1.2 reveals that workers constituted 39.7 percent of total population whereas the ratio of female workers was 25.5 percent. In rural areas more around 30 percent women were working whereas in the urban areas it was 15.4 percent respectively. Table 1.3 shows that the percentage of women under all categories of workers have increased in 2011 as compared to 2001. In agriculture sector more women were working compared to 2001 census. States and Union Territories ranked according to female work participation rate as per 2001 and 2011 census is shown in Table 1.4. Table reveals that the state of Himachal Pradesh had highest female work participation rate (44.8 percent), whereas Delhi had the lowest female work participation rate (10.6 percent). According to the census of 2011, the female work participation rate in Odisha is less (27.2 percent) compared to other bigger states like Maharashtra, Madhya Pradesh, Karnataka, Tamil Nadu, Andhra Pradesh and Rajasthan.

Table 1.4 States and Union Territories ranked according to female work participation rate 2001 and 2011 Census.

Sr. No.	State/ Union Territories	Female Work Participation Rate		Rank in	
		2001	2011	2001	2011
1	Himachal Pradesh	43.7	44.8	2	1
2	Nagaland	38.1	44.7	7	2
3	Chhattisgarh	40	39.7	3	3
4	Sikkim	38.6	39.6	6	4
5	Manipur	39	38.6	4	5
6	Mizoram	47.5	36.2	1	6
7	Andhra Pradesh	35.1	36.2	10	7
8	Arunachal Pradesh	36.5	35.4	8	8
9	Rajasthan	33.5	35.1	11	9
10	Meghalaya	35.1	32.7	9	10
11	Madhya Pradesh	33.2	32.6	12	11
12	Karnataka	32	31.9	13	12
13	Tamil Nadu	31.5	31.8	14	13
14	Maharashtra	30.8	31.1	15	14
15	Jharkhand	26.4	29.1	19	15
16	Odisha	24.7	27.2	20	16
17	Uttarakhand	27.3	26.7	17	17
18	Dadra & Nagar Haveli	38.7	25.3	5	18
19	Tripura	21.1	23.6	23	19
20	Gujarat	27.9	23.4	16	20
21	Assam	20.7	22.5	24	21
22	Goa	22.4	21.9	22	22
23	Jammu & Kashmir	22.5	19.1	21	23
24	Bihar	18.8	19.1	26	24
25	Kerala	15.4	18.2	32	25
26	West Bengal	18.3	18.1	28	26
27	Haryana	27.2	17.8	18	27
28	Andaman & Nicobar Islands	16.6	17.8	30	28
29	Puducherry	17.2	17.6	29	29
30	Uttar Pradesh	16.5	16.7	31	30
31	Chandigarh	14.2	16	33	31
32	Daman & Diu	18.6	14.9	27	32
33	Punjab	19.1	13.9	25	33
34	Lakshadweep	7.3	11	35	34
35	Delhi	9.4	10.6	34	35

Source: Office of the Registrar General, India

1.2.1 Factors that affect work status of women

Women's work status is measured as one of the most important factors describing women's lives, it affects their economic roles, their status in households, their fertility levels and the utilisation of healthcare services (Acharya and Bennett, 1983; Bruce and Dwyer, 1988; Desai and Jain, 1994).

In India, seventy percent population live in rural areas and majority of India's female labour force work as landless agricultural labour. These women struggle for gaining

food, fuel and water for their families (Wijaya, 1993). In India, female labour force is focused in the informal sector, mainly as domestic servants, construction labour and casual labour in urban areas. Only ten percent of the female labour force is employed in industries. Women's labour is always a flexible resource (Banerjee, 1992). More than 70 percent of female labour force is in the unorganized sector which means long hours of work, wage differentials and no security (Gandhi and Shah, 1992).

The major factors that affect work status of women are caste, marital status, education, gender, wage rate and working conditions.

Among SC women, rate of self-employment is quite low. Mostly they are wage labourers in unorganized sector, thus not getting any benefits that workers in the organized sector are getting. Exploitation increases as they are not organized. They have to work in jobs with low status and there is no certainty of work. Times of shortage of labour bring them in the labour market. In the absence of permanent employment, they are mostly dependent upon family members and do not have economic freedom. SC/ST women mostly perform agricultural jobs. Their low social status, illiteracy, unskilled nature forces them to undertake manual jobs. SC/ST women can be grouped into four categories of workers viz. domestic and home workers who cook, wash, clean home, and look after children, workers in agricultural and cottage industries, manual and unskilled labourers in factories, mines, plantation, construction and building work. In urban areas, most of the household work is done by SC/ST women and very few are professional workers. In rural areas, SC/ST women work on agricultural fields. In short, most of SC/ST women are manual and unskilled labourers working on farms, cottage industries and performing domestic work in the houses of rich people and have to perform menial services. Thus, they have to do all types of inferior jobs for earning money to support their poverty stricken families (Jadav, 1995).

The lack of literacy among women is one of the major factor for less work participation among women because less educated women will get work in unorganized sector like construction work, daily wage labourer or as domestic servant. In this sector women have to do hard work with low wages. Those who are from lower economic status are working for the family survival or for the household expenditure.

Marriage as a factor affects levels of labour force participation. Married women are less likely to participate in labour force because their lives are more committed to domestic functions, childbearing and child rearing. Women working outside their home affects the health of their children due to lack of proper care. (Balu and Robins, 1989).

Women workers are facing number of stresses like sexual harassment, being jobless, gender-based discrimination, proneness to different health hazards, physical problems, insomnia, nausea, headache, and other adverse outcomes. It is seen that at the work place they do not have any privacy for sanitation. Both male and female workers work together. Due to free mixing with the male co-workers they might also get sexually transmitted diseases (Tiwari and Ganopadhyay 2011).

Women also work for longer hours than men. They work along with men and additionally on domestic work. Their health is neglected because of their heavy working schedule and are prone to frequent illness. Wages for men are higher than those for women for the same type of jobs (Jadav, 1995). SC/ST women are often discriminated against wage employment programmes and they do not get continuous assured work which they need badly but generally only find work in times of scarcity of workers. The labour market is not neutral to men and women. Gender inequalities exist in almost all sections. The division of labour is highly sex biased. Gender inequalities are also marked in acquirement of education and vocational skills. There is a high degree of discrimination in wage rates. In most of the states, SC/ST women workers are paid unequal wages for equal work in comparison to men. In most states, minimum wage rate is not provided to SC/ST women workers. The terms and conditions of work are not in favour of SC/ST women.

1.2.2 Impact of work status on health

Women work for longer hours than their male counterparts. Most women spend a greater deal of time working outside the home. They fail to fulfill the responsibility towards their children and cannot take good care of their children. More than 80 percent of SC/ST women work in agricultural sector (Jadav, 1995). This sector is unorganized and does not have facilities of social securities as found in other industries and in organized sector. They do not get benefits like leave, medical support, P.F., gratuity etc. SC/ST women have to go to fields for work with their

infant children because in villages there is no facility of crèches. Hence, they have to bring their children in open fields. In fields, there are no facilities of shelter, pure drinking water and other minimum requirements. Sometimes women are not allowed to go to their children for feeding them during work hours. Sometimes landlord/employers do not prefer such women as agricultural labourers. In spite of hard work, inside and outside, they are humiliated, beaten up by their husbands. Her contribution to family income and national income remains largely invisible and undervalued (Jadav, 1995).

Researcher Tara Ali Baig has made some observations, 'In construction work which has mushroomed in the last two decades in all the big cities, contractors feel no responsibility for care of babies though they employ large numbers of women for carrying and coolie work. The babies consequently lie about on sand piles, earth or stones which become dusty, dangerous playground for toddlers and a nearby tree serves as a cradle with father's turban tied to the branches from which the youngest dangles' (Tara Ali Baig, 1976).

As these women construction workers have to work outside more than eight hours, they have to complete household work before they start for their work outside. Similar situation is pointed out in a study of Karnataka state where 'quite often they have to complete several other work including cooking and leave home quite early. After the work they return home tired and then attend to the household work. This has to be done on a routine basis' (Mumtaz Ali Khan Noor Aysha, 1982). Naturally, these women, due to their vigorous nature of work, 81 percent of them were facing pains in different parts of the body.

The conflict between women's (economic) earning role and (biological and social) mothering role results to some degree of squeeze on child care, with consequences for child health and nutrition. Within the household, women play an important part in healthcare. They are responsible for water supply, environmental hygiene, food preparation, and preventive health activities.

The women work participation in labour force has both positive and negative impact on child survival. Women employment have greater control over financial resources, increased exposure and access to relevant information about child bearing and child rearing practices and also get more knowledge about nutritive, medical and survival

needs of children. Whereas due to lack of time, working women are unable to take care of their children fully and shortened breastfeeding which affects the nutrition and health of children (Kumar 1977; Mencher 1988).

1.3 Rural Urban differentials in healthcare utilization

Rural poor and urban poor face the same kind of problems. In rural areas, there are no transport facilities, no health facilities and in some rural areas, there is no electricity, whereas there is availability of electricity and health facilities in urban areas. However, urban poor cannot access them due to lack of money. In rural areas, major source of income is agriculture but in urban areas there are more job opportunities but due to lack of skills, it is difficult for many to get work. People living in rural areas have more space as they are less populated than urban poor areas. The present study thus highlights more on rural and urban poor women of Odisha.

Rural women's health is affected by different factors operating at different levels. Poverty among rural women has a distressing impact on their health. Many pregnant rural women cannot afford the costs related with facility based care, or to travel to reach a facility or the lost income of those accompanying the woman, and so do not receive adequate care. Poverty can cause delays in seeking suitable health services until a condition reaches its most critical stage. Literacy and education also play a role in rural women's health status (Johnston, 2003).

Culture and society have a greater role in rural women's health status and access to services. Socio-cultural norms and blind belief also cause injury to one's own or another person's health and well-being. Long standing and gender inequalities also impact rural women's health in Asia. Domestic violence by husband or by in-laws also affect psychological and physical health of rural women. Women's lack of decision-making power also create problems to their health. Early marriage is more common in rural areas and this can negatively impact their health and well-being (CARM-Asia, 2006). Pregnancy at early ages have negative impacts on rural women's health (Solomon, S. et al, 1998).

Urban poor people are also facing problems, such as living in overcrowded and unsanitary conditions, face poor access to jobs and training, irregularity of wages/labour, highly dependent on public goods and services, violence against

women, youth under-employment/unemployment, alcoholism, drug abuse and malnutrition. Beyond these problems, there are specific groups of the urban poor who face additional vulnerabilities. These include young children and women. Health facilities are also lacking in these areas. Due to the high cost of treatment and non-availability of public medical services, the poor are suffering from many diseases like tuberculosis, fever, cough, cold, measles, stomach disorders, diarrhea, hook worms, malaria, typhoid etc. India has the largest number of poor living in the urban areas compared to any other country in the world. High population densities, poor shelter, lack of adequate supply of water and its poor quality, inadequate or non-existent sanitation facilities, poor drainage and solid waste disposal characterize the living environment of the urban poor (Tewari and Raghupathi, 2004).

1.4 Health Services in Odisha

Odisha, is a major state in eastern India. Due to socio-economic development and better health care services there has been a gradual improvement in the health status of the population in Odisha. The health system in Odisha is provided by the public sector. The private sector has limited role. Health ecosystem of Odisha is affected by geographic inaccessibility of health services, cultural barriers, ignorance of health practices and poor service quality (Shekhar, 2016).

Table 1.5 Average population covered by Health Facility by Districts, Odisha, 2012-13, DLHS-4

Districts	Average Population covered by		
	Sub-Health Centre (SHC)	Primary Health Centre (PHC)	Community Health Centre (CHC)
Bargarh	6,813	25,270	1,05,130
Jharsuguda	6,011	18,288	75,852
Sambalpur	5,063	17,607	60,863
Debagarh	7,150	17,657	75,325
Sundargarh	3,823	24,987	1,28,152
Kendujhar	5,354	25,573	1,16,804
Mayurbhanj	4,746	25,672	91,693
Baleshwar	8,683	36,568	1,50,304
Bhadrak	8,332	31,693	2,05,717
Kendrapara	6,891	30,731	1,60,801
Jagatshinghapur	7,975	24,991	1,33,869
Cuttack	6,607	30,952	1,05,747
Jajapur	7,120	32,450	1,63,940
Dhenkanal	7,351	26,168	1,30,575
Anugul	7,822	56,931	93,806
Nayagarh	6,173	19,308	74,147
Khorda	6,872	38,884	96,367
Puri	6,207	26,723	1,32,916
Ganjam	7,744	27,280	1,29,126
Gajapati	4,803	19,888	70,719
Kandhamal	5,156	15,986	55,993
Baudh	6,581	60,820	2,31,469
Sonarpur	6,767	35,327	1,01,483
Bolangir	6,993	28,063	1,21,592
Nuapada	7,122	28,331	1,20,848
Kalahandi	6,897	22,013	97,056
Rayagada	3,829	21,091	75,740
Nabarangapur	4,384	35,000	97,275
Koraput	3,988	28,721	95,877
Malkangiri	4,104	15,587	84,264
Odisha	6,345	28,400	1,11,668

Source: International Institute for Population Sciences, Mumbai, 2014

Sub-Health Centres (SHCs) are the health institutions providing to the health care needs of the rural population. It is the most outer contact point between the Primary Health Care system and the community. It is operated by one multipurpose worker (male) and one multi-purpose worker (female). Under the facility's survey during 2012-13, a total of 1,493 SHCs were surveyed from 30 districts in Odisha. Out of the 1,493 SHCs, average population covered by a SHC was 6,345. The highest average population covered (8683) among the surveyed SHCs was in Baleshwar district and the lowest (3823) was in Sundargarh district and it was slightly lower as per the prescribed government norms (Table 1.5).

Table 1.6 Key indicators of health facilities Odisha according to DLHS-3 and DLHS-4

Indicators	Number/ Percentage	
	DLHS-4	DLHS-3
Health facilities covered		
Number of Sub-Health Centres	1,493	1,053
Number of Primary Health Centres (PHC)	566	470
Number of Community Health Centres (CHC) including Block PHC	360	229
Number of Sub-Divisional Hospitals (SDH)	26	NA
Number of District Hospitals (DH)	29	30
Availability of Health Infrastructure, Staff and Services at (%)		
Sub-Health Centre		
Sub-Health Centre located in government building	51.4	60.0
Sub-Health Centre with ANM	94.8	78.1
Sub-Health Centre with male health worker	58.7	59.8
Sub-Health Centre with ANM residing in Sub-Health Centre quarter where facility is available	69.1	40.6
Sub-Health Centre with additional ANM	7.4	51.5
Primary Health Centre (PHC)		
PHCs functioning on 24 X 7 hours basis	12.5	49.2
PHCs having Lady Medical Officer *	4.6	53.2
PHCs with at least 4 beds	39.5	31.3
PHCs with AYUSH doctor *	80.1	54.9
PHCs having residential quarter for Medical Officer	54.2	53.4
PHCs having new born care services on 24 X 7 hours basis	60.9	55.4
PHCs having referral services for pregnancies/delivery on 24 X 7 hours basis	38.0	39.0
PHCs conducted at least 10 deliveries during last one month on 24 X 7 hours	44.3	26.4
Community Health Centre (CHC)		
CHCs having 24 X 7 hours normal delivery services	99.7	79.0
CHCs having Obstetrician/Gynaecologist	35.3	87.3
CHCs having Anaesthetist	6.4	50.7
CHCs having functional Operation Theatre	43.1	59.4
CHCs designated as FRUs	28.1	53.7
CHCs designated as FRUs offering caesarean section	16.8	15.5
CHCs having new born care services on 24 X 7 hours basis	79.7	53.7
*Out of total medical officer		

Source: International Institute for Population Sciences, Mumbai, 2014

At the state level, the proportion of SHCs contained in government buildings which were getting water supply through piped, bore-well, hand pump or any other sources was 73 percent. The lowest water supply (31 percent) was noted in Balangir district followed by Sundargarh (38 percent) and Kendujhar (39 percent). The water supplies at surveyed Sub Health Centres were much below the state average in 10 districts

namely Sundargarh, Kendujhar, Mayurbhanj, Bhadrak, Jajapur, Dhenkanal, Gajapati, Balangir, Nuapada and Koraput. Only twenty two percent of the SHCs, which were functioning from government buildings in Odisha, were having regular electricity facility. Nearly forty percent of the surveyed SHCs did not have toilet facility in the state. In Odisha, out of 566 surveyed PHCs, only 13 percent were functioning on 24 hours basis (Table 1.6). Forty percent of the PHCs had regular electricity supply. Functional vehicles were not very common, with only 11 percent of the PHCs having functional vehicles. In 21 percent of the PHCs, even one bed was not available. A gynecologist/obstetrician was available in just 35.3 percent of the CHCs in DLHS-4. While that of pediatrician was about 18.6 percent of CHCs, out of 360 surveyed CHCs, only 7 percent of the CHCs had Anesthetic and only 35 percent of the CHCs had Public Health Manager position.

1.5 Government of India's focus on maternal and child health

Government of India launched Janani Suraksha Yojna under the National Rural Health Mission to reduce maternal and child death in India. It was launched in 2005. In this Scheme Government was providing financial assistance to the pregnant women who delivered their baby at Government hospital.

A new initiative namely Janani Shishu Suraksha Karyakaram (JSSK) was launched in June 2011 which provides free facilities to pregnant women and sick new born till 30 days after birth, including C-Section, drugs and consumables, diagnostics, diet during stay in the health institutions, provision of blood, exemption from user charges, transport from home to health institutions, including transport between facilities in case of referral and free drop back home after 48 hours stay.

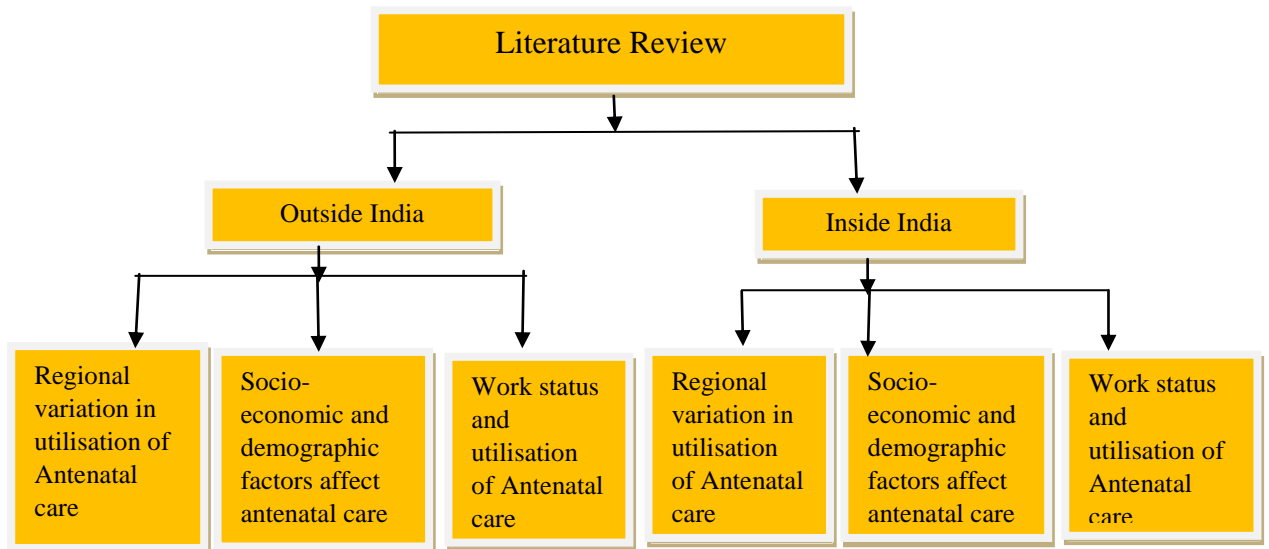
Village Health and Nutrition Day (VHND) is a national programme introduced by National Rural Health Mission and is an important platform for providing Reproductive and Child Health services at the village level. In Odisha, VHND is known as Mamata Diwas and it is conducted at Anganwadi centre (AWC) level on a monthly basis, covering pregnant women, lactating mothers, and children below 5 years and adolescent girls as primary beneficiaries. As per national guidelines, immunization takes place on the VHND but taking into account the current practice in the state, immunization is conducted on another fixed day rather than on VHND.

Basic components of primary healthcare services, including early registration, deworming, counseling on early breastfeeding, identification and referral of high risk cases of children and pregnant women, as well as basic ANC and PNC care will be provided at community level in order to address the essential requirements of pregnancy, delivery, referral, childhood illnesses and adolescent health. The programme would be organized once a month in every Anganwadi centre on a fixed day basis (either Tuesday or Friday) with joint efforts of ANM, AWW and ASHA. On an average, there are six to eight AWCs under the operational jurisdiction of one Sub Centre and thus there would be about eight fixed days in a month per Sub Centre. There should be advanced fixation of the day with all AWCs for the entire month, so that the service providers and the community are aware of it much in advance. In urban areas, it is known as Urban Health and Nutrition Day. After September, 2011, the “Mamata” scheme was launched in Odisha. In this scheme, the beneficiaries are getting financial assistance of Rs. 5000 in the period of their pregnancy and Rs. 1400 for institutional delivery in rural areas and Rs. 1000 for urban areas.

Bolangir, one of the most backward regions of Odisha in the Kalahandi-Bolangir-Koraput (KBK) region and in its district hospital, it was found that against a capacity of only 25 beds, on an average 75 women are admitted and have to wait for hours before delivery because the labour room can accommodate only three patients at a time and once out of the labour room, women are kept in the leaking and clammy corridors with newborns because of non-availability of beds. Women are not surprised when they are discharged from hospital within hours of delivering to accommodate new delivery cases and neither do the family members mind because they would get the money under the Janani Suraksha Yojana as would the Accredited Social Health Activist for bringing the women to the hospital. The lactating mothers may die even before reaching home due to postnatal complications but it would be counted as an institutional delivery. On arrival at a health facility, they are expected to buy everything else needed for the delivery. Still, the Centre has made some progress on maternal and child health in the country. Some of these measures have already started showing results with an appreciable decline in maternal mortality ratio and infant mortality rate, while the impact of some other schemes should be visible in the coming years (Dhar, 2012).

1.6 Literature Review

Different studies from time to time on different regions have tried to identify the factors responsible for women receiving antenatal care. Thus, there have been studies to find factors that affect antenatal care among women. The literature review is based on the below diagram.



1.6.1 Studies outside India

1.6.1.1 Demographic and Socio-Cultural Factors

Education

It has been shown that *maternal education* positively related with the utilisation of maternity care services (Addai, 2000). A cross sectional study conducted in Nepal using Nepal Family Health Survey has found that utilisation of antenatal care was positively associated with pregnant women's *education and household economic status* (Matsumura and Gubhaju, 2001). A cross sectional study in Turkey has shown that utilisation of ANC was positively associated with *education, occupation and among high parity* pregnant women (Erci, 2003). A prospective cohort study conducted by Ciceklioglu in Turkey found that level of *education, husbands occupation, maternal age* negatively affect antenatal care utilisation (Ciceklioglu et al. 2005). Women in higher socioeconomic groups more frequently use maternal

health services than women in the lower socio-economic groups and factors such as *education* appear to be important mediators (Addai, 2000).

Economic status

From the study in Kenya, by using cross sectional demographic and health survey it was found that utilisation of antenatal care was positively associated with *high socio-economic status* of pregnant women whereas unwanted pregnancy and being married were negatively associated with less antenatal care utilisation (Magadi et al. 2000). In Indonesia, research shows that among women who delivered at home, those from *non-poor households* were significantly more likely to have delivery assistance from trained providers than those from *economically more deprived households* (Thind and Banerjee 2004). Other studies show that the use of trained attendants during delivery among women and the rates of cesarean delivery were much higher for women from the top quintile than for poorer women (Hatt et al. 2007).

Region

A large-scale community and family survey concluded that although a number of socio demographic factors are important in urban areas, they are of less relevance in rural parts of the study area. Socio demographic factors including parity, age, and education appeared to influence the use of maternity care services in urban areas. In contrast, distance and travel time were identified as important factors in rural parts of the country (Mekonnen, 2002). Studies from all parts of the world consistently reveal that women in urban areas and women with more education and higher household incomes are more likely to obtain antenatal care and use skilled attendants at delivery (Abbas and Walker, 1986). These effects remain significant when other factors such as parity, health insurance, access to care, and quality of care are controlled. Most of the multi-country studies indicate that the utilisation of maternal and child health care services largely varied from rural areas to urban poor and non-poor. However, the urban poor receive better antenatal care and service delivery care than rural residents but the care of urban poor was worse than non-poor (Wagstaff, 2002). A cross sectional study conducted by Sharma in Nepal found that women residing in *urban areas and high economic status* positively affect the use of antenatal care (Sharma, 2004).

Age at Marriage

Cross sectional study in Bangladesh found that women below 18 years started antenatal care early. *Age* affects utilisation of antenatal care (Bhatia and Cleland, 1995). The study showed that the risk of nonattendance was higher for pregnant women who were first pregnant between the *ages of 10 and 18* (Kwast and Liff, 1988). In a nationally representative sample survey in Ethiopia, receipt of maternity care was found to vary by *age, residence, and other socio demographic factors* (CSA, 1993).

High Parity

A study conducted in Guatemala by using Guatemala Family Health Survey has observed that *high parity and long distance to the facility* were associated with low utilisation of antenatal care (Glei et al. 2003). A cross sectional study in Ecuador has shown that knowledge has positive influence on utilisation of antenatal care while unwanted pregnancy, parity, rural residence negatively influenced utilisation of antenatal care (Paredes et al. 2005).

Status of women

From the study it was found that the *status of women*, low level of education among women, poverty and poor sanitary conditions, high level of fertility and teen age fertility, low level of contraceptive use and low level of utilisation of reproductive and child health services are associated with high level of maternal mortality (Choe and Chen, 2006; Royston and Armstrong, 1989). A cross sectional study conducted in Nepal showed that mother-in-laws and illiteracy negatively affect utilisation of antenatal care (Simkhada et al. 2010). From a prospective cohort study in South Africa, it was found that *male involvement* in antenatal care was acceptable and feasible (Mullick et al. 2005). A study conducted in Taiwan observed that spouses and mother-in-laws influenced decisions about where and whether to go for antenatal care, loneliness as well travel distance to the health facility also affects utilisation of antenatal care (Lee et al. 2009). From the study in Uganda, it was found that *male involvement* positively affects utilisation of antenatal care (Byamugisha et al. 2011).

Cultural practices

From the cross sectional study in Malawi, it was concluded that *cultural beliefs and unplanned pregnancies* were factors that affect utilisation of antenatal care (Chiwaula, 2011). A cross sectional study conducted in Zimbabwe found that long distance and cultural beliefs had greater negative impact on utilisation of antenatal care (Mathole et al. 2004). From a study in Africa, it has found that the *cultural backgrounds* of the woman affect utilisation of maternity care services (Leslie and Gupta, 1989; Pelto, 1987). Cultural perspectives on the use of maternal health services suggests that medical need is determined not only by the presence of physical disease but also by cultural perception of illness (Addai, 2000). In most African rural communities, maternal health services coexist with indigenous health care services; therefore, women must choose between the options (Addai, 2000). The use of modern health services in such a context is often influenced by individual perceptions of the efficacy of modern health services and the religious beliefs of individual women (Adetunji, 1991). Availability of women's time is also important. In developing countries, women spend more time on their multiple responsibilities for care of children, collecting water or fuel, cooking, cleaning, growing food, and employment than on their own health (World Bank, 1994a).

Accessibility of health services

It has also been shown that *accessibility of health services* is an important determinant of utilisation of health services in developing countries. In most rural areas in Africa, one in three women live more than five kilometers from the nearest health facility (World Bank, 1994b). The scarcity of vehicles, especially in remote areas and poor road conditions can make it extremely difficult for women to reach even relatively nearby facilities. Walking is the primary mode of transportation, even for women in labour (World Bank, 1994b). From a cross sectional study in Pakistan it was found that uncomfortable transport, poor road conditions and difficulties in crossing big rivers were barriers to utilisation of antenatal care (Mumtaz and Salway, 2005). Another retrospective community study in Uganda has shown that distance to the health facility and inadequate media exposure contributes to low utilisation of antenatal care (Tann et al. 2007).

1.6.1.2 Work status of Women

From a cross sectional study in Egypt using Egypt Demographic and Health Survey, it was found that *work status of women* has greater impact on utilisation of antenatal care. Women who works for cash were more receiving at least four antenatal care visits compared to women those who were not work for cash (Jaky et al. 2009). But a study conducted in Bangladesh shows different results that working women were less utilising antenatal care compared to non-working women (Kamal, 2012). Similar result was found in Nepal that non-working women were more utilising antenatal care than working women (Paudel et al, 2010). A community based cross sectional study in Pakistan has found that higher income women were twice likely to use antenatal care services than those of lower income women (Nisar and White 2003). A study in Nigeria found that the utilisation of antenatal care is less among working women (Fagbamigbe et al. 2015). From the study in Egypt it was found that maternal occupation was significantly associated with birth attendance and postnatal care (Yassin et. al, 2012).

1.6.2 Studies inside India

1.6.2.1 Demographic and Socio-cultural factors

Education

Studies in Delhi have found that mothers who did not register for antenatal care are mostly *illiterate, belonged to the poorer strata, were below 25 years of age and had three or more children* (Aggarwal et al. 1997). From studies, it has been observed that *education of the mother* is an important social variable that has a positive bearing on utilisation of maternal and child health services (Kavitha and Audinarayan 1997). A study in India using National Family Health Survey has found that *pregnant women's education, husband's education, women's autonomy and exposure* were positively associated with utilisation of antenatal care whereas parity and religion negatively associated with utilisation of antenatal care (Pallikadavath et al. 2004).

Economic status

From a study in Andhra Pradesh and Karnataka, using National Family Health Survey it was seen that women in urban areas were less utilizing antenatal care. *Women's*

education, husband's education and high standard of living were positively associated with antenatal care utilisation (Navaneetham and Dharmalingam, 2002). Study described that the utilisation of antenatal care was associated with women's socio-economic status and education of women (Pandey et al. 2015).

Caste:

From studies, it has been observed that there is a strong association of the *caste system* with utilisation of maternal care services (Kavitha and Audinarayan 1997). From a study on the utilisation of services for safe motherhood, antenatal care (ANC), among the schedule caste (SC) and schedule tribes (ST) of Odisha, it was found that ANC services were much poorer in case of SC and ST as compared to general population. Also various socio-economic and cultural factors were influencing the acceptance of ANC among these vulnerable communities (Nayak and Babu, 2001).

Age at Marriage

Studies highlight that there was statistically significant correlation between antenatal care and age, parity and number of living children. Utilisation of antenatal care among women reduces when *age, parity and number of living children* increases (Chandhiok et al, 2006). From a study in north India, it was concluded that utilisation of antenatal care among women had statistically significant association with age, literacy status, socio-economic status and type of family (Gupta et al, 2015).

Region

A study of antenatal care services in Bihar, Rajasthan, Odisha, Maharashtra and Gujarat found that MCH services hardly reached pregnant women: to only between 5 and 22 percent of all pregnant women in rural areas and between 20 and 50 percent in urban areas (Kanitkar and Sinha, 1989). The reasons for this poor utilisation of services are cultural and socio-economic on the one hand but also a result of poor quality of services on the other. The large majority of women who did not utilise antenatal services considered it unnecessary. It could also reflect dissatisfaction with accessibility, quality and effect of services, a disturbing minority cited such reasons as lack of knowledge and economic and transportation problems (Kanitkar and Sinha, 1989). Studies demonstrate that the proportion of pregnant women who availed full ANC was lower in rural as compared to urban areas, lowest for ST followed by SC;

higher for literate women as compared to illiterate women. The proportion of institutional deliveries managed by hospitals and health centres were about 41 percent, it being higher among literate women and in urban areas (Singh & Yadav, 2000). From National Family Health Survey-3, it has been found that more than three-quarters of pregnant women in India receive at least some antenatal care (ANC), but only half of pregnant women make at least three visits to health practitioners during their pregnancy, as recommended. The disparity between urban and rural women is especially pronounced, with 74 percent of urban women having at least three ANC visits compared to 43 percent of rural women. Births assisted by a health professional increased to 48 percent from 42 percent, with 75 percent of urban women but only 39 percent of rural women receiving professional assistance. Institutional births increased from 34 percent to 41 percent, but most women still deliver their children at home (National Family Health Survey, 2005-06).

Status of women

It was found that women in Uttar Pradesh are dependent on their husbands and older family members for seeking health care (Das Gupta, 1995; Bloom et al., 2001). In a study among slum women in northern India, it was found that women undergoing second or third delivery utilised antenatal care the least. Awareness regarding antenatal care and the need for trained birth assistance is greater among women with educated spouses (Khandekar et al 1993). Some studies have shown a strong association between spouse's education and utilisation of reproductive health services (Khan et al 1997, Bhattacharya and Tandon 1991).

Cultural practices

From the study, it was found that socio-cultural factors affect utilisation of antenatal care and low utilisation of antenatal care during pregnancy create maternal death (Andalakshmy et al. 1993). There exists in India a wide range of cultural practices regarding diet during pregnancy, both on how much and on what to eat. Unfortunately, these are unlikely to foster improvements in antenatal nutrition since they tend to discourage increases in women's already meager average daily food intake (Ramachandran, 1989) and such nutritional items as leafy vegetables during pregnancy. A village level study in Uttar Pradesh suggests that even when women are aware of the importance of diet during pregnancy, cultural and economic priorities

deny them access to better nutrition (Khan et al. 1988). Another study in rural Uttar Pradesh observed that weight gain during pregnancy was of the order of only 6.0-6.5 kg among poorly nourished women and 8.1-8.3 kg among better nourished women (Tripathi et al. 1987). Most maternal and neonatal deaths occur in the immediate postnatal period as few women are visited by health workers during this period. In Anantpur, as many as 60 percent of maternal deaths took place within five days of delivery (Bhatia, 1988), and it was found that women who had just given birth were less visiting health workers in the first week after delivery (Mathai, 1989). From studies in northern India, it was shown that women in rural India have less access to health care. Lack of educational resources, distance, cost and transportation, cultural, religious and family influence utilisation of antenatal care (Bredesen, 2013).

Access to health care facilities

Studies show that access to health care facilities in terms of distance and who provided health care are major factors that influenced utilisation of services. However, Bhattacharya and Tandon (1991) found that rural women living near a health centre do not necessarily utilise antenatal services. Similarly, studies have shown that even in villages, lower the distance from the sub-centre, higher the rate of use of maternal and child health care services (Kumar 1974, Shrinivasan and Sugathan 1976). Women who have utilised antenatal care services are more likely to have their deliveries in medical institutions and attended by health professionals than those who did not utilise those (Pandey et al 2002).

From studies, the clear differences can be observed between economic groups of all parity, age-groups and educational status of women. The gap among poor and non-poor are more prominent for lower parity women and as parity increases, the gap reduced. In case of age, as the age of women increases, antenatal care decreased among urban poor, while for non-poor it increased with age resulting starker gap among poor and non-poor in the older age category. The differences by educational status are comparatively low. Moreover, as educational status improves, the gap between poor and non-poor narrowed down. As antenatal care is inversely related with exposure to mass media but gap between poor and non-poor remained the same whether a woman is exposed to mass media or not. In case of ethnicity gap between poor and non-poor, it is comparatively more pronounced for OBC & Others group. In

case of religion, the utilisation of antenatal care was comparatively lower for Muslims than for the rest of groups but poor and non-poor differences is almost same cutting across religions. Safe delivery reversely varies with parity among both poor and non-poor; however the decline is comparatively more among poor. Thus the poor and non-poor gap seems larger for higher parity women. Differences for safe delivery are substantially large with respect to age of women. This is because of as the age increased, the safe delivery services declined among poor while it increased or remained constant for the urban non-poor. As safe delivery is inversely associated with education status of women across the group, but poor and non-poor differentials are evident. However, the differences declined as educational status increased (Mohanty, 2008).

1.6.2.2 Work status of Women

Studies revealed that working women in rural Tamil Nadu use antenatal care services less than non-working women, as they are engaged in low paid jobs and taking leave affects their income. The economic status of the households also determines utilisation of ANC services and delivery care (Pandey et al 2002). Studies have found that utilisation of antenatal care among tribal women in northern states were more compared to tribal women in central states of India. Women who work were utilizing less health care (Shah, 2011). From studies, it has been found that there is inverse relationship between work status of women and utilisation of antenatal care (Mahapatro, 2012). A community based cross-sectional study in Karnataka showed that occupation of women has great influence on utilisation of antenatal care (Javali et al, 2014). From a study in Mumbai, it was shown that the relation between workers attending school and current usage of antenatal care was significant (John et al, 2017). From a study in Gujrat, it was found that working women were less utilizing antenatal care compared to housewives. It is also statistically significant. The reasons for poor utilisation of antenatal care among working women may be loss of one day wage (Bhimani et al, 2016). Study in Rajasthan showed that utilisation of full antennal care decreased with decrease in socio-economic status and literacy level of mothers, working mothers and increased parity and nuclear type family (Uppadhaya et al, 2017).

1.7 Rational for the selection of Study

Slums are always informal settlements with no land tenure rights. They are full of dirty, diseased and gloomy people. Majority of the women belong to lower socio-economic classes and either they have migrated to the city with the hope of better means of employment or forced to migrate with their partners. Majority of them have no education, skill and work experience, they have no choice in competitive job markets and pick up low paid jobs such as construction work, domestic work and casual factory work. Inadequate income, poor housing conditions, overcrowded environment, poor sanitation, occupation hazards and stressful conditions are unfavourable to the health of women residing in the slums. Majority of population live in rural areas in Odisha. In rural area, women are less educated. So there is less opportunity for job. Most of them are doing agricultural work. They don't have proper knowledge about health care. They have also superstition like that pregnancy is a natural process so there is no need of antenatal care.

There is limited studies on work status and utilisation of antenatal care among women in Odisha. So the present study has tried to find out the factors responsible for less utilisation of antenatal care among working and non-working women in both rural and urban poor women in Khordha and Sundargarh districts of Odisha.

1.8 Hypotheses

- Utilisation of antenatal care among working women are less than non-working women.
- Higher the level of education among the women, higher the level of utilisation of antenatal care.
- Urban poor women are better prepared for utilisation of antenatal care in comparison to their rural counterparts.
- Utilisation of antenatal care is higher among Hindu women as against other women.
- Utilisation of antenatal care is less among tribal women than non-tribal women.
- Poverty has a negative impact on utilisation of antenatal care.

1.9 Objectives

The specific objectives of the study are -

1. To study the differentials of different components and categories of antenatal care by the selected background characteristics of rural & urban women in Odisha.
2. To analyse the work status of rural and urban poor women in Odisha.
3. To examine the differential and determinant of antenatal care among rural and urban poor women in Odisha.
4. To find the linkage between work status and utilisation of antenatal care among rural and urban poor women in Odisha.
5. To make a comparative analysis of the utilisation of antenatal care among the rural and urban poor women between two districts of Odisha.
6. To discuss the main reasons for not receiving antenatal care among rural & urban poor women in Odisha.
7. To examine the determinants of institutional delivery and postnatal care.

1.10 Chapterization

The thesis consists of seven chapters -

Chapter 1: Introduction to the topic is given in Chapter I. It describes work status of women, importance of antenatal care, and government focus on maternal and child health, rationale for the selection of study, literature review, hypothesis and objectives of the study.

Chapter II: Chapter II deals with the conceptual framework, data sources and analytical methods used in the study.

Chapter III: Chapter III presents rural-urban differential in work participation of women in all the districts of Odisha and health and utilisation of antenatal care of women in Odisha.

Chapter VI: Chapter IV describes background profile of the respondents and work status among rural and urban poor women in Khordha and Sundargarh districts of Odisha.

Chapter V: Factors affecting utilisation of antenatal care and non-utilisation of antenatal care among rural and urban poor women in Khordha and Sundargarh districts of Odisha discussed in the Chapter V.

Chapter VI: This chapter shows determinants of institutional delivery and postnatal care among rural and urban poor women in Khordha and Sundargarh districts of Odisha.

Chapter VII: Finally, discussions and conclusions of the study are presented in Chapter VII.

CHAPTER 2

CONCEPTUAL FRAMEWORK, DATA SOURCES AND METHODOLOGY

Conceptual framework is at the heart of any study. There is internal link between dependent and independent variables. So there is a definite need for conceptual framework in research. Conceptual frameworks are a type of intermediate theory that possesses the possibility to link to all aspects of review like problem definition, purpose, literature review, methodology, data collection and analysis. Conceptual frameworks act like maps that give reason to empirical inquiry (Tajalli, 2006).

2.1 Factors Affecting Use of Antenatal Care

The utilisation of antenatal care services largely depends on socio-economic and demographic factors. Women's age group and their parity determine their knowledge and experience which lead to better utilisation of services. The type of family also matters a lot. Educational level, work status of women and household standards are some of the factors that make women more aware about their own health as well as the health of their baby. Hence the utilisation of antenatal care services is likely to be influenced by these variables. Figure 2.1 shows how different socio-economic and demographic factors affect the utilization of antenatal care services.

Major socio-economic factors which affect utilization of antenatal care are as follows:

- Religion (Hindu, Christian or Others)
- Caste (General, OBC, SC or ST)
- Education (No education, Primary, Secondary or Higher)
- Type of Family (Nuclear or Joint)
- Household structure (Pucca, Semi pucca or Kachha)
- Standard of living (Low, Medium or High)
- Economic status (BPL or APL)
- Husband's income (Less than Rs. 5000 or More than Rs. 5000)
- Respondents work status (Working or Non-working)

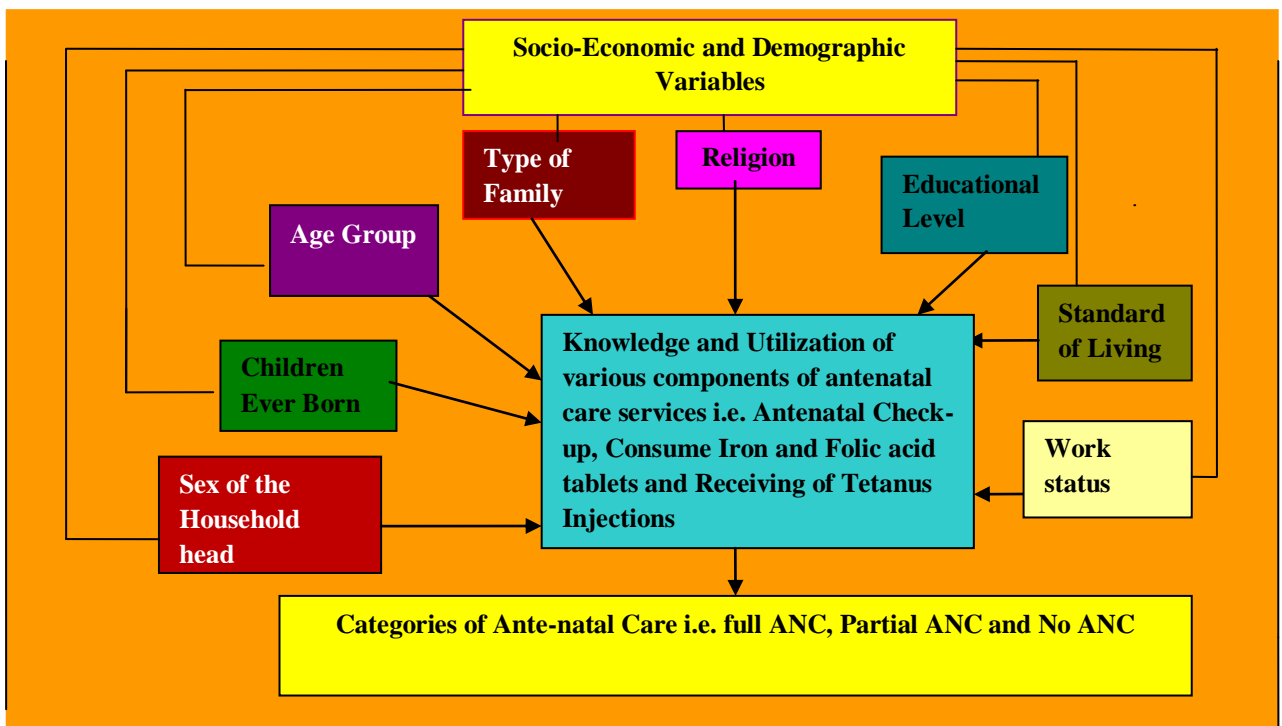
Demographic factors which affect utilization of antenatal care are as follows:

- Age at marriage of the respondents (Below 20 years, 20-25 years or above 25 years)
- Age at first birth (Below 20 years, 20-25 years or above 25 years)
- Total children ever born (One, Less than three or more than three)
- Birth space (Less than 24 months or More than 24 months)

Health Care utilization Variables

- Frequency of ASHA/ Anganwadi Workers visits (One time, two times, three times or four times)
- Received Health Messages (TV, Radio, Public announcements and Govt. healthworkers)
- Place of Antenatal check-up (At home, Govt. hospital, Pvt. Hospital or no check-up)

Figure 2.1 Framework shows the influence of Socio-Economic and Demographic Variables on Utilization of Ante-Natal Care Services

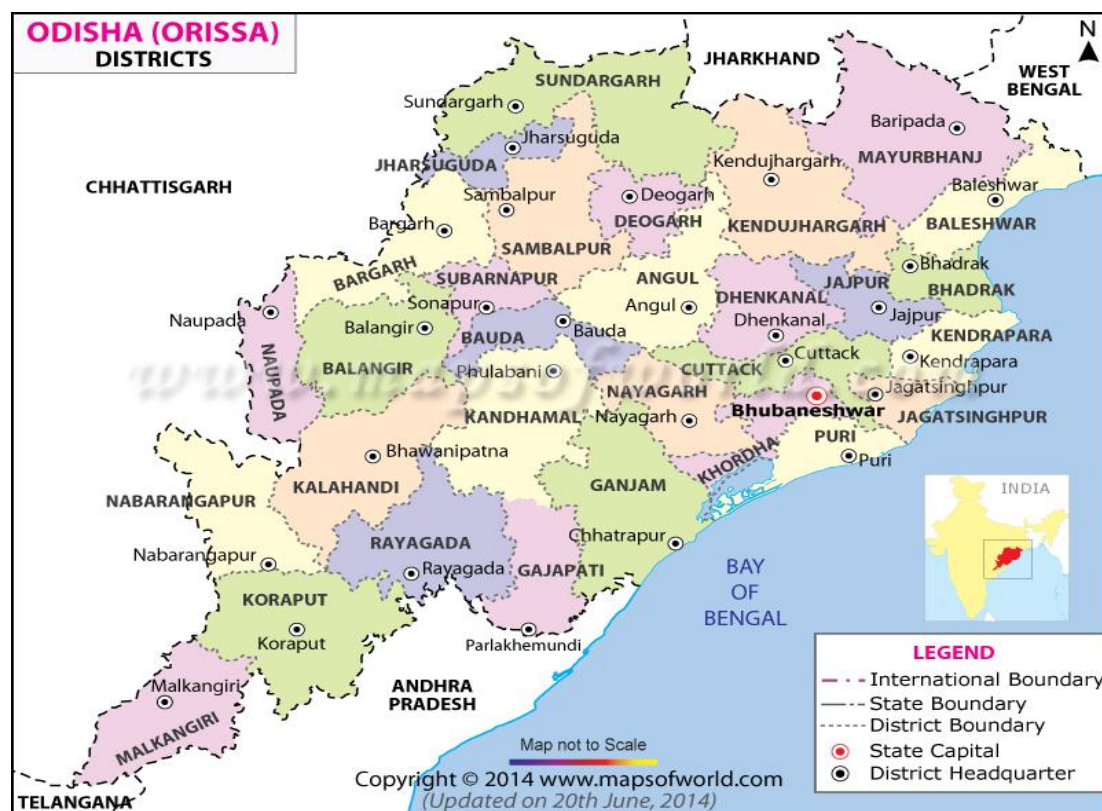


2.2 State Profile

Odisha, located in the eastern coast of India is a state with immense potential in natural resources owing to its fertile land and rich mineral resources like coal, iron and bauxite. The state is surrounded by the Bay of Bengal in the east, Chhattisgarh in the west and Andhra Pradesh and Telengana in the south.

It has an area of 155,707 square kms and it has a coast line of about 500 kms. The state comprises of three revenue divisions, 30 districts, 314 blocks, 6234 village panchayats and 51,349 villages. As per the census of 2011, around 85 percent of its population live in the rural areas depending mostly on agriculture and allied activities for their sustenance. Large number of people live in the country side due to lack of job opportunities in towns and cities. Odisha, despite having high literary rate among its people and rich deposit of mineral resources, is lagging behind in economic indicators compared to other states. However, with more than 45 percent of its population living below the poverty line, Odisha presents a paradox when one compares its natural, mineral and human resources with its socio-economic and political status.

Figure 2.2. Political map of Odisha, 2014



2.3 Population in Odisha

According to the 2011 census, the total population of Odisha is 41,947,358 of which male and female are 21,201,678 and 20,745,680 respectively as shown in Table 2.1. In 2001, total population in Odisha was 36,804,660 in which males were 18,660,570 while females were 18,144,090. The population of Odisha formed 3.47 percent of India in 2011. The total population growth in the last decade was 13.97 percent compared to the 1991-2001 census' 15.94 percent growth.

Table 2.1 District wise population of Odisha as per Census of India, 2011

District wise population of Odisha as per 2011 Census					
Sl No	District/ State	Population	% of Increase from 2001	Density	Sex Ratio (F/M)
1	Ganjam	3,529,031	11.66	430	983
2	Cuttack	2,624,470	12.10	667	940
3	Mayurbhanj	2,519,738	13.33	242	1006
4	Baleshwar	2,320,529	14.62	610	957
5	Khordha	2,246,341	19.65	799	925
6	Sundargarh	2,080,664	13.66	214	971
7	Jajapur	1,827,192	12.49	630	973
8	Kendujhar	1,801,733	15.35	217	988
9	Puri	1,698,730	13.05	488	963
10	Balangir	1,648,997	23.32	251	987
11	Kalahandi	1,576,869	18.07	199	1003
12	Bhadrak	1,506,337	12.94	601	981
13	Bargarh	1,481,255	10.02	254	977
14	Kendrapara	1,440,361	10.63	545	1007
15	Koraput	1,379,647	16.86	157	1032
16	Anugul	1,273,821	11.74	200	943
17	Nabarangapur	1,220,946	19.03	231	1019
18	Dhenkanal	1,192,811	11.80	268	947
19	Jagatsinghapur	1,136,971	7.50	682	968
20	Sambalpur	1,041,099	11.27	157	976
21	Rayagada	967,911	16.46	137	1051
22	Nayagarh	962,789	11.37	248	915
23	Kandhamal	733,110	13.10	91	1037
24	Malkangiri	613,192	21.62	106	1020
25	Nuapada	610,382	15.02	158	1021
26	Subarnapur	610,183	12.61	261	960
27	Jharsuguda	579,505	13.69	274	953
28	Gajapati	577,817	11.37	134	1043
29	Baudh	441,162	18.16	142	991
30	Debagarh	312,520	14.01	106	975
Odisha		41,947,358	13.97	269	978

Source: Registrar General of India, 2011.

The population density of Odisha is 269 per sq. km which is lower than the national average of 382 per sq. km. Sex ratio of Odisha is 978 i.e. for 1000 males, which is above the national average of 940 as per 2011 census. The population of the Khordha district stood at 2,246,341, and witnessed the highest population growth rate compared to other districts of Odisha (19.65%) against the Odisha average of 13.97% as per the 2011 census. The population of Sundargarh district stood at 2,080,664 with a decadal growth rate of 13.66%. Among the districts of Odisha, density of Khordha stood much higher at 799 compared to the state average of 269 per sq km.

However, the population density of the Sundargarh district stood much lower at 216 compared to the state average and compared to the Khordha district. However, urban sex ratio of Odisha remains lower at 934 as against the rural sex ratio of 988. Unlike other districts of the state, the female ratio compared to the male is low (925 per thousand male) in Khordha district against the state average of 978. In Sundargarh district, the sex ratio is quite higher than the Khordha district (Registrar General of India, 2011).

2.3.1 SC and ST Population in Odisha

The state of Odisha occupies a unique position in the country due to high concentration of Scheduled Tribe (ST) and Scheduled Caste (SC) population. As per the 2011 census, it is ranked third in terms of ST population whereas its position is eleventh in terms of SC population in the country. Scheduled Tribes and Scheduled Castes together constitute nearly 40 percent of the state's total population. The ST population of Odisha is 9,590,756 which constitutes 22.1 percent of the total population of Odisha and 9.7 percent of the total tribal population of the country. Out of this, 8,994,967 are in rural areas and 595,789 are in urban areas. The Scheduled Tribe population in absolute number has increased by 1,445,675, which constitutes a decadal (2001-2011) growth of 17.7 percent. In terms of gender composition, there are 4,727,732 male Scheduled Tribes of which 4,428,522 live in the villages and only 299,210 live in urban areas. Female Scheduled Tribes numbered around 4,863,024 of which 4,566,445 live in rural areas and 296,579 live in urban areas, which is the lowest compared to their male counterpart living in the urban areas due to male migration to towns and cities for better job opportunities.

The sex ratio of Scheduled Tribe population has increased from 1003 in 2001 to 1029 in 2011 census, which is an increase of 26 points. (Census of India, 2011). As far as the ST population's district wise distribution is concerned, Malkangiri district has the highest proportion of STs (57.4 percent) followed by Mayurbhanj (56.6 percent), Rayagada (55.8 percent) and Nabarangapur (55 percent). Puri district has the lowest proportion of STs (0.3 percent). Out of sixty two (62) scheduled tribal groups living in Odisha, Khond is the most populous tribe followed by Gond. The other major tribal groups living in Odisha are Santal, Kolha, Munda, Saora, Shabar and Bhottada, Bhumij, Bhuiya, Oraon, Paroja and Kisan. (ST & SC Development, Minorities and Backward Class Welfare Department, Government of Odisha).

The total Scheduled Caste population as per the 2011 census is 7,188,463 of which 6,218,642 live in rural areas and remaining 969,821 live in towns and cities. The Scheduled Caste population in absolute numbers has increased by 1,106,400 which constitutes a decadal growth of 18.2 percent. The highest number of Scheduled Castes has been recorded in Ganjam (688,235) and the lowest in Gajapati (39,175). In terms of gender composition, there are 3,617,808 male scheduled castes and of which 3,127,719 live in rural areas and remaining in urban areas. Female Scheduled Castes consists of 3,570,655 of which 3,090,923 live in rural areas. The sex ratio among the Scheduled Caste population stood at 987 in the 2011 census compared to 979 in the 2001 census. (Census of India, 2011).

2.3.2 Literacy Rate

Literacy of Odisha has increased from 63.08 percent in the 2001 census to 79.5 percent in the 2011 census. The female literacy rate stood at 71.4 percent compared to the male literacy rate of 87.8 percent. There has been a significant rise in both male and female and rural and urban literacy rate in the 2011 census compared to the 2001 census. In the 2011 census, urban literacy rate stood at 90.7 percent against its rural counterpart (77.3 percent). Out of the total female literacy rate of 71.4 percent, literacy rate among urban women stood at 85.7 percent compared to 68.6 percent among their counterparts in rural areas. The lower literacy rate in rural areas is due to lack of sufficient educational institutions, low per capita income of the villagers and the conservative mind set of the villagers. Women literacy rate is low as daughters

help their family in their house hold work and also early marriage which leads to high drop out among female students compared to male students.

Table 2.2 District wise literacy rate of Odisha as per Census of India, 2011

District / State	Person			Male			Female		
	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
Orissa	79.5	77.3	90.7	87.8	86.2	95.4	71.4	68.6	85.7
Anugul	84.0	82.7	90.7	92.1	91.3	96.2	75.8	74.1	84.7
Balangir	76.8	75.5	90.8	86.3	85.5	95.9	67.0	65.3	85.6
Baleshwar	89.2	88.4	94.8	96.0	95.7	98.0	83.0	81.8	91.6
Bargarh	82.6	81.8	91.6	90.7	90.2	96.2	74.3	73.2	86.8
Baudh	77.7	77.1	87.8	87.3	86.9	93.1	67.9	67.1	82.4
Bhadrak	86.6	86.5	87.5	93.4	93.6	91.6	80.6	80.3	83.3
Cuttack	90.7	89.3	94.7	96.2	95.5	98.2	85.0	82.7	91.1
Debagarh	82.4	81.8	88.6	89.8	89.5	93.1	75.1	74.2	84.2
Dhenkanal	83.7	83.0	90.0	91.6	91.1	95.6	76.3	75.5	84.4
Gajapati	63.7	61.1	84.2	74.6	72.5	91.4	52.6	49.5	77.1
Ganjam	78.4	75.7	91.4	89.2	87.5	96.8	68.7	65.4	86.0
Jagatsinghapur	89.5	89.0	93.4	94.9	94.6	97.0	84.1	83.5	89.2
Jajapur	84.5	84.2	90.8	91.3	91.1	95.4	78.0	77.6	86.1
Jharsuguda	84.9	82.4	89.0	92.1	90.5	94.8	77.3	74.1	82.6
Kalahandi	67.2	64.6	87.2	79.5	77.6	94.1	54.4	51.2	79.7
Kandhamal	71.4	69.5	91.4	84.4	83.2	96.4	58.2	55.6	86.0
Kendrapara	86.2	85.8	91.3	93.5	93.4	95.9	79.8	71.3	80.4
Kendujhar	81.4	80.1	87.3	90.1	89.2	94.0	72.9	71.3	80.4
Khordha	90.6	87.7	94.0	95.3	93.8	96.9	85.7	81.6	90.7
Koraput	56.2	51.3	78.7	67.3	62.9	87.0	45.3	39.9	70.3
Malkangiri	53.5	51.2	78.2	63.5	61.4	86.6	43.6	41.1	70.1
Mayurbhanj	68.0	66.7	84.7	78.2	77.0	92.1	58.2	56.7	77.4
Nabarangapur	54.7	52.9	87.7	65.2	63.8	93.3	43.9	41.9	82.0
Nuapada	65.3	64.4	84.8	76.2	75.6	90.5	54.0	52.9	79.1
Nayagarh	87.0	86.7	94.0	95.5	95.3	98.4	78.5	78.0	89.4
Puri	90.9	90.8	91.2	95.7	96.1	93.6	86.0	85.5	88.6
Rayagada	60.4	55.3	84.9	71.8	67.3	92.8	49.5	44.0	76.8
Sambalpur	83.8	80.5	89.0	91.0	89.1	93.9	76.5	71.9	83.9
Sonapur	82.4	82.1	87.0	90.4	90.2	93.7	73.7	73.3	79.7
Sundargarh	82.6	77.9	92.4	90.1	86.8	96.8	74.8	68.7	87.7

Source: Registrar General of India, 2011.

Khordha district is one of the most educationally advanced districts of the state and literacy rate of the district recorded at 90.6 percent compared to the state average of 79.5 percent as shown in Table 2.2. This is because Khordha district houses the capital city of the state and there is availability of abundant educational infrastructure

and also has high per capita income. In Sundargarh district, the total literacy rate stood at 82.6 percent which is also above the state average but lower than the Khordha district. The female literacy rate in Khordha district is higher (85.7 percent) compared to the district of Sundargarh (74.8 percent). In Sundargarh district, like any other district of the state, urban female literacy rate is higher (87.7 percent) compared to rural women (68.7 percent).

2.4 Study Framework

This study tried to find out the relationship between work status of women and their use of antenatal care (ANC) in the rural and urban poor areas of Sundargarh and Khordha district. **Approach:**

Explorative, descriptive and analytical approach were applied for the present study. The estimation of necessary statistics as desired in objectives were done by employing research techniques like econometric modeling in addition to statistical techniques for every concerned variable of the interest under the study. As the study involves both quantitative and qualitative information, a triangulation methodology was followed that would generate both quantitative as well as qualitative information. In order to generate information on the quantitative aspects of the study, interview method was used and semi-structured questionnaires served as tools for conducting these interviews. For obtaining qualitative information from the respondents, Focus Group Discussion (FGD) was used as the method. The tool for this method was Unstructured Interview Guidelines. As the study included an extensive fieldwork for data collection as well as deskwork processing, following activities were taken during the course of the study

- Review of literature available on the subject
- Preparation of research tools and field guidelines
- Glancing through the records and reports available on the subject
- Collection of requisite Primary data (both quantitative and qualitative) from the field by interviewing women respondents
- Compilation and analysis of data

2.5 Data Sources

Both primary and secondary research were undertaken to meet the objectives of the present study.

2.5.1 Secondary Sources of Data

The secondary data sources are the large scale sample surveys which provide a variety of information on different health indicators conducted within certain time intervals by government agencies. The secondary data sources give a macro picture of the work status of women and the utilisation of the health services in the study areas. The main secondary data sources for this research work were Annual Health Survey (AHS) and National Family Health Survey (NFHS). District Level Household Survey (DLHS) was also used in the study areas. Besides DLHS, some socio-economic indicators of different districts are also borrowed from the census as a secondary source of information. Secondary data sources are described briefly below.

Annual Health Survey (AHS), 2012-13

The AHS was designed to obtain information on different health indicators as a benchmark to monitor the performance and outcome of various health interventions by the government of India. The Ministry of Health and Family Welfare (MoHFW) in collaboration with the Registrar General of India conducted the survey in the Empowered Action Group states and Assam. It collects information on various health indicators at the district level with a major focus on access to maternal, child health and family planning services, prevalence of disabilities, injuries, acute and chronic illness, access to health care for identified morbidities. It collects information on these indicators to measure the rate of change on a yearly basis. The survey is confined to the districts of eight Empowered Action Group States, namely, Bihar, Jharkhand, Uttar Pradesh, Uttarakhand, Madhya Pradesh, Chhattisgarh, Odisha and Rajasthan and along with the state of Assam. These nine states almost account for around half of the total population of the country. These states are the high focused states in terms of their poor health indicators compared to the other states of the country. Starting from the year 2010-11, four rounds of surveys have been conducted. The study explores the data from different rounds of AHS to show the level of utilization of antenatal care, institutional and postnatal care in the study districts of Odisha.

National Family Health Survey (NFHS), 2005-06 and 2015-16

National Family Health Survey is a large scale survey that has been conducted as part of a global demographic and health Survey. The survey provides a variety of information including fertility rates, infant and child mortality figures, the practice of family planning, maternal and child health, reproductive health, nutrition, anemia etc. The first round of NFHS was conducted in 1992-93 followed by the second round in 1998-99 while the third round was conducted in 2005-06 and fourth on 2015-16. The third round of NFHS which was conducted in the year 2005-06 covered 124,385 women of age 15-49 at the national level while 4540 women from the same group were from Odisha.

District Level Household Survey (DLHS), 2007-08 and 2012-13

It is a household survey at district level and provides information on maternal and child health. Three rounds of survey have been completed with certain time intervals (IIPS, 2010). The first two rounds were carried out during 1998-99 and 2002-04 respectively. The surveys have been conducted by the Ministry of Health and Family Welfare (MoHFW) in collaboration with International Institute for Population Sciences (IIPS), Mumbai. IIPS, as the nodal agency was responsible for the development of survey design, instruments, recruitment of field researchers and supervisors, providing training, supervision of field work, software development, data entry, and tabulation and report writing. The third round was carried out in 2007-08 and is an improvement over the previous two rounds which covered 601 districts from 34 states and the union territories of India. The survey was conducted during December 2007 to December 2008. A total of 33172 households, 27848 ever-married women and 7257 unmarried women were covered from the state of Odisha. The fourth round of DLHS was carried during 2012-13. It provides information on family planning, maternal and child health, use of ANC, reproductive health of married women and adolescent girls and utilisation of maternal and child healthcare services at the district level.

Census, 2011

The Registrar General of India conducts the census with an interval of ten years which is a primary source of information on various socio-economic and demographic

characteristics of the population of the country. For this study, 2001 and 2011 census data were used.

2.5.2 Primary Sources of Data

For generating data on the wide array of issues, the present study adopted both quantitative and qualitative research techniques. The following research instruments were used.

Structured Households Schedule

Structured schedule with close ended questions were employed for the collection of quantitative data from women respondents in the age group of 15-49 years old. In the questionnaire, all the details were included in order to collect all necessary information from the respondents including their socio-economic status, education, work status, health and utilization of antenatal care. The interview schedule designed for eligible mothers was divided into two parts. The **first part** covers a variety of information regarding household characteristics. Household characteristics include the principal economic activity of the household, possession of assets, land holdings, list of members of household with age, sex and educational level. The women who had at least one child below the age of five years were identified from the sample households. The **second part** of the interview schedule includes the background characteristics of the women and all relevant information needed to satisfy the objectives of the study such as information on work status of women, type of work, working hours, monthly income and accessibility and utilisation of health services, etc. All questions on maternal care were related to the last surviving child of the woman. Detailed questionnaire is attached in **Appendix A**.

Focus Group Discussions (FGDs)

FGD (Focus Group Discussions) were conducted among a group of women respondents (group consists of 8-10 women) in the age group of 15-49 years old to collect qualitative information about antenatal care. A total of 8 FGDs were conducted in four areas. Four FGDs from Khordha district and four FGDs from Sundergarh district were conducted. In each district, one urban area and one rural area were selected for the FGDs consisting of around 8-10 women having 0-5 years children. FGDs were conducted separately among working and non-working women.

Unstructured schedule separately for working women and non-working women were used for focus group discussions.

2.6 Universe of the Study

The study was carried out in the state of Odisha, an eastern state of India.

2.6.1 Selection of districts

Table 2.3 Ranking of Districts of Odisha Based on 16 Key Indicators, 2013

Ranking of Districts of Odisha Based on 16 Key Indicators 2013							
Districts	Pregnancy care	Child Birth	PNC & New Born Care	Reproductive Age group	Total Score	Z score	Ranking
Rayagada	-9	-6	-7	-2	-24	-1.85	Rank 30
Gajapati	-6	-1	-11	-4	-22	-1.69	Rank 29
Koraput	-8	-9	-1	-3	-21	-1.61	Rank 28
Malkangiri	5	-10	-4	-7	-16	-1.20	Rank 27
Nabarangpur	-9	-11	10	-2	-12	-0.88	Rank 26
Bolangir	-9	2	1	-4	-10	-0.72	Rank 25
Ganjam	-4	5	-4	-7	-10	-0.72	Rank 24
Jajpur	1	-9	2	-4	-10	-0.72	Rank 23
Kendrapara	8	-5	-7	-5	-9	-0.63	Rank 22
Sonapur	1	0	-1	-9	-9	-0.63	Rank 21
Khordha	-9	5	-3	-1	-6	-0.39	Rank 20
Nuapada	-4	0	1	-3	-6	-0.39	Rank 19
Nayagarh	2	-5	1	-3	-5	-0.31	Rank 18
Cuttack	8	-1	-4	-7	-4	-0.23	Rank 17
Kendujhar	-1	-9	7	-1	-4	-0.23	Rank 16
Debagarh	4	-6	5	-4	-1	0.01	Rank 15
Boudh	-5	-10	12	3	0	0.09	Rank 14
Anugul	2	-3	5	-3	1	0.18	Rank 13
Mayurbhanj	1	-4	2	3	2	0.26	Rank 12
Balasore	-2	0	4	1	3	0.34	Rank 11
Bargarh	0	6	3	-4	5	0.50	Rank 10
Sambalpur	5	4	-1	-1	7	0.66	Rank 9
Kalahandi	1	-1	1-	-2	8	0.74	Rank 8
Kandhamal	7	-2	2	3	10	0.90	Rank 7
Bhadrak	13	5	1	-8	11	0.99	Rank 6
Jharsuguda	-1	7	9	-2	13	1.15	Rank 5
Puri	10	3	4	-4	13	1.15	Rank 4
Jagatsinghpur	0	5	11	2	18	1.55	Rank 3
Dhenkanal	7	4	7	1	19	1.63	Rank 2
Sundargarh	5	2	9	8	24	2.04	Rank 1
							Poor
							Average
							Good

Source: Odisha HMIS Analysis Report 2013

Two districts namely Khordha and Sundargarh were selected. These two districts were chosen as per the demographic profile of these districts. One is a relatively advanced district while the other one is a backward district in terms of household income, literacy level which gives the opportunity for a comparative level of analysis between the two districts. Of the two, Khordha is the capital district of Odisha while Sundargarh with mostly tribal population, is an industrial district. Besides, in choosing these two districts, 16 indicators were taken into consideration. These 16 service delivery indicators were grouped into four types, namely, pregnancy care, child birth, PNC and new born care, and reproductive age group. Of the 16 indicators, pregnancy care and PNC and new born care consist of five service delivery indicators each while child birth and reproductive age group consist of three indicators each. Odisha HMIS Analysis Report 2013 divided the districts into three categories, namely, poor, average and good (Table-2.3). Khordha falls in the category of average and ranked 20 out of the 30 districts while Sundargarh district falls in the category of good and ranked one.

2.6.2 Selection of Urban Slums

In the two districts, two urban slums (one in each block) were taken for the study. Slums having more than 400 households were chosen for the study. In case of less than 400 households, nearby slums were taken. In Khordha district, slum Saliasahi was taken which comes under the Bhubaneswar municipality area. The slum has 550 households. In Sundargarh district, Rourkela, the industrial capital city of the state was taken as urban slum for the study. Under Rourkela municipal area, slums namely Kalyani Basti and Ganju Basti were taken for the study. Kalyani Basti has 263 households and Ganjubasti has 200 households.

2.6.3 Selection of Villages

A total of two blocks were selected from these two districts (one block in each district). In Khordha district, Bhubaneswar Block and in the Sundargarh district, Bisra Block was selected for the study. In each block, one village was selected purposely for the study. In Bhubaneswar Block of Khordha district, Kesura Village and Bisra Block of Sundargarh District, Dolposh village were chosen. In the selection of villages from the rural blocks census data 2001 was referred. Kesura village has 510

households and Dolposh village has 478 households. In both, villages were chosen having 400 or more than 400 households.

2.6.4 Selection of Women Respondents

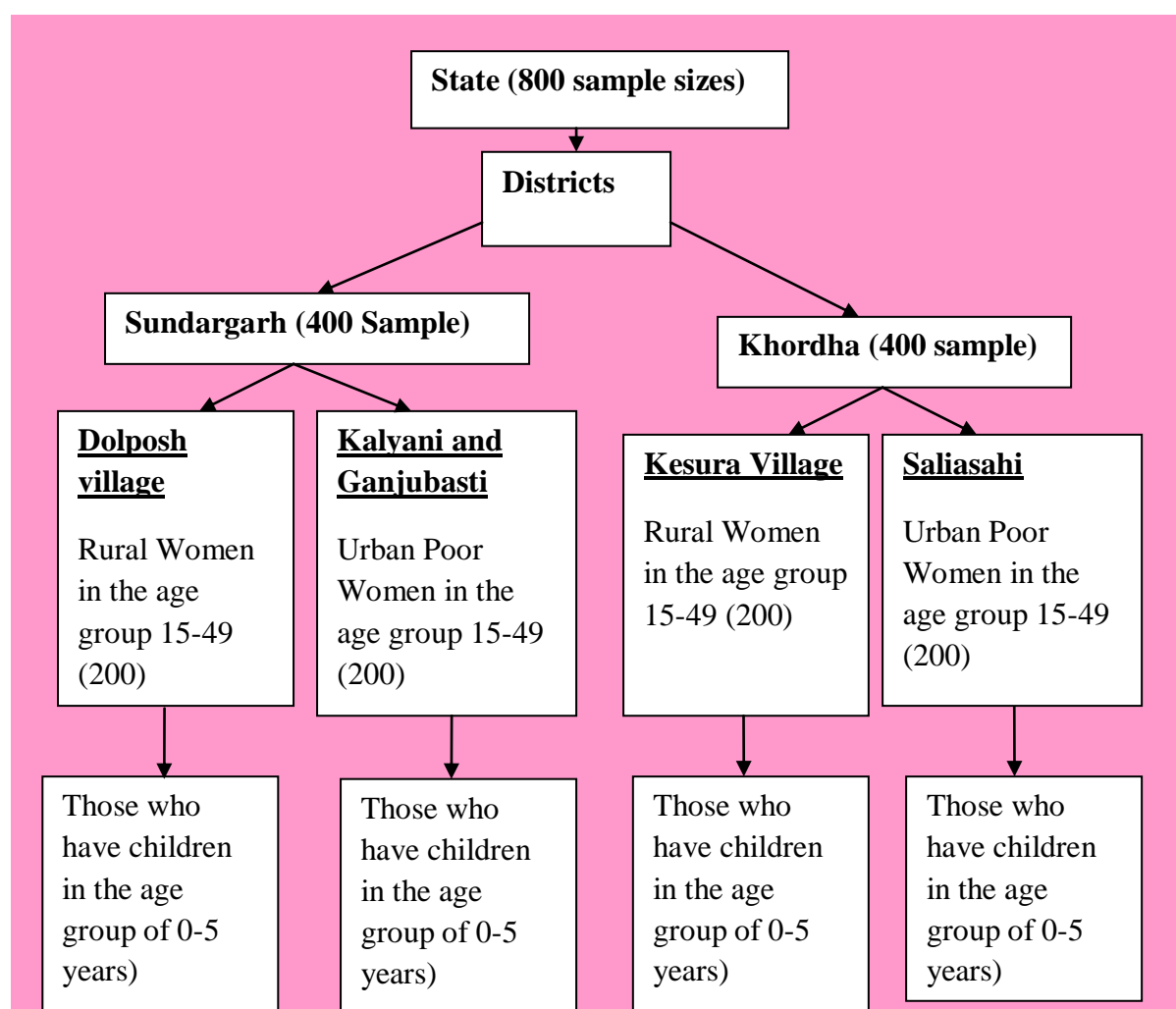
For the selection of women respondents, households those who have child in the age group of 0-5 years was the criteria. For the selection of these households, a complete house listing was conducted in the sample area. The house listing consisted of some basic questions like households having children under 5 years age group, mother's work status, total number of children (living) and number of children in the age group of 0-5 years. Women in the age group of 15-49 years were targeted for the survey. For the selection of eligible women respondents in the age group of 15-49 years in the house listed area, systematic sampling method was used.

The first phase survey was conducted during 2011 in Khordha District and second phase survey was conducted 2012 in Sundargarh districts. Data were collected by interviewing women those have given birth during the last five years (face to face interview) using a well-structured questionnaire. The focus group discussions included questions about age, education, occupation, duration of pregnancy and number of their antenatal visits, questions to assess the satisfaction about different aspects of quality of care like accessibility, waiting time, performance of physicians and the performance of the staff and privacy. Also had questions to assess their perception of antenatal care components such as registration, examination (maternal and fetal), immunization, health, education, nutritional care, social care and home visits. During the face to face interview, the respondents were asked to recall the answers from their mind instead of telling them from the alternatives in the structured schedule.

2.7 Sample Size

A total sample of 800 households/women respondents were taken through structured and in-depth interviews in the state of Odisha. Of the 800 samples, 400 samples were taken from each district. In each district, 400 samples were divided equally into rural and urban areas. Following diagram shows the data collection from the selected areas.

Figure 2.3 Sample Design for the Selection of Households



2.8 Data Analysis

Once the variables – dependent and independent – were chosen and suitably recorded to meet the need of the analysis, SPSS 16.0 (Software Package in Social Sciences) was used for the analysis of the research problem.

The **dependent variable** ANC was constructed using the following variables:

- ANC Visits (no ANC, less than three visits or three and more visits)
- Consumed IFA tablets, (No IFA tablet, consumed less than 100 tablets or consumed 100 tablets)
- Taken TT injections (not taken, one taken or two or more taken)

We generated the dependent variable ANC by categorizing women into full ANC, Partial ANC and No ANC. Full ANC is defined as those women who have gone to at least three ANC checkups, taken two TT injections and consumed all Iron and Folic Acid tablets. Partial ANC is defined as those women who have performed at least one and no ANC is defined as those women who have not done anything, i.e. neither gone for ANC check-ups, nor taken TT injections nor consumed any IFA tablets. Any ANC is considered by taking women who are categorized into full ANC and no ANC.

The methodologies adopted for the analysis are as follows:

1. Sample description
2. Cross tabulation of dependent variable with background characteristics
3. Binary logistics regression

Cross tabulation of the dependent and independent variables were prepared to find out the percentages of the demographic and socio-economic variables. Chi-square test was done to examine the statistical significance of the association between dependent and independent variables (only categorical).

Binary logistic regression was applied to a dichotomous dependent variable, where the dependent variable is the odds of the event of interest occurring. Logistic regression determines the net association between dependent and independent variables. In this case, the dependent variables namely Antenatal care has dichotomous values and thus binary logistic was the model of choice.

The general logistic model expresses the assumed relationship between the probability of occurrence of an event (P) and the independent variables in the form of a logistic function

Symbolically

$$Z = b_0 + b_1X_1 + b_2X_2 + \dots + b_kX_k$$

Where Z is the log Odds of the dependent variable or the logit of P

$$\text{Log} (P/1-P) = Z$$

$$\text{Log} \{P/ (1-P)\} = b_0 + b_1X_1 + b_2X_2 + b_3X_3 \dots b_kX_k$$

The coefficient b_0 is a constant

x_1, x_2, \dots, x_k are the independent variables and

b_1, b_2, \dots are the logistic regression coefficient

From the logistic regression coefficients, odds $\exp(b)$ are used for interpretation. In case of categorical variables, odds ratios ($\exp(b_{ki})$) ratios of odds for a category to the odds for the reference category for the factor, are used to interpret the influences relative to the reference category.

CHAPTER 3

RURAL AND URBAN DIFFERENTIAL IN ANTENATAL CARE BY DISTRICTS OF ODISHA

3.1 Introduction

Since independence, government of India has been launching various family welfare programmes to reduce maternal mortality and morbidity rates. Yet India has higher maternal mortality rate compared to her neighboring countries like Bangladesh, Sri Lanka etc. India also experiences high maternal morbidity prevalence (IIPS and ORC macro 2007). There has been enough importance given with respect to coverage of health facilities even in the most remote areas but the quality aspects of maternal health care have been largely ignored in the Indian public health system. Odisha, one of the socio-economically disadvantaged states of India records high maternal morbidity and death, which is above the national average. Anemia among pregnant and lactating mothers is higher in the state (Agarwal et.al, 2006). Absence of health infrastructure and less utilization of available healthcare services between different subgroups of population are considered as important factors for the poor maternal health situation in the state (Devarajan and Shah, 2004). The utilization of maternal health care services is very low in the state.

Within the state, there is considerable variation by region, social status, economic standard, and literacy level (IIPS, 2010). One clearly pronounced difference in maternal and child health indicators is seen among rural and urban areas. This chapter presents a comparative study of utilization of antenatal care among rural and urban women in the districts of Odisha.

3.2 Rural-Urban differential in Work Status of women in Odisha

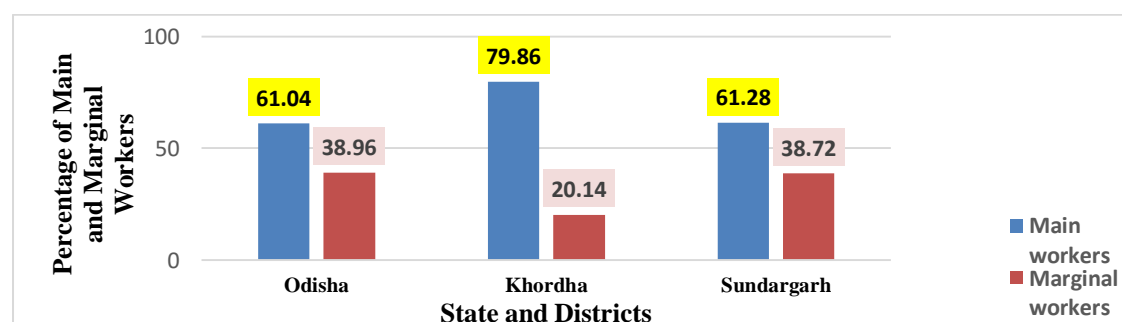
As per the 2011 census, the total number of workers (who have worked for at least one day during the reference year) in Odisha was recorded at 17,541,589. Of this, 11,902,655 were male workers and the remaining 5,638,934 were female workers (Census of India, 2011). There was a decadal growth of workers from 2001 to 2011 and the increase stood at 3,265,101, of which male workers have accounted for 2,100,649 and female workers accounted for 1,164,452. The workers have registered

a growth of 22.9 percent, which is higher than the overall population growth rate of 14 percent during the last decade. The male workers have grown by 21.4 percent and female workers by 26 percent. 15,103,714 workers are in rural areas and 2,437,875 are in urban areas. The female workers in rural and urban areas are 5,162,140 and 476,794 respectively (Census of India, 2011).

3.2.1 Rural-Urban differential in Main and Marginal workers

Table 3.1 shows the rural-urban differential in marginal and main workers among districts of Odisha. The percentage of male workers among the main workers is 73.9 percent and female workers is 33.9 percent. The percentage of both male and female main workers has reduced during the decade (male from 81.7 to 73.9 and female from 35.4 to 33.9). During the decade of 2001-2011, there was a decline of around 6 percent in main workers category. For the first time in the census of 2011, the marginal workers, i.e., workers who worked for less than six months in the reference year, have been subdivided into two categories, namely, those working for less than three months and those who worked for three months or more than three months but less than six months. In tribal districts like Mayurbhanj, Nabarangpur, Rayagada, and Nuapada, more than the majority of the workers are marginal workers. This is because of the lack of job opportunities in these districts. Among the districts of Odisha, highest percentage of marginal workers was recorded in the district of Mayurbhanj (55.18 percent) and lowest was found in Khordha district (20.14 percent). In Khordha district, main workers constitute 79.86 percent which is above the state average (61.04 percent) and is also highest among all the districts of Odisha. In Sundargarh district, 61.28 percent are main workers and the remaining 38.72 percent are marginal workers.

Figure 3.1 Main and Marginal workers in Khordha and Sundargarh districts of Odisha, Census, 2011.



Source: Registrar General of India, 2011

Table 3.1 Rural-Urban differential in Main and Marginal workers, districts of Odisha as per Census, 2011

District/ State	Main Workers			Marginal Workers			Main worker (%)	Marginal worker (%)
	Total	Rural	Urban	Total	Rural	Urban		
Odisha	10,707,543	8,623,947	2,083,596	6,834,046	6,479,767	354,279	61.04	38.96
Ganjam	900,744	676,888	223,856	601,028	555,034	45,994	59.98	40.02
Cuttack	696,274	478,649	217,625	240,091	205,250	34,841	74.36	25.64
Mayurbhanj	548,390	493,359	55,031	675,144	662,964	12,189	44.82	55.18
Baleshwar	618,064	544,455	73,609	314,634	302,716	11,927	66.27	33.73
Khordha	632,625	291,625	341,000	159,568	108,017	51,551	79.86	20.14
Sundargarh	535,112	315,612	219,500	338,115	309,890	28,225	61.28	38.72
Jajapur	407,564	372,543	35,021	144,670	139,062	5,608	69.46	30.54
Kendujhar	442,497	368,952	73,545	324,017	313,494	10,523	57.73	42.27
Puri	450,536	366,582	83,954	171,140	161,345	9,795	72.47	27.53
Balangir	402,227	346,025	56,202	318,374	307,264	11,110	55.82	44.18
Kalahandi	376,757	341,282	35,475	375,173	367,994	7,179	50.11	49.89
Bhadrak	328,097	282,414	45,683	140,502	128,740	11,762	70.02	29.98
Bargarh	474,390	426,776	47,614	287,702	280,109	7,593	62.75	37.75
Kendrapara	322,265	299,189	23,076	144,625	140,509	4,116	69.02	30.98
Koraput	396,440	323,033	73,427	296,946	287,580	9,366	57.18	42.82
Anugul	317,547	257,456	60,091	208,973	198,171	10,802	60.31	39.69
Nabarangpur	279,115	254,500	24,615	331,791	322,672	9,119	45.69	54.31
Dhenkanal	277,338	245,779	31,559	158,195	152,607	5,588	63.68	36.32
Jagatsinghpur	290,170	255,228	34,942	113,479	109,149	4,330	71.89	28.11
Sambalpur	336,854	238,789	98,065	168,986	151,753	17,233	66.59	33.41
Rayagada	227,815	183,867	43,948	239,307	229,832	9,475	48.77	51.03
Nayagarh	229,076	208,001	21,075	114,557	110,228	4,329	66.66	33.34
Kandhamal	167,112	145,835	21,277	188,237	183,842	4,395	47.03	52.97
Malkangiri	179,030	163,217	15,813	131,636	128,255	3,381	57.63	42.37
Nuapada	151,694	141,621	10,073	153,744	151,261	2,483	49.66	50.34
Subarnapur	170,218	155,169	15,049	116,443	113,048	3,395	59.38	40.62
Jharsuguda	172,069	103,420	68,649	75,638	65,684	9,954	69.46	30.54
Gajapati	170,371	149,121	21,250	123,652	118,144	5,418	57.96	42.04
Baudh	123,724	117,656	6,068	95,733	94,667	1,066	56.38	43.62
Debagarh	83,408	76,904	6,504	82,027	80,486	1,541	50.42	49.58

Source: Registrar General of India, 2011

3.2.2 Economic Classification of Workers

Table 3.2 reveals the economic classification of workers in Odisha. The broad categories of economic activities are the following - cultivators, agricultural labourers, working in household industries and other workers. About one-in-two males and two of every three females are engaged in agricultural activities either as a cultivator or an agricultural labourer (Census of India, 2011). In Odisha, the major category of work force is agricultural labourer. Slightly more than 38 percent workers are engaged as agricultural labourer as per the 2011 census and among them, near about 58 percent are female workers. Women's work participation is higher in the agricultural sector compared to any other work. Near about a third of population are engaged in other activities like services, etc. Near about 5 percent people are engaged in house hold works. Major work forces were found in the rural areas compared to the urban particularly in works like cultivation, agriculture and allied services.

Table 3.2 Economic Classification of Workers in Odisha, Census, 2011

Category	Male/ Female	Percentage of total workers		
		Total	Rural	Urban
Cultivators	Persons	23.4	26.7	3.0
	Male	28.4	33.3	3.2
	Female	12.9	13.9	2.3
Agricultural Labourers	Persons	38.4	43.8	5.0
	Male	29.3	34.2	3.9
	Female	57.8	62.3	9.2
HH individual workers	Persons	4.5	4.4	5.1
	Male	3.7	3.5	4.7
	Female	6.1	6.0	6.8
Other workers	Persons	33.7	25.1	86.9
	Male	38.7	28.9	88.2
	Female	23.2	17.8	81.7

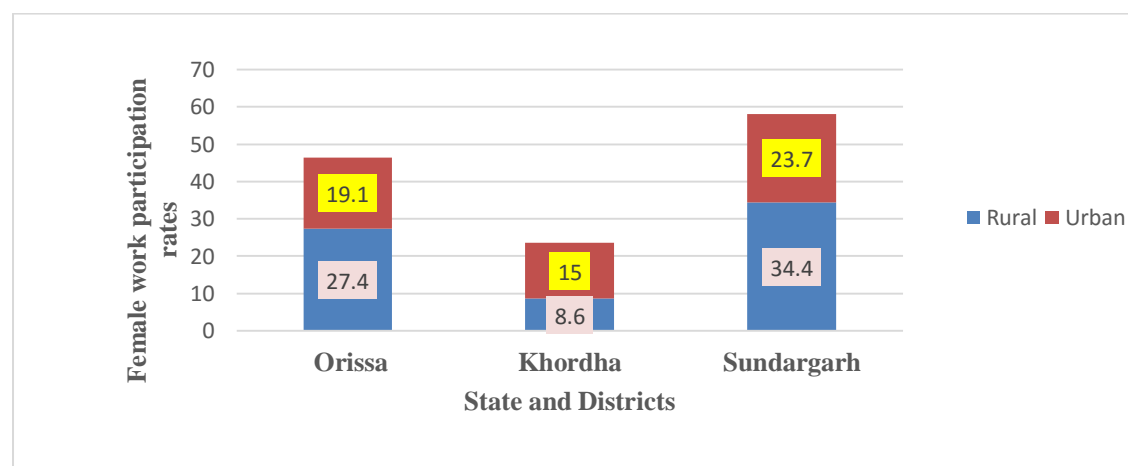
Source: Registrar General of India, 2011

3.2.3 Rural-Urban differential in Female Work participation rates

Table 3.3 shows the rural-urban differential in work participation rate among districts of Odisha. According to Annual Health Survey of 2012-13, work participation rates among females in Odisha is 26.1 percent whereas work participation among women in urban areas is less compared to rural areas. In tribal districts like Koraput, Kalahandi, Mayurbhanj, Sambalpur and Khandhamal, the work participation among female is very high compared to state average. In Debgarh district, work participation among females is 46.9 and for rural women, work participation rate is 48.0 which is highest among all the districts.

In the study area, the work participation rate is much lower in Khordha district (42.3 percent) compared to that of Sundargarh district (55.6 percent). In work participation, Sundargarh scores above the state average of 50.8 percent whereas Khordha falls below the state average. However, contrast to the state and Sundargarh district's rural – urban participation rate, work participation rate in urban areas in Khordha district (44.7 percent) is higher than the rural participation rate (40.1 percent). Figure 3.2 shows female work participation in Odisha. In rural areas of Odisha, more women are working compared to urban areas. Between Sundargarh and Khordha district, more women are working in Sundargarh district that is 34.4 percent, whereas in Khordha around 9 percent women are working. More women are working in urban areas in both Sundargarh and Khordha districts compared to rural areas.

Figure 3.2 Female work participation rate in Khurda and Sundergarh Districts, Odisha, 2012-13



Source: Annual Health Survey, 2012-13

Table 3.3 Rural-urban differential in work participation rate (15 years and above) among different districts of Odisha, 2012-13

District / State	Person			Male			Female		
	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
Anugul	53.1	53.0	53.4	76.4	75.6	80.2	29.6	30.6	24.9
Balangir	52.0	52.5	46.6	78.5	79.0	72.9	25.4	26.0	19.4
Baleshwar	43.7	43.1	47.1	76.5	76.5	76.6	14.5	13.9	19.0
Bargarh	63.4	64.4	51.3	82.6	83.2	75.8	43.9	45.4	25.9
Baudh	49.3	49.4	NA	75.4	75.6	NA	22.6	22.5	NA
Bhadrak	42.7	42.1	46.9	75.4	75.2	77.2	14.7	14.4	16.7
Cuttack	41.7	41.2	43.1	72.3	72.0	73.2	10.3	9.9	11.5
Debagarh	63.0	63.9	55.6	79.6	80.1	75.1	46.9	48.0	35.9
Dhenkanal	45.9	46.0	45.2	74.8	75.0	72.9	19.7	20.0	17.3
Gajapati	54.9	56.5	43.7	73.7	74.4	68.9	36.1	38.4	19.3
Ganjam	50.3	51.4	45.3	75.1	75.9	72.0	28.7	30.7	18.9
Jagatsinghapur	39.5	38.6	46.1	72.2	71.5	77.0	6.7	6.6	7.5
Jajapur	45.5	45.5	NA	74.2	74.4	NA	18.6	18.6	NA
Jharsuguda	56.1	59.8	49.9	79.8	81.3	77.4	31.0	37.7	19.2
Kalahandi	59.3	61.5	NA	78.6	79.8	NA	39.4	42.7	NA
Kandhamal	58.9	60.2	46.2	74.6	74.9	70.9	43.3	45.5	20.6
Kendrapara	39.9	39.8	41.2	68.9	68.9	68.2	15.3	15.3	15.6
Kendujhar	61.5	62.6	56.4	81.2	81.1	81.3	42.6	45.0	31.3
Khordha	42.3	40.1	44.7	71.8	71.5	72.1	11.6	8.6	15.0
Koraput	62.5	67.3	42.3	79.6	82.9	65.9	46.1	52.3	19.0
Malkangiri	54.7	55.3	48.1	79.8	80.7	69.9	30.1	30.4	26.8
Mayurbhanj	62.5	63.3	52.9	80.1	80.5	75.6	45.7	47.0	31.1
Nabarangapur	56.0	56.6	NA	81.0	81.5	NA	30.7	31.5	NA
Nuapada	45.3	45.4	NA	76.2	76.3	NA	13.8	13.8	NA
Nayagarh	37.1	37.1	NA	68.6	68.9	NA	6.5	6.4	NA
Puri	40.2	39.6	42.8	72.9	73.2	71.5	7.5	6.5	12.5
Rayagada	60.2	63.8	43.7	78.4	80.5	69.4	43.3	48.6	17.7
Sambalpur	63.2	69.0	54.0	81.4	83.3	78.4	44.9	54.7	29.1
Sonapur	50.5	50.7	46.3	74.7	74.9	72.3	24.3	24.7	17.3
Sundargarh	55.6	58.0	50.8	79.4	81.1	76.0	30.9	34.4	23.7
Orissa	50.8	51.6	47.1	76.3	76.9	73.9	26.1	27.4	19.1

Source: Annual Health Survey, 2012-13

3.3 Rural-Urban differential in Health and Antenatal care among women in Odisha

Health is one of the important indicators that decide the human development of a nation or state. Odisha figures among all the bigger states in the country with highest Maternal Mortality Ratio (MMR).

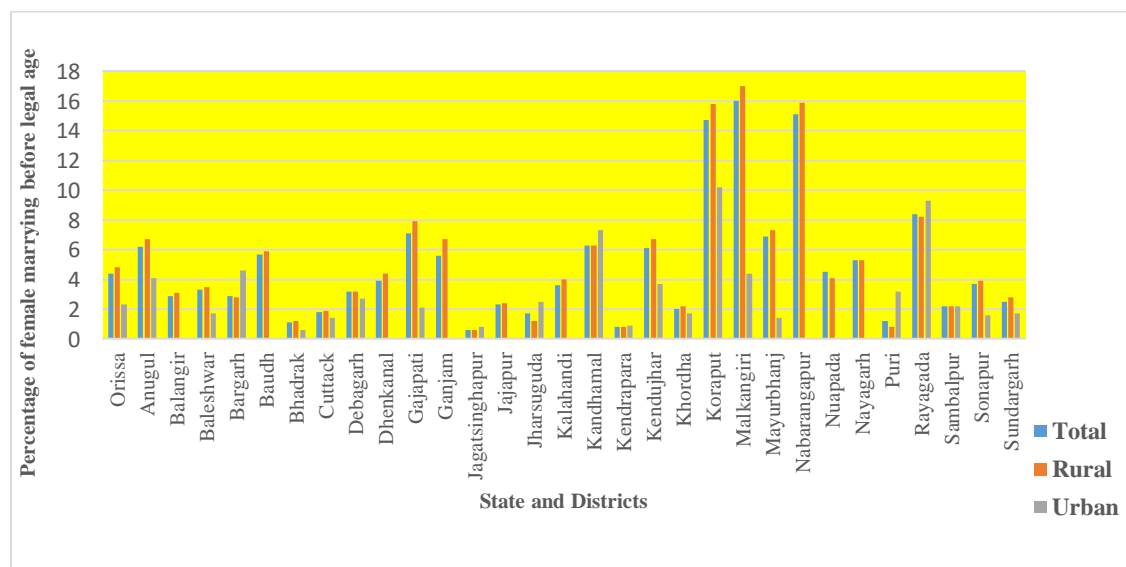
3.3.1 Rural and Urban differential in Age at Marriage

The data on marriage is important to understand fertility related questions and other demographic parameters. The data relating to marriage is available from different sources like decennial censuses, SRS, AHS, NSSO, DLHS and NFHS. Although the data of decennial census is the best source for marriage data, the data collected through AHS is recent and also provides reliable estimates at the district level for informed decision making in social and health sector.

There is huge difference in urban and rural areas as far as early marriage is concerned. Mostly, child marriage rate is much higher in rural areas than the urban areas and this is because of lack of educational institutions and economic opportunities in the rural areas.

Figure 3.3 shows the rural urban differential in percentage of female marrying before legal age (18 years). However, as per the Annual Health Survey Factsheet of 2012-13, in Odisha early marriage (below 18 years age for female) was found to be 4.4 percent and the early marriage rate is almost twice in rural areas (4.8 percent) compared to 2.3 percent in urban areas. Among the district of Odisha, highest rate of early marriage took place in Malkangiri (16 percent), followed by Nabarangpur (15.1 percent) and lowest was found in Jagatsinghpur district. The early marriage rate is substantially low in both the study districts, namely, Khordha and Sundargarh compared to the state average. The early marriage rate in the districts of Khordha and Sundargarh stood at 2 percent and 2.5 percent respectively. In rural areas of both the districts, the number of females who married below the legal age is high compared to their counterparts in urban areas.

Figure 3.3 Rural- urban differential in percentage of female marrying before legal age, among districts of Odisha, 2012-13

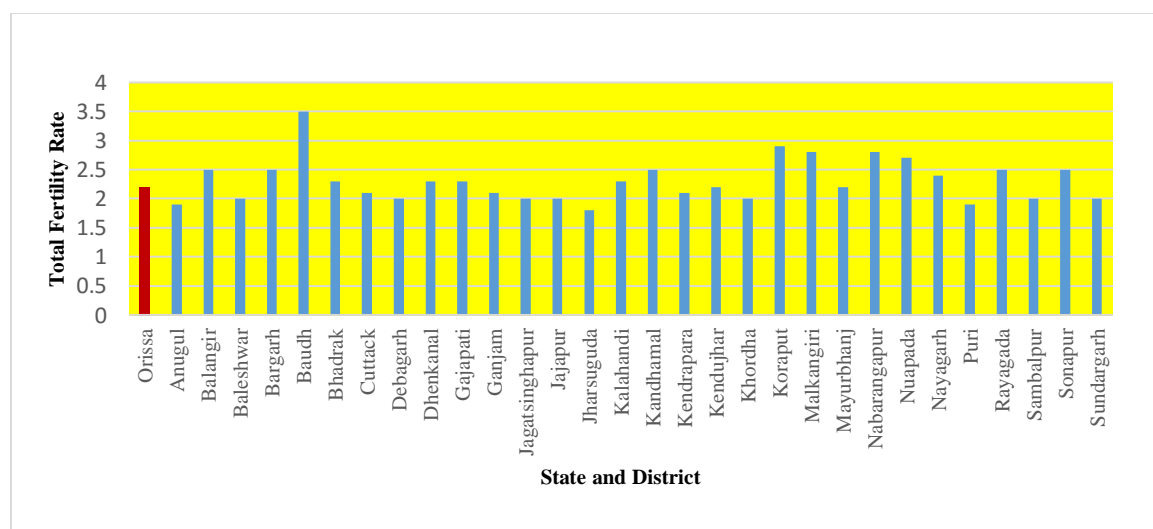


Source: Annual Health Survey, 2012-13

3.3.2 Fertility Rate among women in Districts of Odisha

The Total Fertility Rate (TFR) is expressed as the average number of births that a woman gives during her entire reproduction span. Teen-age pregnancies and motherhood is an important subject in the settings where the marriage of girls takes place at very young ages. Figure 3.4 shows district-wise fertility of women in Odisha.

Figure 3.4 District wise Fertility Rate of Odisha, 2012-13



Source: Annual Health Survey, 2012-13, * In AHS there is no data on rural-urban differential in TFR

Fertility rate is not only important from the fertility perspective but also its consequent implication on the health of the mother and child. As per the 2012-13 Annual Health Survey report, the fertility rate of women in Odisha is 2.2 percent. Khordha district and Sundargarh scores below the state average with 2 percent. The highest fertility rate was found in the Koraput district (2.9 percent) followed by Nabarangpur district (2.8 percent).

3.4 Rural-Urban differential in Utilization of Antenatal care among women in Odisha

Table 3.4 shows rural-urban differential in utilization of antenatal care among women in districts of Odisha. As per 2012-13, Odisha Annual Health Survey report, currently married pregnant women aged 15-49 years registered for ANC in the state is 79.8 percent and registration for ANC is higher in urban areas (80.6 percent) compared to rural areas (79.7 percent). Less number of women going for antenatal checkup in rural areas is due to lack of knowledge, health infrastructure and also lack of resources. In Khordha district, 79 percent currently married pregnant women aged 15-49 years registered for ANC compared to Sundargarh district's 83.5 percent. In Khordha district, registration for ANC is high (79.1 percent) among the urban married pregnant women compared to their rural counterpart (79 percent) whereas in Sundargarh district, the rate of registration is high among the rural women (85.2 percent) against the urban women (79.6 percent).

As per the Annual Health Survey report of 2012-13, in Odisha, 98 percent pregnant women have received some type of antenatal care and in availing antenatal care, rural women have slight advantages over urban women. Antenatal care is more successful in rural areas due to the active role of ASHA and Anganwadi workers. In some types of antenatal care, Sundargarh district scores above the Khordha district and averages near about the state average. In both the study districts, more number of rural women have availed some type of antenatal care than their urban counterparts.

Antenatal checkup in the first trimester is very important for both mother and the baby. In Odisha, 71.4 percent women have done the first trimester antenatal checkup and this figure is higher in urban areas (79.5 percent) compared to rural areas (70.1 percent). Compared to Khordha district (68.9 percent), first trimester checkup is high

in Sundargarh district (71.7 percent). In both the study districts, the first trimester antenatal checkup is higher among the urban women than the rural women.

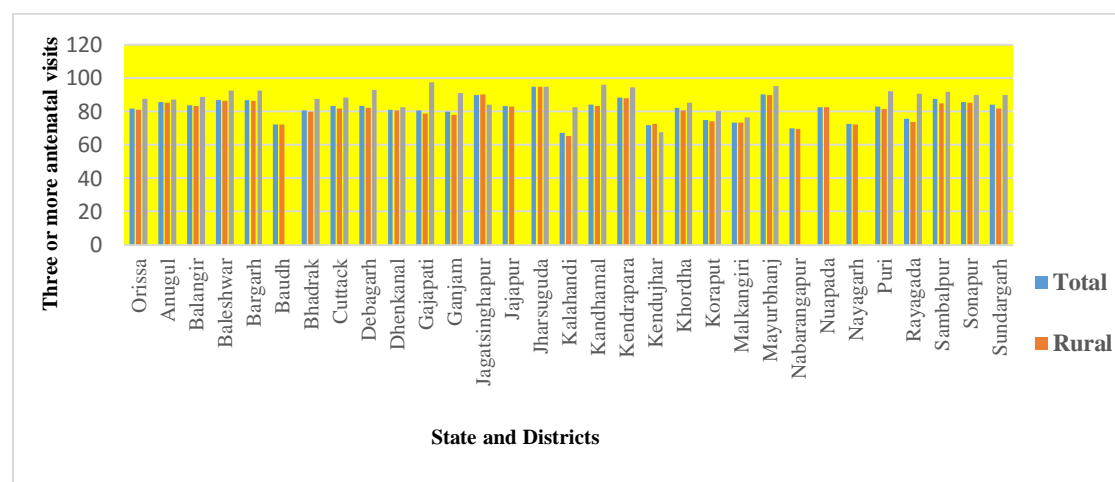
Table 3.4 Rural-Urban differential in utilization of Antenatal Care among women in districts of Odisha, 2012-13

District / State	Currently married pregnant women aged 15-49 years registered for ANC (%)			Mothers who received any antenatal checkup (%)			Mothers who had antenatal checkup first Trimester (%)		
	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
Orissa	79.8	79.7	80.6	98	97.9	98.1	71.4	70.1	79.5
Anugul	80.0	78.3	90.9	98.3	98.6	96.3	73.9	73.0	78.8
Balangir	90.9	91.1	86.7	99.2	99.2	99.5	74.3	73.3	87.9
Baleshwar	90.6	90.8	89.3	99.1	99.1	99.3	78.4	77.3	88.0
Bargarh	89.6	90.0	84.8	99.3	99.2	99.7	78.3	78.0	81.6
Baudh	69.8	68.9	NA	97.3	97.4	NA	67.6	67.0	NA
Bhadrak	90.8	91.8	82.2	98.6	98.5	98.7	70.3	68.9	80.2
Cuttack	79.3	80.5	75.9	98.3	98.5	97.6	77.3	75.8	82.0
Debagarh	81.8	82.1	77.8	98.0	97.9	98.8	71.3	70.4	82.3
Dhenkanal	80.1	79.9	81.8	98.3	98.3	97.3	67.0	66.3	75.5
Gajapati	50.3	48.7	72.7	96.2	95.7	99.3	66.9	63.9	92.1
Ganjam	63.4	60.4	80.0	95.9	95.4	98.4	70.8	69.1	81.9
Jagatsinghpur	74.4	74.9	70.0	98.6	98.7	97.4	81.1	80.6	84.2
Jajapur	82.4	82.0	NA	98.4	98.4	NA	70.8	70.3	NA
Jharsuguda	84.4	83.8	85.5	99.7	99.7	99.8	83.6	82.4	85.6
Kalahandi	69.6	68.6	88.9	94.0	93.5	98.5	64.8	64.5	67.2
Kandhamal	69.3	68.8	77.3	98.6	98.6	100	63.8	63.0	74.2
Kendrapara	85.9	86.1	81.8	99.3	99.3	99.4	76.4	75.8	86.6
Kendujhar	91.2	93.0	81.5	98.0	98.3	96.9	74.5	74.4	74.7
Khordha	79.0	79.0	79.1	97.4	97.6	97.1	68.9	63.5	77.6
Koraput	75.2	74.5	81.8	97.2	97.5	96.0	55.6	54.9	59.7
Malkangiri	83.6	83.4	86.5	94.1	93.9	97.4	56.8	55.9	69.9
Mayurbhanj	86.0	85.2	100	99.2	99.2	98.8	77.6	77.0	87.0
Nabarangapur	73.1	72.8	NA	95.1	94.9	NA	63.3	62.5	NA
Nuapada	54.1	53.8	NA	98.4	98.3	NA	61.7	61.5	NA
Nayagarh	73.0	73.2	NA	96.9	96.9	NA	58.8	58.2	NA
Puri	80.0	80.6	76.2	98.3	98.4	97.8	68.1	65.8	82.4
Rayagada	71.0	72.7	61.5	98.2	98.1	99.	51.9	51.1	57.1
Sambalpur	73.7	71.8	77.3	98.4	98.1	98.8	77.4	76.1	79.5
Sonapur	73.5	74.6	57.9	98.2	98.1	98.6	73.6	73.3	79.3
Sundargarh	83.5	85.2	79.6	98.4	98.2	99.1	71.7	68.1	80.8

Source: Annual Health Survey, 2012-13

Figure 3.5 shows the rural-urban differential in utilization of antenatal care among women in districts of Odisha. As per 2012-13 Odisha Annual Health Survey report, near about 82 percent pregnant women have visited 3 or more times health facilities for antenatal care and this figure was higher among urban women (87.6 women) compared to their rural counterparts (81 women). Rate of three or more antenatal visits among pregnant women is more in Sundargarh district (84.1 percent) compared to Khordha district's 82.3 percent. In Khordha district, 85 percent urban women have received three or more antenatal visits compared to rural women (80.7 percent). In Sundargarh district, near about 90 percent urban women have visited hospital three or more antenatal care compared to their rural counterparts (81.7 percent). Three or more antenatal visits is less among rural women in comparison to their urban counterparts.

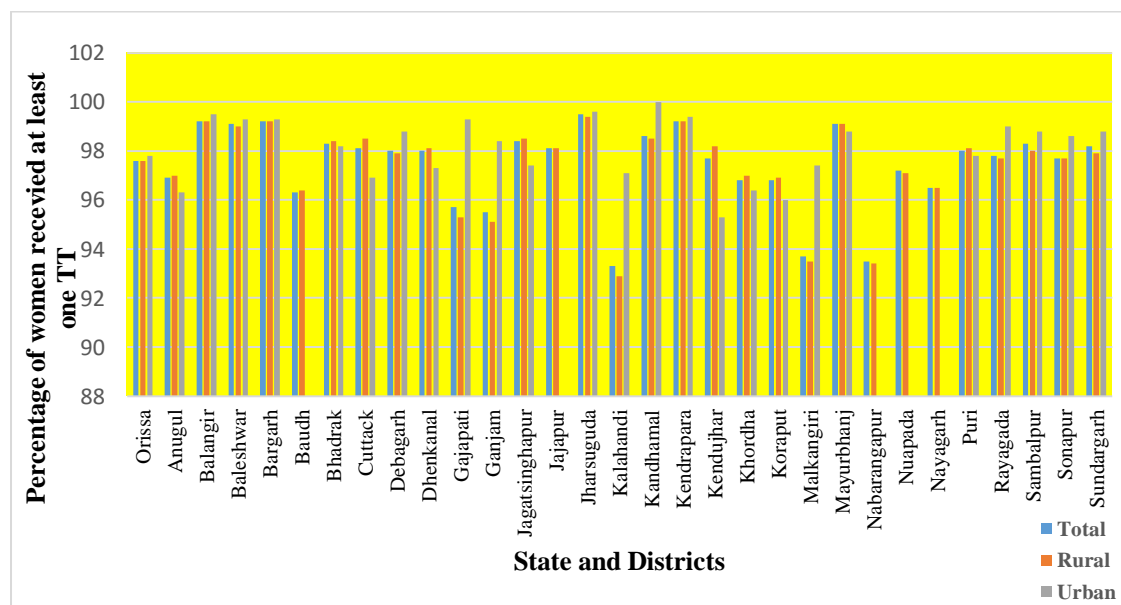
Figure 3.5 Rural-Urban differential in three and more antenatal visits among women in districts of Odisha, 2012-13



Source: Annual Health Survey, 2012-13

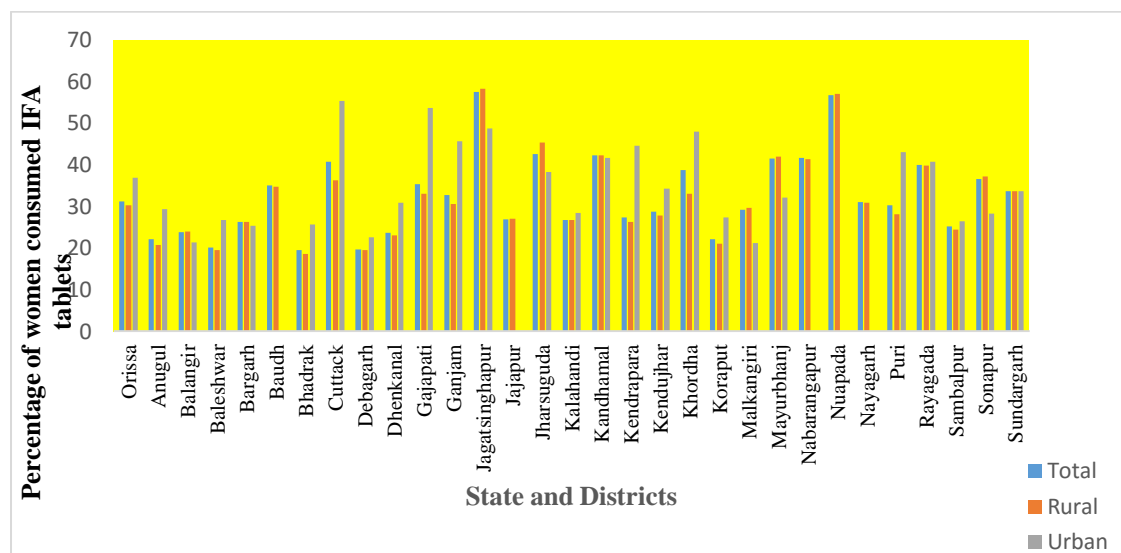
Figure 3.6 shows the rural-urban differential in Tetanus injection taken by women in districts of Odisha. 97.6 percent pregnant women have received at least one TT injection and almost the same percentage of rural and urban women have taken at least one TT injection in Odisha. In Khordha district, less percentage (96.8 percent) of pregnant women have taken at least one TT injection compared to the state average and the percentage of Sundargarh district (98.2 percent). In sundargarh district, 98.8 percent urban women and 97.9 percent rural women have taken at least one dose of TT.

Figure 3.6 Rural-Urban differential in Tetanus injection taken by women in districts of Odisha, 2012-13



Source: Annual Health Survey, 2012-13.

Figure 3.7 Rural-urban differential in consumed Iron and Folic Acid tablets for 100 days or more among women in districts of Odisha, 2012-13



Source: Annual Health Survey, 2012-13.

Figure 3.7 shows the rural-urban differential in consumed Iron and Folic Acid tablets for 100 days or more among women in districts of Odisha. In Odisha, 31.2 percent pregnant women have consumed IFA tablets for at least 100 days or more and around 40 percent urban women consumed IFA tablets compared to their rural counterparts

(30.3 percent). In both Khordha and Sundargarh district, more number of women have consumed IFA tablets than the state average. In Sundargarh district, same percentage of (33.6 percent) rural and urban women have consumed IFA tablets while in Khordha district, 47.9 percent of urban women consumed IFA tablets compared to their rural counterparts (33 percent). In Khordha district, in urban areas more women are consuming Iron and Folic Acid tablets compared to Sundargarh district. This may be because of higher education and higher economic status among urban women, so that they have more knowledge about utilization of antenatal care and the benefit of taking IFA tablets, how it affects health of mother and her baby. They are also accessing their health check-up from private clinics, so that they are getting proper knowledge of antenatal care. In rural areas women are not taking IFA tablets because of negligence.

Table 3.5 shows rural-urban differential in full utilization of antenatal care among women in the districts of Odisha. In Odisha, 27.8 percent women had done full antenatal checkup as per 2012-13 health survey report. 34.5 percent urban women have done the same compared to 26.8 percent of rural women. In both the study area, full antenatal checkup is higher than the state average. In Khordha district, 35 percent women have done the full antenatal checkup and the figure for Sundargarh is 31.7 percent. In Sundargarh, 31.6 percent rural and 31.8 percent urban women have done the full antenatal checkup compared to Khordha district's 44.2 percent urban and 29.4 percent rural women. Pregnant women can avail the antenatal care either from government institutions or from private health care institutions. In the state, more number of women have received ANC from government hospitals than private health care institutions and more number of rural women preferred government hospitals compared to urban women.

Rural women's receiving of ANC from government institutions is due to lack of availability of private health care institutions in the rural areas. 55.9 percent women received ANC from government hospitals and among them, rural women constitutes 57 percent compared to women in urban areas (49.3 percent).

Table 3.5 Rural-Urban differential in utilization of full Antenatal Care among women in districts of Odisha, 2012-13

District / State	Mothers who had full antenatal checkup (%)			Mothers who received ANC from govt hospital			Mothers whose blood pressure (BP) taken		
	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
Orissa	27.8	26.8	34.5	55.9	57.0	49.3	85.7	85.1	89.8
Anugul	21.1	19.7	28.7	57.7	60.6	42.0	83.3	82.6	87.4
Balangir	21.1	21.2	19.4	72.5	73.8	55.6	92.6	92.2	97.6
Baleshwar	18.8	18.0	26.1	62.8	65.0	43.8	88.6	87.9	94.3
Bargarh	23.7	23.8	23.2	64.8	65.6	56.2	88.5	88.4	90.1
Baudh	27.5	27.3	NA	80.9	80.7	NA	86.6	87.0	NA
Bhadrak	17.9	16.9	24.9	53.7	56.0	37.6	84.6	83.8	90.3
Cuttack	36.5	31.9	51.0	64.2	73.5	34.6	91.4	91.1	92.4
Debagarh	18.2	17.8	22.6	87.0	87.9	76.5	82.8	82.0	91.5
Dhenkanal	21.1	20.5	28.7	78.8	78.5	82.5	85.9	86.0	84.6
ewGajapati	31.9	29.3	53.6	55.5	56.3	48.7	82.7	80.9	98.7
Ganjam	29.5	27.2	44.0	61.6	63.5	49.6	83.5	82.0	93.1
Jagatsinghapur	54.6	55.4	47.4	70.4	69.7	77.0	93.8	94.0	92.1
Jajapur	24.9	25.0	NA	64.2	65.1	NA	86.0	85.7	NA
Jharsuguda	41.4	44.0	37.4	58.4	69.3	41.4	94.4	94.2	94.6
Kalahandi	20.2	19.7	24.8	79.8	81.9	59.3	83.3	82.2	94.2
Kandhamal	37.8	37.5	41.7	79.5	78.5	92.5	87.6	87.1	95.0
Kendrapara	25.9	24.9	44.5	69.5	70.6	49.7	89.6	89.4	92.1
Kendujhar	23.8	22.9	28.3	85.9	88.8	71.0	72.1	72.1	72.6
Khordha	35.0	29.4	44.2	57.2	67.2	40.7	86.1	83.2	90.7
Koraput	16.8	15.5	23.9	44.0	37.9	76.5	76.1	75.4	79.6
Malkangiri	25.6	26.0	19.2	31.1	29.2	59.2	76.0	75.9	77.6
Mayurbhanj	38.4	38.8	31.5	91.5	92.3	76.3	90.4	90.1	96.9
Nabarangapur	31.4	31.1	NA	30.7	28.6	NA	83.3	83.2	NA
Nuapada	47.0	47.2	NA	85.3	85.8	NA	91.0	90.9	NA
Nayagarh	25.0	24.8	NA	72.0	72.0	NA	71.3	71.0	NA
Puri	27.3	25.0	41.2	67.0	69.8	49.7	90.1	89.7	92.6
Rayagada	33.6	32.9	37.7	49.7	46.3	71.4	86.5	85.2	95.3
Sambalpur	24.1	23.2	25.6	79.8	84.4	72.0	85.1	83.1	88.5
Sonapur	33.5	34.0	24.8	83.2	83.2	84.6	88.8	88.6	93.1
Sundargarh	31.6	31.6	31.8	80.5	90.1	57.0	84.5	82.4	89.6

Source: Annual Health Survey, 2012-13

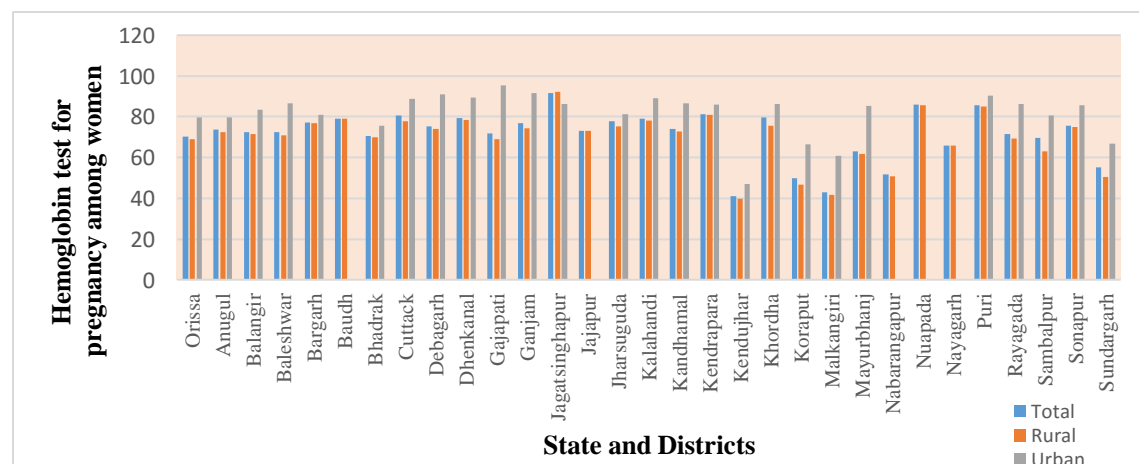
In Khordha district, 57.2 percent women have visited government hospitals for antenatal checkup compared to Sundargarh district's 80.5 percent. In both districts,

more number of rural women visited government hospitals than their counterparts in urban areas. In both the districts, more number of urban women preferred private health care institutions than government health care facilities. In the state, for recently married pregnant women, blood pressure (BP) check was done. More number of urban women (89.8 percent) have done the BP check compared to their rural counterparts (85.1 percent). In both the districts, more number of urban women have done blood pressure checkup than rural women.

3.4.1 Antenatal care (HB & Ultrasound)

Figure 3.8 shows the rural-urban differential in hemoglobin test among women during pregnancy in districts of Odisha. In the state of Odisha, more than 70 percent women's blood have been given for hemoglobin test and near about 80 percent urban women have done the same compared to rural women (68.9 percent). Near about four-fifth pregnant women in Khordha district have done the Hb test compared to Sundargarh district's 55.2 percent. In both districts, more number of urban women have done Hb test against their rural counterparts.

Figure 3.8 Rural-urban differential in Hemoglobin test of pregnant women in districts of Odisha, 2012-13

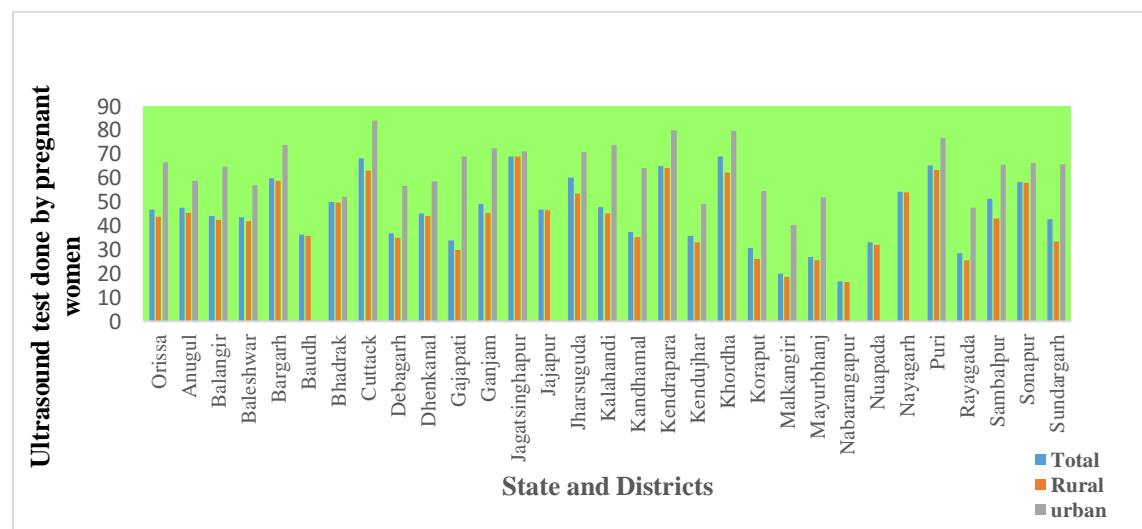


Source: Annual Health Survey, 2012-13

Figure 3.9 shows the rural-urban differential with respect to ultrasound test among women during pregnancy in districts of Odisha. During pregnancy, women also undergo ultrasound test. In Odisha, less than half of pregnant women have undergone

ultra sound test but in urban areas, as per the Annual Health Survey report of 2012-13, 66.6 percent women have undertaken the ultrasound test whereas only 43.7 percent rural women have done the same. In case of the ultrasound test, Khordha has the highest percentage of pregnant women (69.9 percent) among all the districts of the state. In Sundargarh district, less than fifty percent women went for the ultra sound test. In both the districts, urban women’s availability for antenatal care is higher compared to their rural counterparts.

Figure 3.9 Rural-Urban differential in Ultrasound test of pregnant women in districts of Odisha, 2012-13



Source: Annual Health Survey, 2012-13

3.5 Institutional Delivery

As per the National Population Policy of 2000, India is to achieve 80 percent institutional child deliveries and 100 percent deliveries to be assisted by skilled health personnel by 2015 (Jena, et.al., 2013). However, the rate of increase in coverage of institutional deliveries in India was rather slow. It increased from 26 percent in 1992-93 to 73 percent in 2010-11 and the target was to achieve 80 percent by the end of 2015 (Jena, et.at.2013). Due to the launch of the National Rural Health Mission (NRHM), the percentage of institutional delivery has increased.

Table 3.6 shows the rural-urban differential in institutional delivery among women in districts of Odisha. In the state, 80.8 percent deliveries took place in institutions and among them, 70.8 percent took place in government institutions/hospitals and around one-tenth deliveries took place in the private institutions. Institutional delivery is high

among the urban women (86.8 percent) compared to their counterparts in the rural areas (79.8 percent). More number of rural women (72.5 percent) preferred to go to the government hospitals for delivery compared to urban women (60.1 percent). Urban women prefer private institutions for delivery (25.9 percent) than rural women (7 percent).

Table 3.6 Rural-Urban differential in Institutional Delivery among women in districts of Odisha, 2012-13

District /state	Institutional Delivery (%)			Delivery at government institution (%)			Delivery at private institution (%)		
	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
Orissa	80.8	79.8	86.8	70.8	72.5	60.1	9.6	7.0	25.9
Anugul	84.6	85.1	81.7	70.0	74.4	46.8	14.4	10.5	35.0
Balangir	80.1	79.4	89.8	76.2	76.4	74.8	3.8	3.0	14.6
Baleshwar	86.3	85.5	93.3	79.4	80.2	72.2	6.9	5.2	21.1
Bargarh	86.5	85.8	94.2	77.6	78.4	69.6	8.7	7.2	24.2
Baudh	67.6	67.1	NA	64.5	64.3	NA	2.9	2.6	NA
Bhadrak	81.9	82.5	78.0	70.4	71.8	60.0	11.5	10.5	18.0
Cuttack	91.3	92.0	89.3	70.5	78.5	45.6	19.6	12.9	40.6
Debagarh	78.3	77.7	86.0	74.9	74.9	75.6	3.4	2.8	9.8
Dhenkanal	84.1	83.9	86.7	76.3	76.6	72.9	7.7	7.2	13.8
Gajapati	66.1	64.1	84.1	53.1	54.2	43.7	12.8	9.8	39.1
Ganjam	87.6	86.4	94.8	73.1	75.1	60.5	12.7	9.8	30.6
Jagatsinghpur	95.9	96.6	88.8	79.4	80.8	65.1	15.4	14.9	19.7
Jajapur	88.6	88.5	NA	78.3	78.8	NA	10.2	9.6	NA
Jharsuguda	85.8	86.9	84.2	66.1	75.4	51.5	18.7	10.8	31.1
Kalahandi	67	65.3	84.7	59.3	58.1	70.8	7.0	6.3	13.9
Kandhamal	80.4	79.3	94.2	78.4	77.6	89.2	1.8	1.6	5.0
Kendrapara	81.8	81.3	90.9	70.6	70.6	72.0	11.1	10.7	18.9
Kendujhar	71.3	72.6	64.6	64.9	68.5	46.4	6.3	4.0	18.2
Khordha	92.9	94	91.1	68.6	79.4	50.8	23.7	14.2	39.3
Koraput	53.4	49.7	73.0	51.0	47.9	67.3	2.4	1.8	5.8
Malkangiri	52.6	51.6	67.9	50.6	49.8	62.2	2.0	1.8	5.8
Mayurbhanj	79.7	78.9	93.2	78.0	77.7	82.7	1.7	1.2	10.5
Nabarangapur	53.6	52.4	NA	50.8	49.8	NA	2.6	2.4	NA
Nuapada	70.4	69.7	NA	63.3	63.1	NA	6.5	6.2	NA
Nayagarh	89.1	89.0	NA	78.5	78.8	NA	10.2	9.7	NA
Puri	95.5	95.5	95.4	81.1	83.9	64.1	14	11.3	30.7
Rayagada	62.3	58.1	89.5	53.7	51.6	67.0	6.5	4.4	20.4
Sambalpur	83.2	79.9	88.7	71.4	72.8	68.9	11.6	6.8	19.6
Sonapur	83.4	82.7	93.1	79.2	79.1	80.7	3.9	3.4	12.4
Sundargarh	80.9	77.9	88.2	68.6	72.8	58.2	12.1	5.0	29.7

Source: Annual Health Survey, 2012-13

In Khordha district, around 93 percent institutional delivery took place which is above the state average and above of Sundargarh district (80.9 percent). In Khordha district, 94 percent rural women and 91.1 percent urban women preferred institutional delivery. Delivery in government institutions is more among rural women (79.4 percent) and delivery in private institutions is more among urban women (39.3 percent) in Khordha district. In Khordha district, 68.6 percent institutional delivery took place at government hospitals and more number of rural women preferred (79.4 percent) government hospitals compared to their counterparts in urban areas (50.8 percent).

In Sundargarh district, 80.9 percent women preferred institutional delivery and among them, 88.2 percent are urban women and 77.9 percent are rural women. In Sundargarh district, 68.6 percent delivery took place in government hospitals and more number of rural women (72.8 percent) preferred delivery at government hospitals than the urban women (58.2 percent). In Sundargarh district, 29.7 percent urban women went to private hospitals for delivery than rural women (5 percent) as shown in Table 3.6.

3.6 Rural-Urban differential in delivery at Home

Home delivery is occurring more in rural areas of Odisha compared to urban areas of Odisha. Figure 3.7 shows the rural-urban differential in home delivery among women in districts of Odisha. In Odisha, around 19 percent delivery took place at home and delivery at home is higher among rural women (19.6 percent) than urban women (12.6 percent).

Around a quarter of delivery at home was conducted under the active supervision of skilled health personnel and this is high among urban women (31.9 percent) compared to their counterparts in the rural areas (23.8 percent). Among all the deliveries at home, 83.7 percent were safe and the percentage is higher for the urban women (89.1 percent) than rural women (82.8 percent). Among the two districts, the percentage of home delivery is very less in Khordha district compared to the Sundargarh district. Delivery at home is 7.1 percent in Khordha district against Sundargarh's 18.9 percent. In Khordha district, 8.8 percent delivery at home takes place in urban areas against 6 percent in rural areas.

Table 3.7 Rural-Urban differential in home delivery among women in districts of Odisha, 2012-13

District / state	Delivery at home (%)			Delivery at home conducted by skilled health personnel (%)			Safe Delivery (%)		
	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
Orissa	18.7	19.6	12.6	24.5	23.8	31.9	83.7	82.8	89.1
Anugul	15.0	14.5	17.7	14.9	13.8	20.0	85.8	86.2	83.7
Balangir	19.6	20.4	10.2	36.8	37.3	23.8	86.4	86.0	92.2
Baleshwar	13.5	14.3	6.7	24.7	25.0	20.0	89.0	88.4	94.0
Bargarh	13.1	13.8	5.5	40.7	40.4	50.0	91.0	90.5	95.9
Baudh	32.2	32.7	NA	15.0	15.1	NA	72.0	71.5	NA
Bhadrak	17.7	17.2	21.8	25.9	25.6	27.8	84.9	85.4	81.6
Cuttack	8.6	7.9	10.7	34.1	32.7	37.3	92.6	93.2	90.7
Debagarh	21.2	21.8	13.4	13.8	13.3	22.7	80.1	79.5	87.2
Dhenkanal	15.4	15.7	12.2	17.9	17.7	21.7	85.8	85.5	88.8
Gajapati	33.5	35.5	15.9	27.6	26.9	41.7	71.7	69.7	89.4
Ganjam	11.8	12.9	5.2	19.4	19.1	23.1	88.9	87.9	95.6
Jagatsinghapur	3.9	3.2	11.2	30.4	16.9	70.6	96.2	96.9	88.8
Jajapur	11.0	11.1	NA	14.2	14.1	NA	89.8	89.7	NA
Jharsuguda	12.0	12.0	11.9	45.0	40.4	52.3	89.9	90.6	88.8
Kalahandi	32.8	34.5	15.3	21.8	21.1	38.1	73.1	71.5	89.1
Kandhamal	19.3	2.3	5.8	18.0	18.1	14.3	81.9	81.0	94.2
Kendrapara	15.4	15.9	7.5	41.1	41	41.7	85.4	85.0	91.5
Kendujhar	28.5	27.2	35.2	22.2	20.6	28.8	75.7	76.6	70.8
Khordha	7.1	6.0	8.8	26.2	17.1	36.2	93.8	94.5	92.6
Koraput	46.6	50.3	27.0	33.1	33.5	29.5	57.9	54.4	76.5
Malkangiri	47.3	48.3	32.1	18.1	17.4	34.0	56.9	55.9	72.4
Mayurbhanj	19.8	20.6	6.2	24.3	24.2	30.0	82.4	81.8	93.2
Nabarangapur	41.2	42.4	NA	13.8	13.7	NA	57.0	55.9	NA
Nuapada	29.6	30.3	NA	24.7	24.1	NA	76.9	76.2	NA
Nayagarh	10.9	11.0	NA	9.5	9.7	NA	89.6	89.5	NA
Puri	4.4	4.3	4.6	14.3	13.3	20.0	95.8	95.9	95.7
Rayagada	37.7	41.9	10.5	12.5	11.3	45.0	64.8	60.4	93.7
Sambalpur	16.6	20.0	10.8	25.8	24.5	29.7	86.1	83.4	90.8
Sonapur	16.4	17.0	6.2	24	23.6	44.4	86.8	86.3	95.2
Sundargarh	18.9	21.9	11.3	29.7	28.6	34.9	84.5	82.3	90.1

Source: Annual Health Survey, 2012-13.

However, in Sundargarh, more number of home delivery took place among the rural women (21.9 percent) against 11.3 percent among urban women. Among the two districts, more number of safe delivery took place in Khordha district (93.8 percent)

against 84.5 percent in Sundargarh district. In Khordha district, more safe delivery reported in the rural areas (94.5 percent) against 92.6 percent in the urban areas and in Sundargarh district, more safe delivery (90.1 percent) reported in the urban areas compared to 82.3 percent in rural areas.

3.7 Postnatal Care

Table 3.8 shows the rural-urban differential in postnatal check-up among women in districts of Odisha. In institutional delivery, 52.4 percent women stayed in the institution for 24 hours after the delivery and more number of rural women (54.6 percent) stayed in the institutions than their urban counterparts (39.4 percent). In the state of Odisha, as per the Annual Health Survey Report of 2012-13, 82.8 percent women received postnatal check-up within 48 hours of delivery and the percentage of postnatal checkup is high among urban women (87.7 percent) against rural women (82.1 percent). 86.5 percent mothers received postnatal checkup within one week of the delivery and more number of women from urban areas (90.7 percent) received the same compared to their rural counterparts (85.8 percent).

In Khordha district, 45 percent women stayed in the institution after 48 hours of the delivery compared to 32.1 percent in the Sundargarh district. In both the districts, more number of rural women stayed in the institution after 24 hours of the delivery than their counterparts in the urban areas. In Khordha district, 88.6 percent women received post natal checkup after 48 hours of delivery compared to 84.4 percent in Sundargarh district. In Sundargarh district, more number of urban women (91.6 percent) received post natal checkup after 48 hours of delivery than their rural counterparts (81.5 percent). In Khordha district, receiving of post natal checkup after 48 hours of delivery is higher among rural women (89.2 percent) against 87.7 percent of urban women. In Khordha, 91.5 percent women received post natal checkup after one week of delivery compared to 89.4 percent in Sundargarh district. In Sundargarh district, more number of urban women (95 percent) have received post natal checkup compared to the rural women (87.2 percent). Reverse is true in case of Khordha district as more number of rural women (91.5 percent) have received post natal checkup within one week of delivery compared to their urban counterparts (90.8 percent).

Table 3.8 Rural-Urban differential in Postnatal Care among women in districts of Odisha, 2012-13

District / state	Less than 24 hours stay in institution after delivery (%)			Mothers who received postnatal checkup within 48 hrs of delivery (%)			Mothers who received postnatal checkup within one week of delivery (%)		
	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
Orissa	52.4	54.6	39.4	82.8	82.1	87.7	86.5	85.8	90.7
Anugul	47.1	47.7	44.0	86.8	87.1	85.3	89.9	90.2	88.4
Balangir	65.6	66.1	60.5	86.5	86.8	83.5	90.3	90.5	87.9
Baleshwar	58.2	59.0	52.0	89.8	89.4	93.3	92.1	91.5	97.3
Bargarh	63.0	62.9	63.8	94.0	93.7	97.3	96.5	96.4	98.6
Baudh	49.9	50.3	NA	73.7	73.1	NA	79.9	79.5	NA
Bhadrak	58.5	58.8	56.8	84.2	84.5	82.0	87.0	87.5	84.0
Cuttack	42.7	48.8	23.0	87.3	86.7	88.9	90.9	90.9	90.9
Debagarh	55.4	56.3	46.1	80.3	79.6	88.4	84.3	83.7	91.5
Dhenkanal	58.6	59.4	48.5	87.1	86.8	90.4	89.1	88.9	91.5
Gajapati	60.0	59.7	62.2	68.0	65.9	86.8	74.2	71.5	97.4
Ganjam	60.2	64.2	37.9	86.8	85.7	93.5	89.3	88.5	94.4
Jagatsinghapur	20.6	19.3	35.1	89.2	89.9	81.6	92.9	93.8	84.2
Jajapur	64.1	64.5	NA	89.4	89.4	NA	90.4	90.3	NA
Jharsuguda	38.7	39.7	37.2	91.8	92.0	91.5	95.1	95.2	95.1
Kalahandi	59.0	59.9	51.8	65.7	64.2	81.0	72.3	70.9	86.1
Kandhamal	25.9	25.5	30.4	83.9	83.2	92.5	88.9	88.4	95.8
Kendrapara	56.6	56.7	55	87.1	87	89.6	88.7	88.6	90.2
Kendujhar	75.3	77.1	64.9	73.9	74.5	70.5	77.1	77.5	75.0
Khordha	45.0	54.5	28.9	88.6	89.2	87.7	91.2	91.5	90.8
Koraput	56.3	56.8	54.3	62.1	59.6	75.2	67.5	65.4	78.8
Malkangiri	19.2	18.6	26.2	50.3	49.0	69.9	60.9	59.6	80.1
Mayurbhanj	56.9	56.9	55.6	84.4	83.8	95.1	88.1	87.6	86.9
Nabarangapur	52.8	52.9	NA	60.5	59.3	NA	67.0	66.0	NA
Nuapada	60.2	60.7	NA	72.3	71.6	NA	78.9	78.3	NA
Nayagarh	70.5	71.3	NA	85.5	85.3	NA	88.2	87.9	NA
Puri	35.2	35.7	32.0	88.4	87.7	92.3	91.0	90.4	94.4
Rayagada	24.2	23.5	26.9	69.1	66.6	84.8	79.3	77.9	88.5
Sambalpur	30.1	31.6	27.8	86.4	84.3	90.0	90.7	89.4	92.9
Sonapur	46.5	47.3	34.8	88.5	87.9	91.3	90.8	97.9	NA
Sundargarh	32.1	33.5	28.8	84.4	81.5	91.6	89.4	87.2	95.0

Source: Annual Health Survey, 2012-13.

3.8 Maternal mortality and morbidity

Maternal morbidity and mortality along with infant mortality rate is universally considered as human development indicators in a country and it determines the health

status of the people. In spite of very good plans and programmes, the reduction in MMR and IMR is much below the target set.

Table 3.9 shows the district-wise maternal mortality ratio in Odisha. Odisha is one of the poorest states in India having MMR of 230 per 100000 live births as per Annual Health Survey 2012-13 which is much higher than the national average and significantly contributing to the high MMR of the country. The poor health infrastructure and lack of skilled health professionals affects the maternal health services starting from prenatal to postnatal stage. Maternal death is higher in the central division which includes the study district of Khordha followed by Northern division which includes the district of Sundargarh.

Table 3.9 District wise Maternal Mortality Ratio of Odisha, 2012-13

Maternal Mortality Ratio(MMR)per 100,000 live births				
State/Division	Sample female population	Sample live births	Maternal mortality rate	Maternal Mortality Ratio
Odisha	556678	111586	257	230
Northern Division (Bargarh, Jharsguda, Sambalpur, Debagarh, Sundargarh, Kendujhar, Dhenkanal, Angul, Sonapur, Balangir)	203553	38434	90	234
Central Division (Mayurbhanj, Balesore, Bhadrak, Kendrapara, Jagatsinghpur, Cuttack, Jaipur, Nayagarh, Khordha, Puri)	239211	46254	101	218
Southern Division (Ganjam, Gajapati, Kandhamal, Baudh, Nuapada, Kalahandi, Rayagada, Nabarangapur, Koraput, Malkanagiri)	113914	26898	66	245

Source: Annual Health Survey, 2012-13

3.9 Summary

The present chapter has discussed the rural-urban differential in utilization of antenatal care among women in districts of Odisha. For this chapter, data from secondary sources was used which included the 2011 census and Annual Health Survey, 2012-13 of Odisha. In the first section, working conditions of women in rural and urban areas in districts of Odisha was discussed. In the second section, the maternal health scenario of Odisha was analysed. It elaborately described the antenatal care utilization among rural and urban women in districts of Odisha. First it

has discussed the three components of antenatal care that is three or more antenatal check-up, consuming 100 Iron and Folic Acid tablets and taken two TT injections. Second it has given the picture of institutional and home delivery and thirdly postnatal check-ups among women in rural and urban areas of Odisha.

The higher percentage of marginal workers were found in Mayurbhanj district which is one of the tribal districts of Odisha. Main workers were more in Khordha district compared to Sundargarh district. The work participation rate is higher among women in Sundargarh district compared to Khordha district and both urban and rural areas work participation among women is high in Sundargarh district. The women work participation is very less in rural as well as urban areas of Khordha district. In work participation, Sundargarh scores above the state average whereas Khordha falls below the state average.

Secondary data analysis discussed in the present chapter shows that urban Odisha is doing substantially better than rural Odisha in all antenatal and natal cares. For instance there is huge gap in utilization of full antenatal care among women in between urban and rural areas of Odisha. In the study areas, the utilization of antenatal care is higher among women in Sundargarh district compared to Khordha district. In both Khordha and Sundargarh districts, more than 90 percent women have taken one TT injection. But the consumption of 100 or more Iron and Folic Acid tablets is less among women in both Sundargarh and Khordha districts whereas in urban areas in Khordha districts, around 50 percent women have consumed 100 or more IFA tablets. For this reason the utilization of full antenatal care is less among women in Khordha and Sundargarh districts.

As per the Annual Health Survey report of 2012-13, in Odisha, 98 percent pregnant women have received some type of antenatal care and in availing antenatal care, rural women slightly have advantages over the urban women. Antenatal care is more successful in rural areas due to the active role of ASHA and Anganwadi workers. In any type of antenatal care, Sundargarh district scores above the Khordha district and averages near about the state average. In both the study districts, more number of rural women have availed some type of antenatal care than their urban counterpart.

Above 90 percent pregnant women have received at least one TT injection and almost same percentage of rural and urban women have taken at least one TT injection in

Odisha. In Khordha district, less percentage of pregnant women have taken at least one TT injection compared to the state average and the percentage of Sundargarh district. In Odisha, very less percent pregnant women have consumed IFA tablets for at least 100 days or more and more urban women have consumed IFA tablets compared to their rural counterparts. In both Khordha and Sundargarh district, more number of women have consumed IFA tablets than the state average. In Sundargarh district, same percentage of rural and urban women have consumed IFA tablets while in Khordha district, higher percentage of urban women consumed IAF tablets compared to their rural counterparts. In Khordha district in urban areas more women are consuming Iron and Folic Acid tablets compared to Sundargarh districts.

In Odisha, near about thirty percent women had done full antenatal checkup as per 2012-13 health survey report. Higher percent of urban women have done the same compared to rural women. In both the study areas, full antenatal checkup is higher than the state average. In Khordha district, higher percent of women have done the full antenatal checkup and the figure for Sundargarh is less. In Sundargarh, less percent of both rural and urban women have done the full antenatal checkup compared to Khordha district. Institutional delivery is high among women in urban areas compared to rural areas of Odisha. In Khordha district, institutional delivery is very high compared to the state average and Sundargarh district. In Khordha district, more institutional delivery is among urban women compared to rural women whereas in Sundargarh district, institutional delivery is higher among rural women compared to urban women.

In Odisha, around 20 percent delivery took place at home and home delivery is higher in rural areas compared to urban areas. Home delivery is higher in rural areas than urban areas in Sundargarh district where as in Khordha district home delivery is higher in urban areas than rural areas. In Odisha more urban women received postnatal check-up within 48 hours of delivery than rural women. In Sundargarh district, more number of urban women have received postnatal checkup compared to rural women. Reverse is true in the case of Khordha district as more number of rural women have received postnatal checkup within one week of delivery compared to their urban counterparts.

CHAPTER 4

DETERMINANTS OF WORK STATUS OF WOMEN IN ODISHA

A primary survey was conducted in two districts namely Sundargarh and Khordha of Odisha. In these two districts, two areas/localities were chosen with one rural and the other was an urban slum. The present chapter analyses the background profiles of the respondents and determinants of work status among rural and urban poor women in these two districts.

4.1 Socio-economic Profile of the Respondents in Khorda and Sundargarh District, Odisha

Table 4.1 shows the socio-economic profile of the respondents in Khordha and Sundargarh districts of Odisha. In Kesura, a rural area of Khordha district, all respondents were Hindus. Respondents of no other religion were come across during the survey. In Dolposh village of Sundargarh district, about 87 percent were from Hindu religion, 9 percent were Christians and the rest were of other religions. In Ganjubasti (urban slum) of Sundargarh, majority of the respondents belonged to the Hindu religion and very few respondents were Christians. In Saliasahi (urban slum) of Khordha district, around 90 percent of women respondents belonged to the Hindu religion followed by 11 percent Christians. Households of no other religion were found during the survey.

In the whole study area, out of 800 women respondents, more than 50 percent belonged to the Scheduled Tribe category, followed by 22 percent who belonged to the Schedule Caste category. Around 16 percent women respondents belonged to the OBC category while the general category women stood at 12 percent of the total respondents. The higher percentage of ST population in the study area is because of the high concentration of ST population in Sundargarh district as well as in the urban slum of Khordha district. In Dolposh village, almost all households belonged to the ST category followed by 55 percent in Saliasahi of Khordha district. Around 50 percent households in the Ganjubasti of Sundargarh district belonged to the ST population. However, there was no ST population in Kesura village of Khordha

district. Highest percentage of SC households were found in the Ganjubasti of Sundargarh district (44 percent) followed by 32 percent in Kesura village. Saliasahi had around 19 percent SC population. No general category population was found in the Dolposh village whereas only 1 percent population in Ganjubasti belonged to the general category. Highest (29 percent) general category population was found in Kesura village followed by 17 percent in Saliasahi of Khordha district. There was no OBC population in Dolposh village while Kesura village had highest percentage (40 percent) of OBC population followed by Saliasahi (19 percent). Compared to the homogenous rural areas of two districts, different caste groups were found to coexist in the two slums because of the migration of different caste populations to urban areas for job and earning who gradually then settled down.

The education profile of the respondents in the study area also presents an interesting picture. In the whole area, only around 7 percent possessed a higher education degree whereas 26 percent respondents had not received any type (formal or non-formal) of education. Around 45 percent women had primary education and 23 percent women had secondary education. An area specific analysis revealed that near about half of respondents in Saliasahi of Khordha district had secondary education while very less respondents had primary education in Dolposh village. Around two-third of women respondents had primary education in both Dolposh and Ganjubasti areas. And in these two areas, around a quarter of women respondents had not received any kind of education and this was due to the backwardness of the district. In Khordha district, the education level among women was quite high compared to Sundargarh district. In Kesura village, around 37 percent women had completed secondary education and similar percent had primary education. Around one-tenth of respondents had passed a higher education degree while about 21 percent respondents had not received any education. In Saliasahi, around 8 percent respondents had higher secondary education and more surprisingly around 32 percent women had not received any education. Around 12 percent women had only received primary education.

The economic conditions of the households in these areas were also not good. More than three quarter of households' monthly income was below Rs. 5000 per month and near about a quarter of households' income was above Rs. 5000 per month. In case of area wise income patterns, Khordha district's income was much better compared to Sundargarh district. In Khordha district, Kesura village's income level was better than

Saliasahi. In Dolposh village of Sundargarh district, almost all (99 percent) households' income was below Rs. 5000 per month and 98.5 percent households' income in Ganjubasti of the same district was below Rs.5000.

Table 4.1 Socio-economic profile of women in Sundargarh and Khordha

Background characteristics	District (%)				Total
	Sundargarh		Khordha		
	Dolposh (rural)	Ganjubasti (urban poor)	Kesura (rural)	Saliasahi (urban poor)	
Religion					
Hindu	87.5	98.0	100.0	88.5	93.5
Christian	9.0	2.0	0.0	11.5	5.6
Others	3.5	0.0	0.0	0.0	0.9
Caste					
General	0.0	1.0	28.5	16.5	11.5
OBC	0.0	5.5	39.5	18.5	15.9
SC	0.5	44.0	32.0	9.5	21.5
ST	99.5	49.5	0.0	55.5	51.1
Educational Level of the Respondents					
No education	25.00	26.5	21.5	31.5	26.1
Primary	67.00	67.0	32.5	12.0	44.6
Secondary	1.00	4.5	37.0	48.5	22.8
Higher	7.00	2.0	9.0	8.0	6.5
Husband's Income					
Less than 5000	99.0	98.5	35.0	75.5	77.0
More than 5000	1.0	1.5	65.0	24.5	23.0
Types of Family					
Nuclear	48.5	80.0	36.5	74.5	59.9
Joint	51.5	20.0	63.5	25.5	40.1
Female headed households					
Yes	15	0.5	6.0	9.0	7.6
No	85	99.5	94.0	91.0	92.4
Standard of Living					
Low SLI	68.5	86.5	13.0	66.0	58.5
Medium SLI	28.0	13.5	59.0	32.0	33.1
High SLI	3.5	0.0	28.0	2.0	8.4
Family has BPL card					
Yes	25.0	23.0	65.5	25.5	34.8
No	75.0	77.0	34.5	74.5	65.2
House Type					
Pucca	7.0	17.5	13.5	0.0	9.5
Kachha	82.5	71.0	76.0	35.0	66.1
Mixed	10.5	11.5	10.0	65.0	24.4
Electrification of House					
Yes	96.0	88.0	90.5	80.5	88.8
Own Toilet Facility					
Yes	63.0	30.5	31.5	39.5	41.1
Own drinking water source					
Yes	33.0	25.0	4.0	7.0	17.3
Total (N)	200	200	200	200	800

districts, Odisha field study, 2011-12

Source: Computed from primary data

It was found during the primary survey that the poor economy of the region was due to lack of earning opportunities and most of the households depended upon agriculture, seasonal labour and unskilled labour. Most of them worked in construction sites or as domestic workers or in similar jobs. In contrast to this, Khordha district had a better income level because of it being a developed district in Odisha. More number of skilled work, government employment, corporate and private jobs were available in the city.

Due to urbanization and industrialization, large scale migration of working population had taken place to urban areas and this has changed the family structures in the state. Earlier, Odisha was a traditional state with traditional values and customs. People valued the joint family structure because they thought that it would mean earnings and household properties need not be divided. However, in recent times these values have changed because of the demands of modern life. Sometimes it is also not possible to bring all the family members to urban areas. In village areas also, these tendencies are gradually taking hold because they believe that their earnings should not be divided among all family members. The study found that with increase in urbanization and industrialization, nuclear family structure is spreading. In the whole study area, around 60 percent households belonged to the nuclear family structure and remaining belonged to the joint family structure. However, in Ganjubasti which is located in the steel city of Rourkela, 80 percent households had nuclear family (because of industrialisation) followed by around 75 percent households in Saliasahi (because of urbanization) that belonged to the nuclear family structure. However, although changes have taken place, still rural areas have majority joint family value structures. In Dolposh village, around 52 percent households and in Kesura village around 64 percent households belonged to the joint family structure.

India and Indian subcontinent is still dominated by the patriarchal values of a male dominated society. In Odisha, most of the households are headed by male members. In the study area, around 92% households belonged to male headed households and only 8% households were headed by women. A comparative study reveals that findings do not depend on any pattern like industrialisation or urban - rural factor. In Ganjubasti, 99.5 percent households were headed by male members, followed by 94 percent in Kesura village and 91 percent in Saliasahi. Dolposh village had 85 percent

households headed by male members. Overall, most of the households were headed by male members.

Odisha is the only coastal state whose economy is very poor and has a low economic growth rate compared to other Indian states. As far as standard of living is concerned, majority of the people in the study area were poor. Their standard of living was not up to the all India average. In the whole study area, around 59 percent households had lower standards of living, followed by around 33 percent of people who had medium standards of living and only 8 percent households had high standards of living. In two districts, the standard of living was also not evenly distributed.

Although Odisha is a poor state, in the study area, it was found that around 65 percent of population lived above the poverty line and only 35 percent population lived below poverty line. However, a question was asked about whether they have BPL card and the tabulations were done accordingly. During discussions, majority of the respondents revealed that although they fell in the BPL category, they had not got BPL cards and said that the issuing authorities were responsible for not issuing BPL cards to them. As the data reveals, in Kesura village, around 66 percent households belonged to the BPL category and in both Saliasahi and Dolposh village, 25 percent households belonged to the BPL category. Ganjubasti had only 23 percent BPL households. Except for Kesura where only 34 percent households belonged to the Above Poverty Line, in all other areas, majority of the households were above poverty line. In Ganjubasti, around 77 percent households were above the poverty line followed by both Saliasahi and Dolposh village (75 percent).

In the study area, majority of the respondents were staying in kachha houses. In Dolpsh around 82 percent respondents were staying in kachha houses compared to 76 percent respondents in Kesura village. In Ganjubasti, 71 percent respondents were living in kachha houses and 35 percent were living in kachha houses in Saliasahi. In the study area, about 90 percent households had electricity facility and rest 10 percent households had no electric connection. There was more electrification among houses in village areas compared to urban poor areas of both the districts. In Dolposh, around 96 percent households had an electric connection whereas in Kesura it was 90.5 percent. In Ganjubasti, 88.0 percent households had an electric connection compared to 80 percent in Saliasahi. According to the primary data, highest number of

households (63.0 percent) in Dolposh village had their own toilet facility whereas in Kesura only about 31 percent households had their own toilets. In Ganjubasti, around 30 percent households had their own toilets whereas in Saliasahi, 40 percent households had their own toilets. In the study area, 17 percent households had own drinking water facility. In Khordha district very less percent households had own drinking water facility whereas in Sundargarh district more households had their own drinking water facility.

4.2 Demographic Profile of the Respondents in Khordha and Sundargarh districts, Odisha

Like in other parts of India, some sections of population in Odisha still believe in early marriage for their daughters because of the disadvantages and social stigma attached to the lives of unmarried women. Table 4.2 shows the demographic profile of the respondents in Khordha and Sundargarh districts of Odisha. In the study area, it was found that more than three-fourth of girls got married before they reached the age 20. Around 22 percent women got married at the age of 20-25 years and only less than a percent of women got married after they attained the age of 25 years. About 95 percent early marriage occurred in Dolposh village, followed by 81 percent in Saliasahi. And both these two areas are dominated by the tribal population and it can be said that a majority of the tribal population still believe in early marriage. 68 percent women in Ganjubasti and around 65 percent women in Kesura village got married before they attained the age of 20 years. Only in Ganjubasti, 1.5 percent women got married at the age of 25 years or above and in no other areas, women waited till that age. In the age group of 20-25 years, Kesura village tops the list with 35.5 percent, followed by Ganjubasti at 30.5 percent. In Saliasahi, around 19 percent women got married at the age of 20-25 years, followed by 5 percent in Dolposh village.

Early marriage means early child birth and more number of children. In majority of the cases, before a girl even understands the role of a mother, she becomes a mother and sacrifices her life in the service of her children and her in-laws. In the study area, it was found that 53.6 % of women below the age of 20 years became mothers, followed by 40 percent women becoming mothers in the age group of 20-25 years and only around 7 percent women became mothers after they attained the age of 25. In

case of women becoming mothers before they attained the age of 20, Dolposh village topped the list with 72 percent, followed by Saliasahi (60 percent). Around a quarter of women below the age of 20 years became mothers in Kesura village and around 58 percent became mothers in Ganjubasti before the age of 20 years. The highest percentage of women (70 percent) becoming mothers between the age of 20-25 years was in Kesura village, followed by Saliasahi (35 percent). In the same age group in Ganjubasti and Dolposh village, around 27 percent of women had given birth to their first child. In Ganjubasti, around 16 percent had given birth to their first child after attaining the age of 25 years followed by 6 percent in Saliasahi. Around 5 percent women in the same age group had given birth to their first child in Kesura village whereas less than a percent of women gave birth to their first child in Dolposh village in the same age interval.

Table 4.2 Demographic profile of the respondents in Khordha and Sundargarh districts of Odisha, field study, 2011-12

Background characteristics	District (%)				Total
	Sundargarh		Khordha		
	Dolposh (rural)	Ganjubasti (urban poor)	Kesura (rural)	Saliasahi (urban poor)	
Age at Marriage					
Below 20 years	95.0	68.0	64.5	81.0	77.1
20-25	5.0	30.5	35.5	19.0	22.5
25 years above	0.0	1.5	0.0	0.0	0.4
Age at Birth					
Below 20 years	72.0	57.5	25.5	59.5	53.6
20-25	27.5	27.0	70.0	34.5	39.8
25 years above	0.5	15.5	4.5	6.0	6.6
Total children ever born					
1	38.5	43.0	33.0	36.5	37.8
2	33.5	34.0	48.5	32.0	37.0
3	18.5	17.0	18.0	16.0	17.4
4	8	3.0	0.50	12.0	5.9
5	1	2.0	0.0	3.5	1.6
6	0.5	1.0	0.0	0.0	0.4
Space of birth					
<24 months	38.0	46.5	74.0	52.0	52.6
>24 months	62.0	53.5	26.0	48.0	47.4
Total (N)	200	200	200	200	800

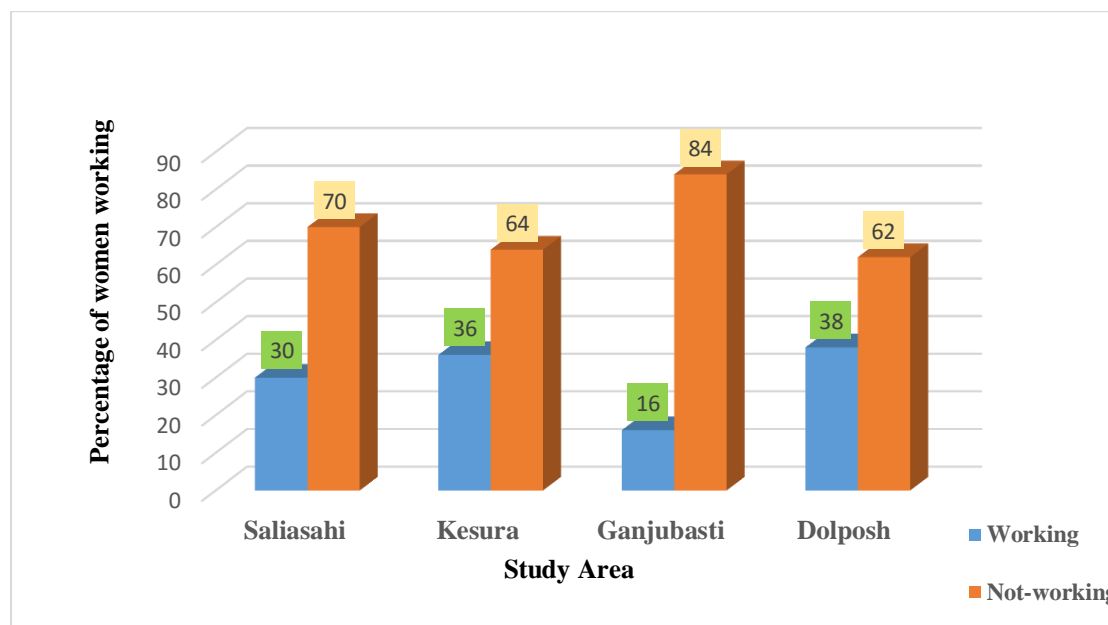
Source: Computed from primary data

India is one of the most populous countries in the world, second only to China. In recent times, there has been some stabilization in population growth because of various government population control policies. In the 20th century, the average number of children from a single mother was approximately around five. Now this number has substantially reduced. In the study area, it was found that around three-fourth of mothers had either given birth to one child or two children. During the survey, it was found that economic problems and government policies were the main reasons cited for reducing the number of children. Around 17 percent women had given birth to three children followed by 6 percent women who had given birth to four children. The percentage was very insignificant in case of women who had five or more children. In the one child norm, Ganjubasti leads the table with 43 percent, followed by 39 percent in Dolposh village. In Saliasahi, 37 percent of women had one child. In both Dolposh and Ganjubasti, around 34 percent women had two children followed by 32 percent in Saliasahi. For all the areas, the percentage stood between 16 to 19 percent with respect to women having three children. In Saliasahi, around 12 percent women had more than three children or they had four children. In both the districts, the spacing between two child births was very less. In Kesura village, more number of women delivered their second child with less than 24 months gap.

4.3 Work status of women in Sundargarh and Khordha of Odisha

Work status of women depends upon socio-cultural structure of their families. In Odisha, most families do not allow their women to work outside their house. Their main responsibilities are to look after their families as well as child's health. They do not have much autonomy to go outside for work. It is believe by some however that additional income to family supplements in the time of need and also helps for children's education, better health care treatment and other benefits. Particularly in the slum and rural areas, where the household economy is very poor, wife's income helps in the survival of household.

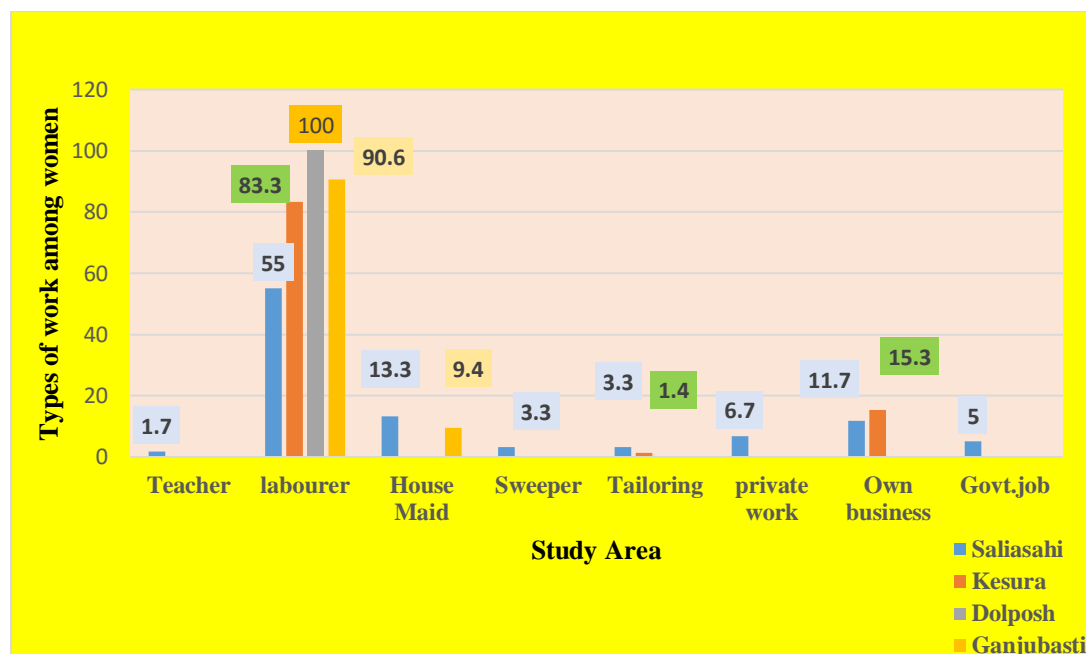
Figure 4.1 Work status of women in Sundargarh and Khordha districts of Odisha, field study, 2011-12



Source: Computed from primary data

Figure 4.1 shows the work status of women in Khordha and Sundargarh districts of Odisha. It was found that around 70 percent women did not work and only 30 percent women worked. In the study area, the highest percentage of working women were found in Dolposh village (38 percent), followed by Kesura village (36 percent). Lowest percentage of working women were found in Ganjubasti with 16 percent while Saliasahi had 30 percent working women. Among the non-working women, Ganjubasti had the highest percentage (84 percent), followed by 70 percent in Saliasahi. In the study area, among those who were working, about 82 percent of the respondents were working as labourers. In rural areas, women were working as agricultural labourers which was seasonal whereas in urban poor areas, women were involved in construction work and some of them were working as labourers in factories. 7.5 percent women had their own businesses like vegetable shops or stationery shops or tea shops. 5 percent women were doing jobs like being house maids. Very less percent women were in govt. jobs as shown in Table 4.3.

Figure 4.2 Types of work women are doing in Sundargarh and Kdordha districts of Odisha, field study, 2011-12



Source: Computed from primary data

Figure 4.2 shows the types of work women were doing in Khordha and Sundargarh districts of Odisha. They were teachers, daily labourers, house maids, sweepers etc. Most of the working women were working as daily labourers, followed by housemaids and those who had own businesses. All working women in Dolposh village of Sundargarh district were working as daily labourers. Above 15 percent women respondents had their own businesses in Kesura village, followed by 11.7 percent in Saliasahi of Khorda district. Women private workers were found only in Saliasahi of the Khorda district. Different types of working women were found in different study areas because of the availability of different jobs.

Table 4.3 shows the work status of women in Khordha and Sundargarh districts of Odisha. In the study area majority (84 percent) of the respondents were earning less than Rs. 2000 in a month and very less percent (16 percent) respondents were earning Rs. 2000 and above. In the study area, those who were doing jobs like labourers were getting below Rs. 2000 in a month because in the urban poor areas, the contractors had to call them for work when it was available. Mostly, they were getting work for

only 10-15 days in a month and only rarely they were getting work for the whole month. Women who were working as housemaids were doing work in three to four houses and got Rs. 1000 or Rs. 1500 in a month from each house. Those who were doing work like preparing food were getting Rs. 1500 a month and were working 5-6 hours a day. The respondents who were working as labourers earned Rs. 200 to 250 a day. Wage rate also varies between rural and urban areas and also among male and female workers for the same work.

During the interaction (during 2011-2012) with the women respondents in the study area, it was found that a very negligible section of women earned around Rs. 5000 or more than Rs. 5000 per month. Majority of the respondents in the study areas were earning around Rs. 1000 per month, followed by Rs. 2000 per month. More than 60 percent women in Saliasahi of Khorda district earned around Rs. 2000 per month and in Kesura around 98 percent women were getting less than Rs. 2000 per month. In both Dolposh and Ganjubasti, it was found that all working women were getting less than Rs. 2000 per month.

Depending on the nature of work, hours of work also differs. In the entire study area, near about 85 percent working women spent atleast 6 hours in their work place. Near about majority of the women workers in Saliasahi were found spending 6 hours or more in their work place. More than 90 percent of the women workers in Dolposh village spent less than 6 hours a day in their work place. 100 percent women workers in Ganjubasti and Kesura worked less than 6 hours a day in their work place.

Table 4.3 Work Status of women in Sundargarh and Kdordha districts of Odisha, field study, 2011-12

Work status of women	Study areas				Total
	Saliasahi	Kesura	Dolposh	Ganjubasti	
Type of work					
Teacher	1.7	0.0	0.0	0.0	0.4
Labourer	55.0	83.3	100.0	90.6	82.5
House Maid	13.3	0.0	0.0	9.4	4.6
Sweeper	3.3	0.0	0.0	0.0	0.8
Tailoring	3.3	1.4	0.0	0.0	1.3
Private work	6.7	0.0	0.0	0.0	1.7
Own business	11.7	15.3	0.0	0.0	7.5
Govt.job	5.0	0.00	0.0	0.0	1.3
Reasons for working					
Self-independent	3.3	0.0	0.0	6.3	1.7
Household Expenditure	0.0	2.8	44.7	15.6	17.1
Enhance family income	86.7	19.4	0.0	46.9	33.8
child education	5.0	0.0	0.0	6.3	2.1
for better living	1.7	0.0	0.0	25.0	3.8
Poverty	3.3	0.0	0.0	0.0	0.8
Family survival	0.0	2.8	55.3	0.0	18.3
Family support	0.0	75.0	0.0	0.0	22.5
Reasons for not working					
Young child	47.9	14.8	57.3	30.4	37.1
job not available	4.3	0.0	0.0	8.9	3.8
household work	7.9	0.8	0.8	0.6	2.5
husband is not allowing for work	5.0	45.3	25.8	32.7	27.1
no necessity	28.6	0.0	6.5	4.2	9.8
not able to do work	0.7	0.0	0.0	0.0	0.2
no education more	5.7	0.0	0.0	0.0	1.4
no time	0.0	32.8	9.7	23.2	16.6
ill health	0.0	6.3	0.0	0.0	1.4
Full Time / Part Time					
Full Time	15.0	1.4	0.0	0.0	4.0
Part Time	85.0	98.6	100.0	100.0	96.0
Conditions of work place					
Good	93.0	53.0	0.0	0.0	39.0
Not Good	7.0	47.0	100.0	100.0	61.0
No of Hours spent in work					
Less than 6 hours	50.0	100.0	89.5	100.0	84.2
More than 6 hours	50.0	0.0	10.5	0.0	15.8
Monthly Respondents' income					
Less than Rs 2000	38.3	98.6	100.0	100.0	84.2
More than Rs 2000	61.7	1.4	0.0	0.0	15.8
Health Injury at work place					
Injury	0.0	0.0	9.0	0.0	3.0
No Injury	100.0	100.0	91.0	100.0	97.0
Total (N)	60	72	76	32	240

Source: Computed from primary data

In the study area, it was found that, among those who were working, 96 percent of them were engaged on a part time basis and the remaining four percent were in full time jobs. Highest full time engagement (15 percent) was found in Saliasahi of

Khorda district followed by one per cent in Kesura village of the same district. All working women were engaged in part time jobs in both the study areas of the Sundargarh district.

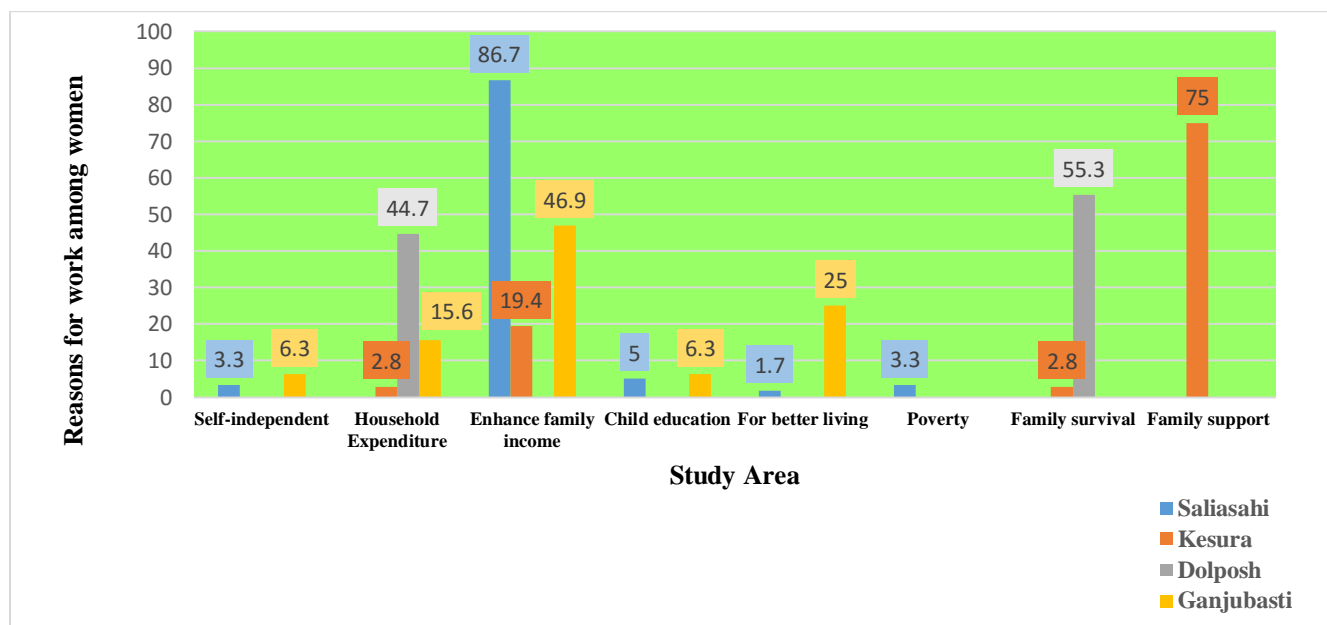
As most of the working women worked in unorganized sectors, their working conditions were also not good. More than majority of the respondents revealed that their working conditions were not good and all respondents in both the areas of Sundargarh district revealed that their working conditions were not good. However, 93 percent respondents in Saliasahi of Khorda district revealed that their working conditions were good followed by Kesura village (53 percent) of the same district. As most of the working women in the study area were engaged in hazard free work conditions, they had not received any major injury in the work place. Around 3% respondents revealed that they had received minor health injuries while working and 9 percent women had got injuries in the Dolposh village of Sundargarh district.

4.4 Reasons for work and non-work among women in Khordha and Sundargarh of Odisha

4.4.1 Results from quantitative Surveys

Figure 4.3 shows the reasons for women choosing to work in Khordha and Sundargarh districts of Odisha. In the study area, many women's husbands were wage labourers or construction workers. They were earning the same as their wives. These incomes were not sufficient for better standards of living. At the time of interview, 33.8 percent respondents said that they were working for money because it was essential to fulfill their basic needs. 22.5 percent respondents were working to support their family as their husband's income was not enough. 18.3 percent were working for family survival as most of the respondents had larger family sizes. 17 percent respondents were working to manage their household expenditures. Some respondents said that they were working for their children's education, for better standards of living, to be self-independent and very less percent told that they were working because of poverty. Most of the respondents said that their husbands were not earning enough and many of them also were spending on alcohol and smoking. They were also beating their wives.

Figure 4.3 Reasons for work among women in Khordha and Sundargarh districts of Odisha, field study, 2011-12

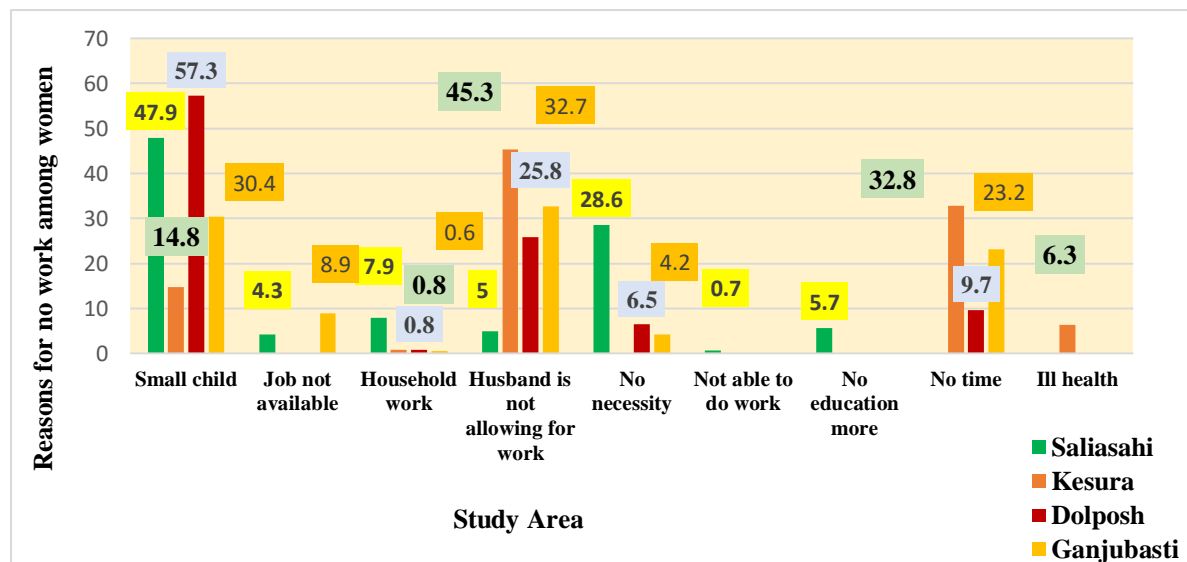


Source: Computed from primary data

In the rural village of Dolposh, near about 45 percent women were working for household expenditures and 55 percent women were working for family survival, whereas in Kesura the respondents said that they were working to support their family (75 percent) while around 20 percent were working to enhance family incomes, for family survival and some respondents said that they were working to take care of household expenditures. In the case of urban poor area of Saliasahi and Ganjubasti, women were working because of different reasons. In Saliasahi, around 87 percent women were working to enhance family incomes, 5 percent were working for children's education, around 3 percent said they were working because of poverty and the rest 3 percent were working to be self-reliant. In Ganjubasti, women were working to enhance family incomes (47 percent), 17 percent were working to take care of household expenditures, 25 percent for better living standards, 6.3 for children's education and rest 6.3 percent were working to be self-reliant. In urban poor areas, the major problem was unemployment and alcoholism. Alcohol consumption and wife beating was prevalent in these areas. For family survival, women were working in different avenues as housemaids, daily wage labourers and also as construction workers.

Figure 4.4 shows the reasons why many women choose not to work in Khordha and Sundargarh districts of Odisha. Different reasons were mentioned for non-working among the respondents in the study areas. Majority of the respondents were not working because they had young children. 27 percent respondents told that they were not working because their husband and family members did not allow them to and believed one income was sufficient and their women should not work. 17 percent respondents said that they had no time for work. 10 percent said that there was no necessary to work outside. Some of the responds were not working because no suitable work was available or they had no education or had to manage the household, etc.

Figure 4.4 Reasons for no work among women in Khordha and Sundargarh districts of Odisha, field study, 2011-12



Source: Computed from primary data

In the study area, 70 percent women were not working and only 30 percent women were found to be working in different sectors. Highest percent (37.1) women were not working due to having small children and they also revealed that they were working before pregnancy and would resume work once the child grew up. More than a majority of women in Dolposh village did not work due to having a small child followed by near about majority in Saliasahi. More than a quarter of women respondents revealed that their spouse/husband was not allowing them to work and most such cases were reported in Kesura village of Khordha district (45.3) and lowest

(5 percent) was found in Saliasahi of the same district. In Kesura village, the women from higher standards of living households were not working because their husbands were earning sufficient income and they were not allowing their wife to work outside. Around 16.6 percent women respondents revealed that they had no time to work outside. Other reasons like jobs not available (3.8 percent), household work (2.5%), no necessity (9.8%), not able to work (0.2%), no education or very little education (1.4%) and ill health (1.4%) were also responsible for women not working.

4.4.2 Results from qualitative Surveys

From the Focus Group Discussion it was found that in Kesura, women were doing work like being agricultural seasonal labourers and some were doing own business. Seasonal labourers were getting work around 5-6 months in a year. Rest of the time they remained unemployed. Some of the respondents told that at that time they were working in brick factories near to their village while some also went outside the village for construction works. Women who were working in agricultural fields had fixed amount of wage. They were getting Rs. 150 to 200 per day. The wage rate also varied between males and females. They were working more than 6 hours in field. Some respondents told that employer provided food to them. There was no toilet facility, no drinking water facility and no crèche facility. So women sent their child to Anganwadi centre. In Dolposh village, women are working as agricultural labourers and as construction workers. As Rourkela city is nearer to this village, some of the respondents were working as sweepers in some govt. offices. Some were also working as domestic workers. They were working more than 6 hours and getting Rs. 200 to 250 per day.

Women in urban poor areas were doing daily wage work and construction work. They were doing part time work to a maximum of 15 days in a month. When contractor called them, they went for work and the rest of month they were not doing any work. For this work, they were getting Rs. 200 per day and they were working 5 to 8 hours in a day. For extra work, they were getting extra Rs. 50. Some of the respondents in Ganjubasti told that they sent their child to Father School (Missionary Crèche) and Anganwadi centre when they went to work and other respondents told that they left their child in neighbour's house. During pregnancy, some of them were not working whereas women from poor households had gone to work for money for household

expenditure and to take care of their children. After 6 months of delivery, they again started their work, taking the small children with them as there was no crèche facility in construction sites, they kept the children in a small area in the construction site. The respondents told that they were working because of three reasons;

- Domestic violence
- Family survival
- Children's education

Domestic violence

In urban poor areas, women were facing so many problems. Their husbands were not earning enough and whatever they were earning, they spent that amount on alcohol. They were also beating their wives. They did not take care of their children. So women were working outside for money. These are some opinions given by respondents:

“My husband was not earning enough and whatever he was earning he spent that amount on alcohol and was physically abusing me. Every day he was giving me Rs. 10 rupees, it was very difficult to manage my home so I started work as house maid during my pregnancy. I had not taken any antenatal care during my pregnancy, so I delivered a stillbirth baby in govt. hospital” (Women 24 years, Ganjubasti)

“My husband is a drunkard and he used to beat me every day after having drinks. Due to continuous torture, I left my husband's house and presently staying with my mother. I am working as a daily wage labourer and each alternate day, I go to work, because I have to take care of my two year old son, when I go to work, my mother looks after the baby and when she goes, I look after baby.” (Women 20 years, Saliasahi).

Family survival

In the study area, women were also working to support their families as their husbands were not earning enough. It is very difficult to survive with limited amount of money. So they were working outside inspite of their health problems. These are some opinions given by respondents:

“I am doing work like mixing of sand and cement and take this mixture in my head and reach to the fourth floor where workers are doing work. I have always pain in all parts of my body, besides these I am working for Rs 200 money for the survival of my children”. (Women 35 years Saliasahi)

“I am doing house maid work in 3-4 houses, during my pregnancy I was also working till the third trimester of my pregnancy and I was also anemic, so I faced some complications during my delivery as I have two children and my husband is an auto driver, earning about Rs 5000 in a month, it is difficult to manage my family in that income” (Women 25 years, Saliasahi)

Children’s Education

In the study area, women were also working for the sake of their children’s education. They were thinking that education of children was important for better living as they had no education and hence were struggling in their life. These are some opinions:

“I am doing packing of noodles in a factory in Rourkela. It is 5 KM from my home. So I go to factory by cycle, it is my full time job from 9 am to 6 pm and I am getting Rs. 280 per days. It is very difficult for me to go to work place by cycle, as I have not much money to go by auto or bus to work place. Besides these I am working to educate my child”. (Women 24 years, Ganjubasti)

“I am working in a dress shop from 10 am to 9 pm, for this I am getting Rs 3000 per month. I am feeling pain in my body because I have to stand all the time for selling dresses. Sometimes I feel weak. But I have to work for my 3 children’s education and my husband is getting Rs. 200 from their daily wage labour, it is difficult to survive in that amount of money” (Women 26 years, Ganjubasti).

Different reasons were told for non-working. Some of these reasons were linked to husband not allowing, family members not allowing by saying that one income was sufficient or their women should not work. Others said no suitable work was available or had to look after the children and manage the household work, etc. Even in some places, it was said that to work outside was not safe. Seasonal unskilled workers suffer as in village areas, they work only during paddy harvesting. Apart from this, they do not have any other work to do. Some respondents also said that their husband’s income was sufficient. Among the working women, most were mostly

unskilled workers and worked in paddy fields whenever there was work and apart from this, they worked as labourers in construction sites, as domestic workers, or owned tea or some small shops. The reasons given for not working are as follows -

- Joint families
- Non availability of job

Joint Families

In the study area, most of the respondents said that after marriage their main responsibility became taking care of their families. There was thus no need to work outside. Some of the respondents told that it was against their culture. Some of the opinions are given below:

“In my family women can’t go outside for work. My mother-in-law said to me that your main duty is to take care of your family. You can’t work outside because it is against our culture.” (Women 20 years, Kesura).

“I am not working because I had gotten married at an early age due to less education, my husband is doing own business. My family does not allow me to work outside. I have three children. Due to heavy work, I am not getting much time to look after my children, one female child died due to pneumonia”. (Women 30 years, Kesura)

Non-availability of Jobs

Some respondents said that after their marriage they were not getting time to work outside and there were no proper jobs available in the village. They were so busy in their household work that they had no time to go outside for work.

“As I have completed graduation, I can work somewhere, but after my marriage I am busy taking care of my family. There is also no job facility in village. My mother-in-law wants a grandson, for this reason I have aborted four times. Now I have a girl child.” (Women 30 years, Kesura)

In the study area, it was found that though they needed jobs for survival of their families, in joint family homes they were not getting time to work outside. They did not have any say regarding their health or matters concerning their children.

4.5 Factors affecting work status of women in Khordha and Sundargarh of Odisha,

Table 4.4 shows the socio-economic factors affect work status of women in Khordha and Sundargarh districts of Odisha. In the study area, majority of the respondents were from Hindu religion, less percent were from Christian religion and very minor percentage respondents were from other religions.

Table 4.4 Socio-economic factors affect work status of the respondents in Sundargarh and Kdordha districts of Odisha, field study, 2011-12

Socio-economic factors	Saliasahi	Kesura	Ganjubasti	Dolposh
	Working women	Working women	Working women	Working women
Husband's Income				
<5000	34.4	61.4	16.2	37.4
>5000	16.3	22.3	0.0	100.0
Family belongs to BPL				
BPL	33.3	47.3	34.8	44.0
APL	28.9	14.5	10.4	36.0
Religion				
Hindu	29.4	36.0	15.3	35.4
Non-Hindu	34.8	0.0	50.0	56.0
Caste				
Non-ST	18.0	36.0	4.0	100.0
ST	39.6	0.0	28.3	37.7
Types of Family				
Nuclear	28.9	49.3	13.8	32.0
Joint	33.3	28.3	25.0	43.7
Education				
No education	50.8	58.1	15.1	32.0
Primary and secondary	21.5	26.6	16.8	33.8
Higher	12.5	55.6	0.0	100.0
Children Ever Born				
One	24.7	53.0	10.5	45.5
Less than three	20.8	27.1	15.7	38.5
Three and above	71.0	100.0	58.3	5.3
Standard of Living				
Low	39.4	57.7	14.5	27.0
Medium	12.5	39.8	25.9	57.1
High	0.0	17.9	0.0	100.0
Family Decision				
Husband	23.2	36.0	13.0	37.4
Wife	46.6	33.3	25.9	42.3
Both husband and wife	0.0	0.0	26.3	0.0
Total (N)	60	72	32	76

Source: Computed from primary data

Among Hindu women, less percent were working and higher percent were not working whereas among Christian women, more percent were working and among others religions, all women respondents were working. Christian women had more

freedom to work outside where as in Hindu families, women were not being allowed to work outside because they were more conservative compared to Christian families. In the study, it was found that more women were working from non-Hindu families compared to Hindu families.

In the study area, it was found that in Saliasahi urban slum of Khordha district, more women from non-Hindu families were working compared to Hindu families. Near about 35 percent women from non-Hindu families were working compared to 29 percent in Hindu families of Saliasahi. In case of Kesura village, for present study only Hindu women responded and among them 36 percent were working. In Sundargarh district, both Ganjubasti and Dolposh women from non-Hindu families were working at a higher rate in comparison to Hindu families. In Ganjubasti, 50 percent non-Hindu women were working whereas in Dolposh village around 56 percent non-Hindu women were working. This was because more ST women were working in Ganjubasti and Dolposh and they were from the Christian religion.

In the study area, higher percent of ST women were working compared to non-ST women. In the study area, work participation rates among ST women was higher because most of them were illiterate and were employed in low paid jobs. But the case was reverse among general caste women because most of the women in General caste were literate but their families were not allowing them to go for low paid occupations. In the present study, no ST women was interviewed in Kesura village. So except Kesura village, more number of ST women were working in Saliasahi, Ganjubasti and Dolposh village compared to non-ST women.

In the study area, respondents from joint families were working more compared to nuclear families. This was because in joint families women were getting support from other members of their family, so they had time to work outside and financially help their family to manage their household expenditures. But in nuclear families women were busy with their daily work and also looking after their children, so they were not getting much time to work outside. In Saliasahi, about 33 percent women from joint families were working compared to 30 percent women in nuclear families. In Ganjubasti, 25 percent women from joint families were working compared to 14 percent women from nuclear families. In Dolposh village, higher percent (44 percent) women from joint families were working whereas in Kesura village more women

were working in nuclear families compared to joint families. In Kesura village, women were not allowed to work outside in joint families. They were being asked to take care of children, husband and in-laws.

Conventional wisdom is that work participation of women depends on their educational status, higher the education, greater their chance of being employed. However, in the study area, it was found that work participation among uneducated women was higher because they were doing work like construction work or as labourers. Very less percent women had completed higher education and among them around half percent were doing jobs like teaching, tailoring, running own businesses and some of them also worked as labourers due to non-availability of other kind of jobs.

In the study area, higher percent respondents from BPL families were working compared to APL families. In Sundargarh and Khordha district, more women from BPL families were working compared to APL families. Generally, standard of living is determined by the income of a family. As data shows higher percent women were working from lower standard of living households and those husbands were earning less than Rs. 5000 per month and hence women worked to enhance their family income. Higher percent women were working among those who had more than three children.

Table 4.5 lists the socio-economic factors that affect the work status of women in Khordha and Sundargarh districts of Odisha. Variables like standard of living, educational level of women, caste, children, and family's economic status are significant predictors of female work participation in the study areas.

The work participation among lower standard of living women were higher compared to medium or higher standard of living women. It means that those women who were from lower standard of living were working more because of the poor condition of their family. Women from BPL families were participating more in the labour force compared to APL families. Women belonging to SC/ST category were more likely to participate in labour force compared to their counterparts. The work participation was lower among women who had completed primary and secondary and higher education compared to those women who were illiterate. It shows that women's education plays a crucial role in labour force participation. Women from joint families were more

participating in labour force compared to nuclear families. Work participation was higher among women who had three or more children compared to women who had one child.

Table 4.5 Socio-economic factors affect work status of women in Sundargarh and Kdordha districts of Odisha, field study, 2011-12

Explanatory Variables	Exp(B)	Sig	95 CI
Caste			
Non-ST®			
ST	2.266	0.000	(1.590-3.231)
Respondent's Education			
Illiterate®			
Literate	0.564	0.003	(0.386-0.825)
Types of Family			
Nuclear®			
Joint	1.215	0.270	(0.860-1.717)
Children Ever Born			
One ®			
Less than three	1.265	0.456	(0.682-2.344)
Three and above	2.295	0.006	(1.276-4.219)
Family belong to BPL			
Yes ®			
No	0.422	0.000	(0.302-0.589)
Standard of Living			
Low ®			
Middle	1.838	0.074	(0.943-3.584)
High	0.973	0.933	(0.512-1.848)
Constant	0.987	0.975	

Source: Computed from primary data; dependent variable is working status of woman (No=0; 1=yes)

4.6 Summary

This chapter discussed the work status of women in Khordha and Sundargarh district of Odisha. It was found that highest percent of women were working in Dolposh village of Sundargarh district and after that higher percent women were working in Kesura village. In urban poor areas of Khordha and Sundargarh, less percent women were working compared to rural areas. In Ganjubasti, very less percent women were working.

In Dolposh village, they were mostly doing work like agricultural labour or construction work. In Kesura village of Sundargarh district, more women were doing work like seasonal agricultural labour, or ran own businesses like tea shop or some stationery shop and some were working in brick factories. In urban poor areas, women were mostly doing work like daily wage labour, house work, construction

work and very less percent were in govt. jobs. In Saliasahi of Khordha district, more women were working as labourers and some were doing work like tailoring and teaching and very less percent were in govt. jobs. In Ganjubasti, more women were doing work like daily wage labour and the rest were working in factories.

From the study, it was found that working women were more from ST families compared to non-ST families. Most of the working women were from Scheduled Tribe households and many more were from Scheduled Caste households. Most of the working women were illiterate and had lower standard of living. They were mostly from BPL families and their husbands were earning less than Rs. 5000 per month.

From the present study, it was found that women were working for different reasons. Some of the respondents were working to meet household expenditures, for survival of their families, to support their family and some of them were working for giving better education to their children. They were working mainly to support their husbands as their husbands were earning less and most of them have more children. From the current study, it was found that about 70 percent women were not working in study areas. The main reason was that they had young children and so they were not getting time to work outside. Majority of the respondents told that their husbands and in-laws were not allowing them to work outside. Some of the respondents told that there was non-availability of jobs and because of their low education, they were not getting good jobs. Due to ill health also some women were not working. In Kesura village of Khordha district, some women said that their culture forbade them to work out side.

CHAPTER 5

DETERMINANTS OF ANTENATAL CARE AMONG WOMEN IN ODISHA

Antenatal care is necessary for the better health of women and her child. As per government health policies, a woman during her pregnancy or child bearing should visit the hospital or health center for periodic checkups for the good health of her child as well as her own. During the entire pregnancy, a woman is required to visit three times or more than three times to take various antenatal care. However, still some segments of population in Odisha do not believe in such antenatal care. This chapter will discuss about the factors which are affecting utilisation of antenatal care among rural and urban poor women in Khordha and Sundargarh districts of Odisha. The major reasons for less utilisation of antenatal care among rural and urban poor women in these two districts is discussed in this chapter.

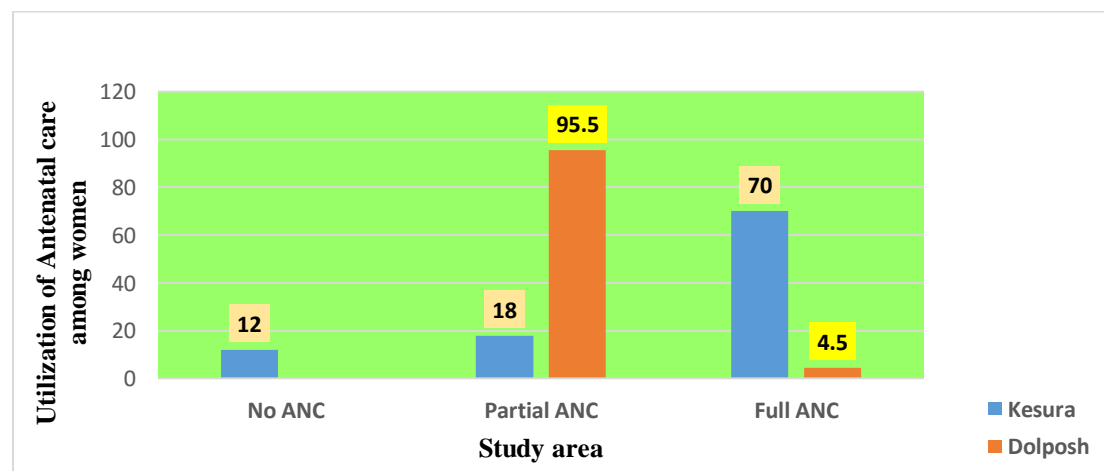
5.1 Utilisation of Antenatal care among women in Dolposh and Kesura village of Odisha

Village Health and Nutrition Day (VHND) is a national programme introduced by National Rural Health Mission and is an important platform for providing Reproductive and Child Health services at the village level. In Odisha, VHND is known as Mamata Diwas and it is conducted at Anganwadi centre (AWC) level on a monthly basis, covering pregnant women, lactating mothers, and children below 5 years and adolescent girls as primary beneficiaries. As per national guidelines, immunization takes place on the VHND but taking into account the current practice in the state, immunization is conducted on another fixed day rather than on VHND. Basic components of primary healthcare services, including early registration, deworming, counseling on early breastfeeding, identification and referral of high risk cases of children and pregnant women, as well as basic ANC and PNC care will be provided at community level in order to address the essential requirements of pregnancy, delivery, referral, childhood illnesses and adolescent health. The programme would be organized once a month in every Anganwadi centre on a fixed day basis (either Tuesday or Friday) with joint efforts of ANM, AWW and ASHA. On an average, there are six to eight AWCs under the operational jurisdiction of one Sub Centre and thus there would be about eight fixed days in a month per Sub Centre. There should be advanced fixation of the day with all AWCs for the entire month, so

that the service providers and the community are aware of it much in advance. In urban areas, it is known as Urban Health and Nutrition Day. After September, 2011, the “Mamata” scheme was launched in Odisha. In this scheme, the beneficiaries are getting financial assistance of Rs. 5000 in the period of their pregnancy and Rs. 1400 for institutional delivery in rural areas and Rs. 1000 for urban areas.

In the study area, most of the women were aware about the Mamata scheme because of the financial assistance they were getting from the scheme. Utilisation of at least one antenatal care was less among women in Kesura village of Khordha district compared to Dolposh village of Sundargarh district. In Kesura, about 88 percent respondents were utilising antenatal care whereas in Dolposh, all respondents were utilising antenatal care but the partial utilisation of antenatal care was higher than full ANC. In case of Kesura village, 70 percent respondents were utilising full antenatal care as shown in Figure 5.1.

Figure 5.1 Utilisation of antenatal care among women in Kesura and Dolposh Village of Odisha, field study, 2011-12



Source: Computed from primary data

Table 5.1 shows the utilisation of antenatal care by socio-economic characteristics among women in Kesura and Dolposh village of Odisha. The utilisation of antenatal care was less among Hindu women compared to Christian women in Dolposh area of Sundargarh district. But in comparison with Kesura village of Khordha district, 70 percent of Hindu women took full ANC. The utilisation of ANC was better in Dolposh village compared to Kesura village because of the availability of hospitals, health workers, anganwadi workers and level of education and road connecting the

hospital. Dolposh is one of the tribal dominated village in Sundargarh district whereas Kesura is a somewhat advanced village in Khordha district. Awareness about antenatal care was high in Dolposh village compared to Kesura village.

Table 5.1 Utilisation of antenatal care by socio-economic characteristics among women in Dolposh and Kesura village of Odisha, field study, 2011-12

Background characteristics	District (%)					
	NO ANC	Sundargarh Dolposh (rural) Partial ANC	Full ANC	NO ANC	Khordha Kesura (rural) Partial ANC	Full ANC
Religion		Sig (0.929)				
Hindu	0.0	94.9	5.1	12.0	18.0	70.0
Non-Hindu	0.0	100.0	0.0	0.0	0.0	0.0
Caste		Sig (0.000)				
Non-ST	0.0	0.0	100.0	12.0	18.0	70.0
ST	0.0	96.0	4.00	0.0	0.0	0.0
Educational Level		Sig (0.000)			Sig (0.037)	
No education	0.0	100.0	0.0	18.6	20.9	60.5
Primary	0.0	99.3	0.7	24.6	18.5	56.9
Secondary	0.0	50.0	50.0	0.0	20.3	79.7
Higher	0.0	50.0	50.0	0.0	0.0	100.0
Husband's Income		Sig (0.002)			Sig (0.000)	
Less than 5000	0.0	96.0	4.0	32.8	14.3	52.9
More than 5000	0.0	50.0	50.0	0.8	20.0	79.2
Types of Family		Sig (0.072)			Sig (0.005)	
Nuclear	0.0	92.8	7.2	20.6	21.9	57.5
Joint	0.0	98.1	1.9	7.1	15.7	77.2
Female headed households		Sig (0.738)			Sig (0.568)	
Yes	0.0	96.7	3.3	8.3	8.3	83.4
No	0.0	95.3	4.7	12.2	18.6	69.2
Standard of Living		Sig (0.000)			Sig (0.000)	
Low SLI	0.0	99.3	0.7	88.5	3.8	7.7
Medium SLI	0.0	98.2	1.8	0.0	28.8	71.2
High SLI	0.0	0.0	100.0	1.8	1.8	96.4
Family has BPL card		Sig (0.325)			Sig (0.001)	
Yes	0.0	98.0	2.0	17.6	20.6	61.8
No	0.0	94.7	5.3	1.4	13.0	85.5
Work status of Respondents		Sig (0.000)			Sig (0.040)	
Working	0.0	88.2	11.8	19.4	13.9	66.7
Not-working	0.0	100.0	0.0	7.8	20.3	71.9
Total (N)	0	191	9	24	36	140

Source: Computed from primary data Chi-square significance value in bracket

It was found during the survey that there were no general or other backward caste people in the Dolposh village. Almost all people belong to scheduled tribe, whereas there was no Scheduled tribe women in Kesura village. In Kesura village, among all castes, awareness level and utilisation level of antenatal care was high. In case of no

ANC, the figure was more or less same for all the castes in Kesura village. In Dolposh village, 96 percent ST women had taken partial ANC while only 4 percent women had full ANC in this category. Majority of women in tribal caste had taken partial ANC. For partial use of ANC in both areas, respondents revealed the reasons to be lack of health service facility as well as their personal lack of interest, family pressures and particularly from mother-in-laws.

Literacy level or education has a role in the utilisation of antenatal care. In Dolposh village, illiterate women had not taken full ANC but in Kesura village, around 60 percent illiterate women had taken full ANC. In Kesura village, all higher degree holding women had taken full ANC, compared to 50 percent higher degree holding women in Dolposh village who had taken full ANC. In Kesura village, the percentage of full ANC was high among highly educated women compared to Dolposh village.

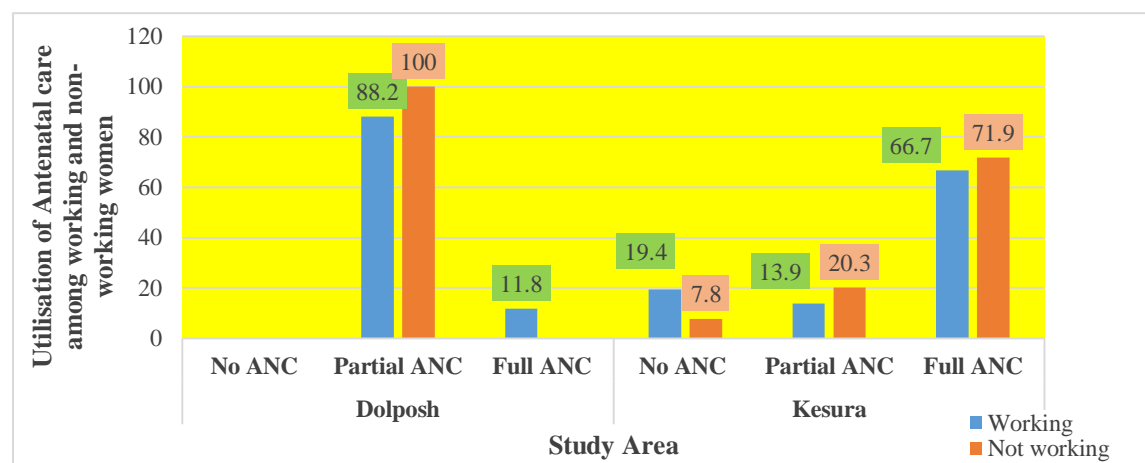
Although there is a general belief that higher the income level, higher the utilisation of antenatal care, this was not true in the case of Dolposh village because with respect to families with income more than Rs. 5000, the utilisation of partial ANC was less (50 percent) compared to those families with less than Rs. 5000 income per month. However, it was true in the case of Kesura village of Khordha district. Around 80 percent of women belonging to the higher income group had taken full ANC and 20 percent had taken partial ANC. It is generally said that higher the standard of living, better the utilisation of medical facilities. However, this was not true in case of these two areas. In Kesura village, 96 percent women belonging to the higher standard of living had taken full ANC and in Dolposh village, 100 percent women belonging to the higher standard of living had taken full ANC.

Utilisation of ANC among the BPL families was quite good in Dolposh area and around 85 percent women belong to the APL (Above Poverty Line) group had taken full ANC in Kesura area. The figure was also high in case of BPL families (62 percent) in Kesura village with respect to those who had taken full ANC. Around 98 percent women belonging to the BPL families in Dolposh village had taken partial ANC. The reason for very small gap between the BPL and APL families in terms of utilisation of ANC was the availability of health workers and free distribution of medicines and timely care taken by the health workers.

5.1.1 Work status and utilisation of antenatal care among women in Kesura and Dolposh village of Odisha

The work status and utilisation of antenatal care is shown in Figure 5.2. The figure shows very contrasting results. It was found from the study that working women in Dolposh village had not taken full ANC compared to their counterparts in Kesura village. Even among the non-working women, the use of full antenatal care was high (72 percent) among women in Kesura village compared to their counterparts in Dolposh village. However, more number of both working and non-working women in Dolposh village had taken partial ANC compared to Kesura village. More than a quarter of both working and non-working women in Kesura village had not taken any ANC, 19 percent working women and around 8 percent non-working women in Kesura village had not taken any ANC.

Figure 5.2 Work status and utilisation of antenatal care among women in Kesura and Dolposh Village of Odisha, field study, 2011-12



Source: Computed from primary data

In Dolposh, all the respondents were ST women and either they were more educated or they had better household standards and besides these the utilisation of antenatal care was higher among both working and non-working women. This was because of active participation of ASHA, Anganwadi workers and ANM. In every month, on 2nd Tuesday, the ANM came to the Anganwadi centre, where she tested the urine of the pregnant women and also checked the hemoglobin level and weight. She advised them for better nutritional intake of food. Anganwadi worker was also providing (*chatua and eggs*) to pregnant and lactating mothers in every month, for better health

of mother and child. Whereas in Kesura, most of the non-working women from higher standard of living households went to private hospitals for utilisation of antenatal care and poor working women were not getting time to go to the government hospital which was about 10 KMs from the village and the ASHA was not giving IFA tablet to them.

Table 5.2 shows the demographic and health care service utilisation of antenatal care among women in Kesura and Dolposh village of Odisha. In Kesura village, women who got married below the age of 20 years (61 percent) had taken full ANC compared to their counterparts in Dolposh village (4.2 percent). In Kesura village, more women were utilising antenatal care and they were those who got married in the age group 20-25 years whereas in Dolposh village, only (10 percent) women in the same age group had taken full ANC. In Kesura village, around 89 percent women who had given birth after the age of 25 years had taken full ANC. In Dolposh village around 15 percent women who had given birth at 20-25 years were utilising full antenatal care. Irrespective of the number of children a mother has given birth, the use of antenatal care was better among all categories of women in Kesura village compared to Dolposh village. All women having more than three children had taken full ANC in Kesura village whereas in Dolposh more women utilising ANC were those who had one child.

As far health workers visit during pregnancy and their use of antenatal care, it differed in two villages. As the table shows, around all women had taken full ANC where two visits were made by the ASHA/ANM workers in Kesura and Dolposh village.

As far as health message received from different sources, there were different kinds of response in two areas. As the table shows, almost all respondents who had taken full ANC were those who had watched TV in Kesura village followed by 50 percent through government health workers. Around 20 percent women in Kesura village had taken full ANC after getting information through public announcements. Nobody had got the message through radio or public announcements in Dolposh village. Around 5 percent women in Dolposh village who had taken full ANC said they got the message through the government health workers.

Table 5.2 Demographic and health care service utilisation affect utilisation of antenatal care among women in Dolposh and Kesura village, Odisha, field study, 2011-12.

Background characteristics	District (%)					
	Sundargarh Dolposh (rural)			Khordha Kesura (rural)		
	NO ANC	Partial ANC	Full ANC	NO ANC	Partial ANC	Full ANC
Age at Marriage		Sig (0.389)			Sig (0.000)	
Below 20 years	0.0	95.8	4.2	18.6	20.9	60.5
20-25	0.0	90.0	10.0	0.0	12.7	87.3
Age at Birth		Sig (0.000)			Sig (0.002)	
Below 20 years	0.0	100.0	0.0	17.6	2.0	80.4
20-25	0.0	85.5	14.5	10.7	24.3	65.0
25 years above	0.0	0.0	0.0	0.0	11.1	88.9
Total children ever born		Sig (0.043)			Sig (0.022)	
One	0.0	90.9	9.1	22.7	13.6	63.7
Less than three	0.0	98.1	1.9	6.8	20.3	72.9
Three and above	0.0	100.0	0.0	0.0	0.0	100.0
Frequency of ASHA/ANM visits during pregnancy		Sig (0.000)			Sig (0.000)	
Once	0.0	79.5	20.5	16.5	8.3	75.2
Two times	0.0	100.0	0.0	0.0	0.0	100.0
Three times	0.0	100.0	0.0	0.0	100.0	0.0
Four times	0.0	0.0	0.0	0.0	100.0	0.0
Receive Health massages		Sig (0.929)			Sig (0.929)	
TV	0.0	100.0	0.0	1.0	1.0	98.0
Radio	0.0	0.0	0.0	0.0	100.0	0.0
Public announcement	0.0	0.0	0.0	80.0	0.0	20.0
Govt. Health workers	0.0	95.5	4.5	18.3	31.7	50.0
Antenatal check-up done		Sig (0.758)			Sig (0.000)	
At home	0.0	100.0	0.0	100.0	0.0	0.0
At govt. Hospital	0.0	88.0	12.0	4.2	21.8	73.9
At pvt. Hospital	0.0	100.0	0.0	0.0	0.0	100.0
No check-up	0.0	0.0	0.0	0.0	0.0	0.0
Total (N)	0	191	9	12	18	70

Source: Computed from primary data Chi-square significance value in bracket

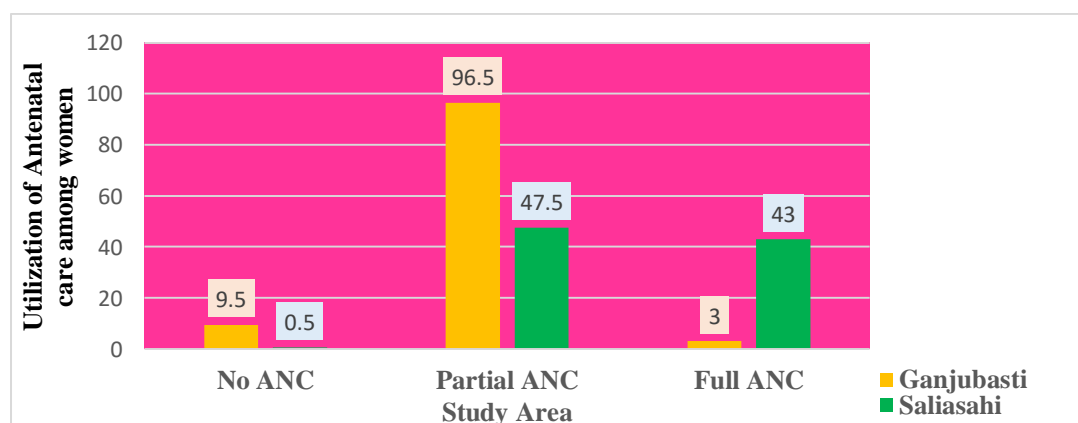
In both rural areas, most of the antenatal check-up was done in either government hospitals or private hospitals. In Kesura village, women those who had done their check ups at private hospital had taken full ANC and in Kesura village, those women who had done their check up in government hospitals, around 74 percent of them had taken full ANC compared to 12 percent in Dolposh village in the same category. In both areas, no full ANC was taken where women had done their check-ups at home.

5.2 Utilisation of Antenatal care among women in Saliasahi and Ganjubasti of Odisha

The following section focuses on a comparative analysis of two urban slums in two different districts. Ganjubasti (urban slum) was chosen from Sundargarh district while Saliasahi (urban slum) was chosen from Khordha district. The background characteristics of both the slum is more or less same in terms of their occupation, living standards, monthly income, etc. Although their background characteristics are the same, they are located in two different districts and the following section will highlight their utilisation of antenatal care against their different socio-economic variables.

A pregnant woman can have an antenatal check-up by visiting a doctor or another health professional in a medical facility or by receiving a home visit from a health worker or both. Figure 5.3 shows the utilisation of antenatal care among urban poor women in Saliasahi and Ganjubasti of Odisha. For the present study, it was found that utilisation of antenatal care was higher among the women from the urban poor area of Ganjubasti (Rourkela) compared to Saliasahi of Bhubaneswar. In Saliasahi, around 10 percent women had not taken any ANC whereas in Ganjubasti 96.5 percent had taken partial ANC. Utilisation of full ANC was higher among women in Saliasahi. Bhubaneswar is the capital of Odisha whereas Rourkela is the industrial, developed city of Odisha. In Ganjubasti, Anganwadi Worker, ASHA and ANM were more guiding to poor women for utilisation of antenatal care. More women were utilising antenatal care because of the financial assistance they were getting from the “Mamata” Scheme.

Figure 5.3 Utilisation of Antenatal Care among urban poor women in Saliasahi and Ganjubasti of Odisha, field study, 2011-12



Source: Computed from primary data

Table 5.3 shows the utilisation of antenatal care by socio-economic and demographic characteristics among urban poor women in Saliasahi and Ganjubasti of Odisha. The utilisation of antenatal care was evenly distributed among all the religions in both the study areas. In Saliasahi of Khordha district, around 87 percent women belonging to the Christian religion had taken full ANC while Christian women in Ganjubasti had not taken full ANC. In Ganjubasti, all Christian and 96 percent Hindu women had taken partial ANC. In Saliasahi, 52 percent Hindu women had taken partial ANC and around 37 percent Hindu women had taken full ANC. The utilisation of antenatal care was less among Hindu women in Saliasahi. Around 10 percent Hindu women had not taken any ANC in Saliasahi whereas in Ganjubasti more Hindu women had taken antenatal care during their pregnancy.

There was also variation in the utilisation of ANC among the different castes in these two areas. As the table shows, the highest utilisation of full ANC was reported among the scheduled tribe women (43.2 percent) in Saliasahi while the utilisation of full ANC among non-ST was 42.7 percent. In Ganjubasti, about 99 percent ST women had taken antenatal care and 94 percent non-ST women had taken partial ANC. In both Ganjubasti and Saliasahi, more ST women were utilising antenatal care compared to non-ST women. It was said that due to the availability of better health care by the ASHA and anganwadi workers during pregnancy, the utilisation of antenatal care has been improving over the years. They also said that they did not want to harm either the mother or the child during delivery. That was the reason they were actively cooperating with the health workers.

Education also plays an important role in the availability of health care facilities as education increases awareness about health care. In Saliasahi, higher the education better was the utilisation of full antenatal care but this was not true in the case of Ganjubasti. In Ganjubasti, no women with higher education background, had taken full ANC. Almost all women with higher education had taken partial ANC in Ganjubasti. Compared to both areas, the utilisation of ANC was better in Saliasahi than Ganjubasti. Around 29 percent uneducated women had not taken any antenatal care in Saliasahi and among those had completed higher education, 75 percent women had taken full antenatal care.

Table 5.3 Utilisation of antenatal care by socio-economic and demographic characteristics among urban poor women in Saliasahi and Ganjubasti of Odisha, field study, 2011-12

Socio –economic and demographic factors	District (%)					
	Sundargarh Ganjubasti (urban slum)			Khordha Saliasahi (urban slum)		
	NO ANC	Partial ANC	Full ANC	NO ANC	Partial ANC	Full ANC
Religion		Sig (0.929)			Sig (0.000)	
Hindu	1.5	96.4	2.1	10.7	52.0	37.3
Non-Hindu	0.0	100.0	0.0	0.0	13.7	87.0
Caste		Sig (0.113)			Sig (0.004)	
Non-ST	2.0	94.1	4.0	2.2	55.1	42.7
ST	1.0	99.0	0.0	15.3	41.4	43.2
Educational Level		Sig (0.783)			Sig (0.000)	
No education	1.9	98.1	0.0	28.6	54.0	17.5
Primary and secondary	1.4	95.8	2.8	0.8	47.1	52.1
Higher	0.0	100.0	0.0	0.0	25.0	75.0
Husband's Income		Sig (0.946)			Sig (0.011)	
Less than 5000	1.5	96.4	2.1	9.9	53.0	37.1
More than 5000	0.0	100.0	0.0	8.2	30.6	61.2
Types of Family		Sig (0.264)			Sig (0.021)	
Nuclear	1.3	97.5	1.2	9.4	53.0	37.6
Joint	2.5	92.5	5.0	9.8	31.4	58.8
Female headed households		Sig (0.982)			Sig (0.446)	
Yes	0.0	100.0	0.0	11.1	33.3	55.6
No	1.5	96.5	2.0	9.3	48.9	41.8
Standard of Living		Sig (0.568)			Sig (0.068)	
Low SLI	1.7	96.0	2.3	12.1	51.5	36.4
Medium SLI	0.0	100.0	0.0	4.7	40.6	54.7
High SLI	0.0	0.0	0.0	0.0	25.0	75.0
Family has BPL card		Sig (0.338)			Sig (0.057)	
Yes	0.0	100.0	0.0	17.6	47.1	35.3
No	1.9	95.5	2.6	6.7	47.7	45.6
Work status of Respondents		Sig (0.501)			Sig (0.000)	
Not working	1.8	95.8	2.4	2.9	52.1	45.0
Working	0.0	100.0	0.0	25.0	36.7	38.3
Age at marriage		Sig (0.181)			Sig (0.181)	
Less than 20 years	2.2	94.9	2.9	11.1	48.1	40.8
20-25 years	0.0	100.0	0.0	2.6	44.7	52.6
More than 25 years	0.0	100.0	0.0	0.0	0.0	0.0
Children ever born		Sig (0.047)			Sig (0.000)	
One child	3.5	91.9	4.7	0.0	45.2	54.8
Less than three child	0.0	100.0	0.0	7.3	49.0	43.7
More than three child	0.0	100.0	0.0	38.7	48.4	12.9
Total (N)	3	193	4	19	95	86
		200			200	

Source: Computed from primary data Chi-square significance value in bracket

Husband's income or households' income had a role in the utilisation of antenatal care. Almost all women in higher category income had taken partial ANC in

Ganjubasti and around 31 percent of women in the same category had taken partial ANC in Saliasahi compared to 53 percent of women in lower category income in the same area. However, the utilisation of full ANC was higher in both areas for higher category income families compared to lower income families.

Family structure also plays an important role in the utilisation of antenatal care as the family environment motivates and encourages women to take better care of their health. In both the slums, antenatal care was better in joint families. As the table shows, around 59 percent in Saliasahi and 5 percent in Ganjubasti of women belonging to joint families had taken full ANC. At the same time, table also shows that around 2.5 percent in Ganjubasti and 10 percent women in Saliasahi belonging to joint families had not taken any ANC. As far as partial ANC was concerned, higher percentage of women in both the areas in nuclear families had taken compared to joint families. It was said that sometimes in joint families, in-laws oppose the idea of ANC.

As the table shows, the utilisation of antenatal care was very less in both the slum areas in female headed households. This was due to lack of time which prevented them to go to health centres. They also said that injections caused short term pain which prevented them from working. No women from Ganjubasti from women headed households had taken full ANC compared to 56 percent of women belong to the same category in Saliasahi, who had taken full ANC. But in case of partial ANC, around 49 percent women in male headed households in Saliasahi and 96 percent women in Ganjubasti in the same category had taken partial ANC. As far as full ANC is concerned, the two different areas present two different pictures as it seems that Ganjubasti in Sundargarh district still follows the traditional family pattern (male headed household) while a mixed picture was found in Saliasahi of Khordha district.

As far as standard of living is concerned, the use of antenatal care varies. In Ganjubasti, the use of full ANC (2.3 percent) was low in houses with lower standard of living compared to 75 percent in higher standard of living families.

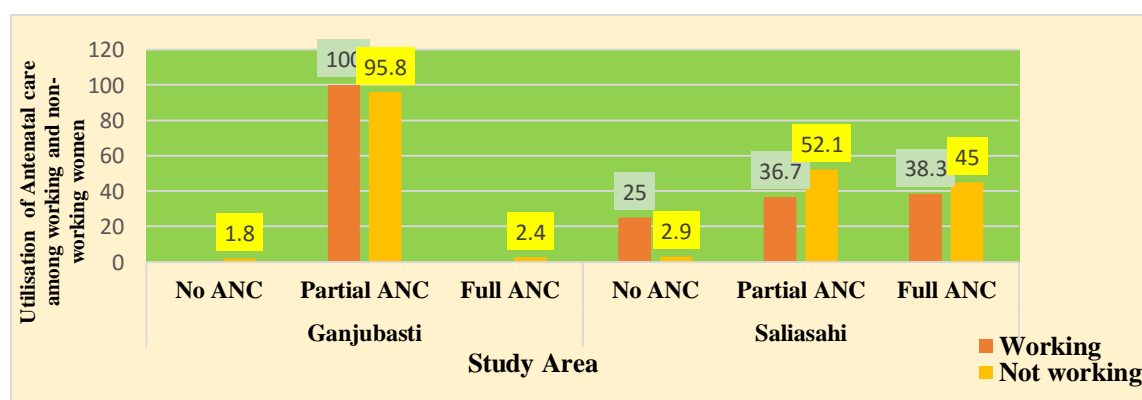
The table shows that women belonging to the above poverty line (APL) had better record of utilisation of antenatal care compared to their counterparts in BPL families in Saliasahi. In Saliasahi, around 46 percent women belonging to the APL families had taken full ANC compared to 35 percent of women in BPL families. However, equal number of women in Saliasahi, in both APL and BPL categories had taken

partial ANC but the picture was different in case of Ganjubasti. In Ganjubasti, almost all women belonging to the BPL families had taken partial ANC compared to 96 percent in APL families. Many studies have revealed that early marriage affected the health of both mother and child. The findings of the following study present a mixed picture. Among women who got married after the age of 25, there was no full use of ANC. In Saliasahi, women in the age group of 20-25 (53 percent) had taken full ANC compared to women (41percent) who married before the age of 20. In Ganjubasti, around all women in the age group of 20-25 years had taken partial ANC.

5.2.1 Work status and utilisation of antenatal care among women in Saliasahi and Ganjubasti of Odisha

Figure 5.4 shows the work status and utilisation of antenatal care among women in Saliasahi and Ganjubasti of Odisha. It is also sometimes said that mothers work status also plays a role in them availing the health facilities. In the study areas, it was found that 45 percent of non-working women in Saliasahi had taken full ANC compared to 38.3 percent working women in the same area. In Saliasahi area, the utilisation of partial ANC was also higher (52.1 percent) for non-working women compared to 37 percent for working women. The case is also the same in case of no use of ANC. In Saliasahi, around 25 percent working had not taken any ANC compared to their non-working counterparts (3 percent). In Ganjubasti, all working women had taken partial ANC. 96 percent of non-working women had taken partial ANC. The study reveals that working status of mother hardly affects utilisation of antenatal care in Ganjubasti.

Figure 5.4- Work status and utilisation of antenatal care among women in Saliasahi and Ganjubasti, Odisha, field study, 2011-12



Source: Computed from primary data

5.3 Utilisation of Antenatal care among women in rural against urban poor areas of Odisha

The following section analyses a comparative study of rural area versus the urban poor of two districts. Two rural areas of two districts are combined as one and two urban poor areas of two districts are also combined as one. The section also discusses the total health scenario of women in the two districts.

5.3.1 Results from Bi-variate Analysis

Table 5.4 shows the utilisation antenatal care by socio-economic characteristics among rural and urban poor women in Khordha and Sundargarh district of Odisha. In the whole study area, it was found that utilisation of full ANC was higher (39 percent) among non-Hindu households compared to their counterparts in Hindu families (29 percent). However, more than majority of Hindu women had availed partial ANC compared to non-Hindu women (62 percent). In rural areas, all non-Hindu women had taken partial ANC. In both the areas, highest number of Hindu women had taken partial ANC compared to full ANC. In the utilisation of full ANC among Hindu women, the rate was higher in case of rural women (40 percent) compared to their urban counterparts (19 percent). Utilisation of antenatal care was better in rural areas compared to urban areas. This was due to work culture in urban areas as well as time constraints and exploitation of private clinics. The success was possible in rural areas because of the ASHA workers and the availability of services in rural areas.

Table 5.4 Utilisation of antenatal care by Socio-economic characteristics among rural and urban poor women in Khordha and Sundargarh district of Odisha, field study, 2011-12

Background characteristics	District (%)								
	Rural (400)			Urban poor (400)			Total (800)		
	NO ANC	Parti al ANC	Full ANC	NO ANC	Parti al ANC	Full AN C	NO AN C	Partial ANC	Full AN C
Religion									
Hindu	6.4	53.9	39.7	5.9	75.3	18.8	6.1	64.6	29.3
Non-Hindu	0.0	100	0.0	0.0	25.9	74.1	0.0	61.5	38.5
Caste									
Non-ST	11.9	17.0	70.1	2.1	75.8	22.1	7.2	46	46.8
ST	0.0	96.0	4.0	8.6	68.6	22.9	4.4	81.9	13.7
Educational Level									
No education	8.6	63.4	28	16.4	74.1	9.5	12.9	69.4	17.7
Primary and secondary	5.8	58.5	35.6	1.1	73.5	25.4	3.5	65.9	30.6
Higher	0.0	21.9	78.1	0.0	40.0	60.0	0.0	28.8	71.2
Husband's Income									
Less than 5000	8.6	74.6	16.8	5.2	77.6	17.2	6.7	76.3	17.0
More than 5000	0.8	20.5	78.8	7.7	34.6	57.7	2.7	24.5	72.8
Types of Family									
Nuclear	8.8	62.4	28.8	5.1	76.1	18.8	6.5	71.2	22.3
Joint	3.9	52.6	43.5	6.6	58.2	35.2	4.7	54.2	41.1
Female headed households									
Yes	2.4	71.4	26.2	10.5	36.8	52.6	4.9	60.7	34.4
No	6.4	55.0	38.5	5.2	73.8	21.0	5.8	64.7	29.5
Standard of Living									
Low SLI	14.1	84.0	1.9	6.2	76.7	17.0	9.0	79.3	11.8
Medium SLI	0.0	51.1	48.9	3.3	58.2	38.5	1.1	53.6	45.3
High SLI	1.6	1.6	96.8	0.0	25.0	75.0	1.5	3.0	95.5
Family has BPL card									
Yes	12.7	42.0	45.3	9.3	72.2	18.6	11.5	52.5	36.0
No	0.5	68.9	30.6	4.3	71.9	23.8	2.7	70.7	26.6
Work status of Respondents									
Working	9.5	52.0	38.5	16.3	58.7	25.0	12.1	54.6	33.3
Not working	4.0	59.5	36.5	2.3	76.0	21.7	3.0	68.6	28.4
Total (N)		400			400			800	

Source: Computed from primary data

The earlier practice was that high caste populations availed all kinds of health facilities because of their high standard of living, income, education, etc. But due to government's policies, this practice has changed. As health facilities, particularly for

maternal and child care are provided free of cost, lower caste populations including other backward classes are actively availing health care facilities. Highest number of Scheduled Tribe women (82 percent) had taken partial ANC whereas only 47 percent of non-ST women had taken full ANC. Compared to urban poor areas, the utilisation of full ANC was better in rural areas among all categories of women except scheduled tribe women. Around 4 percent ST women had taken full ANC in rural areas compared to their urban counterparts (23 percent). The use of partial ANC was better in urban areas in all categories except for tribal women when compared to their counterparts in rural areas.

Level of education plays an important role in the use and non-use of ANC. The study area's data shows that higher the level of education, higher the utilisation of ANC. Near about three-fourth of highly educated women had taken full ANC compared to 18 percent of illiterate women. The utilisation of full ANC was higher among educated rural women (78.1 percent) than to their counterparts in urban poor areas (60.0 percent). In the use of partial ANC, there is mixed response in both urban and rural areas. In rural areas, among the illiterate women, the use of partial ANC was less compared to their counterparts in urban areas.

Husband's income was also a determining factor in the use and non-use of healthcare facilities. Better the level of family income, higher the use of health care facilities. In the study area, it was found that 73 percent of women with family incomes more than Rs.5000 had taken full ANC, compared to only 17 percent of women with family incomes less than Rs.5000 per month. Higher percentage of women (79 percent) belonging to families with higher income had taken full ANC in rural areas compared to 58 percent of their counterparts in urban areas. The utilisation of antenatal care was better in rural areas compared to urban areas due to the availability of various government schemes and large scale intervention in rural areas by government agencies and private agencies.

In the study area, it was found that antenatal care was better in joint families compared to nuclear families. Around 41 percent women belonging to joint families had taken full ANC compared to their counterparts in nuclear families (22 percent). However, in the use of partial ANC, the nuclear families rates were higher than joint families. Around 71 percent women belonging to nuclear families had taken partial

ANC compared to their counterparts in joint families (54 percent). From the survey, women belonging to nuclear families revealed that after taking partial ANC, they forget and sometimes they did not have time to complete the full course. Around 7 percent women in nuclear families and 5 percent in joint families had not taken any ANC. Compared to rural against urban areas, rural areas performed better in both categories of women in the use of ANC. In rural areas, around 44 percent women belonging to joint families had taken full ANC compared to their counterparts in urban areas (36 percent). In nuclear families, around 29 percent women in rural areas had taken full ANC compared to their counterparts in urban areas (19 percent). In both urban and rural areas, higher percentage of women belonging to nuclear families had taken partial ANC compared to their counterparts in joint families.

It is believed that generally a woman understands another woman's grievances. In the study area, it was found that almost same number (30 percent) of women in each kind of household had taken full ANC. In male headed households, the use of partial ANC was higher compared to female headed households. Around 65 percent women belonging to male headed households had taken partial ANC compared to 61 percent in female headed households. Almost same number of households (5 percent) in both categories of family had not taken any ANC. However, a different picture emerges if comparison was made between rural and urban areas in these two categories of families. In rural areas, the highest percentage of women belonging to male headed households (39 percent) had taken full ANC whereas in urban areas, highest number of women (53 percent) belonging to female headed households had taken full ANC.

It is believed that higher the standard of living, better the utilisation of health facilities. However, in the study area, it was found that the case was totally reverse. In the whole study area, around 12 percent women belonging to lower standard of living houses had taken full ANC, followed by 45 percent of women from medium standard of living houses and around 96 percent of women from higher standard of living houses. The highest rate of no ANC was found among women from lower standard of living houses (9 percent). In comparison between rural and urban poor areas, it was found that women from higher standard of living houses were utilising antenatal care in greater numbers compared to women from lower standard of living houses in both rural and urban poor areas. But compared to urban poor areas, women from higher standard of living houses in rural areas were taking more antenatal care.

Despite the prevailing tendency to believe that higher the income, better the use of medical facilities, in the study area, it was found that around 36 percent women belonging to the BPL families had taken full ANC compared to their counterparts in APL families (27). However, highest percentage of (71 percent) APL family women had taken partial ANC, compared to their counterparts in BPL families (51 percent). But the highest number of women (12 percent) in BPL families had not taken any ANC, compared to their counterparts in APL families (3 percent). In rural areas, more numbers of BPL family women (43%) had taken full ANC compared to 19 percent in urban areas.

In the study area, it was found that the utilisation pattern of antenatal care was better among non-working mothers compared to their working counterparts. From the study it was found that more working women from rural areas were utilising antenatal care than urban poor areas.

Table 5.5 shows the utilisation of antenatal care by demographic and health care service utilisation characteristics of rural and urban women in Khordha and Sundargarh districts of Odisha. From previous studies, it is observed that higher the age of mother, better the health of the children. With higher age, they can take better care of themselves as well as their children. They are also better aware of health care issues. However, in the study area, it was found that women who got married after the age of 25 years had not taken full ANC. In the rural areas, women in the age group of 20-25 years were utilising antenatal care compared to urban areas. In the study area, it was found that higher aged women were taking more antenatal care in rural areas as well as in urban areas. Full utilisation of antenatal care was less among women who had more than three children in rural and urban areas.

Mother and child care facilities were improving in both rural areas and urban poor areas due to the appointment of ASHA workers. The duty of ASHA workers was to visit from time to time the house of pregnant women and families having small children for various kinds of antenatal care and child immunization programmes. In rural areas, where ASHA workers had made more than one visit, every woman had taken either partial or full ANC but in urban areas, it was found that more than one-tenth of women had not taken any ANC. However, the rate was higher in both rural and urban areas where ASHA workers had made only one visit.

Table 5.5 Utilisation of antenatal care by demographic and health care service utilisation characteristics among rural and urban poor women in Khordha and Sundargarh districts of Odisha, field study, 2011-12

Background characteristics	District (%)								
	Rural (400)			Urban poor (400)			Total (800)		
	NO ANC	Partial ANC	Full ANC	NO ANC	Partial ANC	Full ANC	NO ANC	Partial ANC	Full ANC
Age at Marriage									
Below 20 years	7.5	65.5	27.0	7.0	69.5	23.5	7.3	67.4	25.3
20-25	0.0	22.2	77.8	1.0	78.8	20.2	0.6	53.3	46.1
25 years above	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	0.0
Age at Birth									
Below 20 years	4.6	74.4	21.0	6.8	72.3	20.9	5.8	73.2	21.0
20-25	7.7	41.5	50.8	4.1	65.0	30.9	6.3	50.6	43.1
25 years above	0.0	10.0	90.0	2.3	90.7	7.0	1.9	75.5	22.6
Total children ever born									
One	10.5	55.2	34.3	1.9	70.4	27.7	6.0	63.2	30.8
Less than three	3.8	54.4	41.8	3.5	75.3	21.2	3.7	63.9	32.4
Three and above	0.0	95.0	5.0	27.9	62.8	9.3	19.1	73.0	7.9
Frequency of ASHA/ANM visits during pregnancy									
Once	12.7	24.9	62.4	6.3	63.7	30.1	9.0	47.2	43.8
Two times	0.0	73.3	26.7	0.0	100.0	0.0	0.0	81.5	18.5
Three times	0.0	100.0	0.0	0.0	96.2	3.8	0.0	98.6	1.4
Four times	0.0	100.0	0.0	0.0	100.0	0.0	0.0	100.0	0.0
Receive Health messages									
TV	1.0	3.0	96.0	9.2	33.8	56.9	4.2	15.1	80.70
Radio	0.0	100.0	0.0	0.00	0.0	0.00	0.0	100.0	0.00
Public announcement	80.0	0.0	20.0	15.8	36.8	47.4	37.9	24.2	37.9
Govt. Health workers	5.4	76.8	17.9	9.3	57.4	33.3	9.3	57.4	33.3
Antenatal check-up done									
At home	22.9	77.1	0.0	33.3	66.7	0.0	27.7	72.3	0.0
At govt. Hospital	2.9	42.5	54.6	1.7	72.7	25.6	2.3	58.9	38.8
At pvt. Hospital	0.0	84.5	15.5	1.4	75.0	23.6	0.5	80.9	18.6
No check-up	0.0	0.0	0.0	75.0	25.0	0.0	75.0	25.0	0.0
Total (N)		400			400			800	

Source: Computed from primary data

These days, government is spreading health awareness through radio, television, newspapers, public announcements and through health workers to give a boost to its IEC programme. From the study area, it was found that television is a popular source for health awareness. Around 81 percent of women who had taken full ANC said that they came to know about it through TV, followed by 38 percent through public announcements and 33 percent revealed that government health workers like ASHA and Anganwadi workers informed them. Government of India has almost made it

mandatory for all pregnant women to check up from time to time for the better health of mother and child. In the study area, it was found that those women who had availed full ANC had not done the check up at their home. Around 39 percent women who had taken full ANC had done check-up in government hospitals, followed by 19 percent in private hospitals.

5.3.2 Results of Logistic Regression

Results of binary logistic regression in Table 5.6 indicates that educational level of women, caste, work status of women and economic status are significant predictors of utilisation of antenatal care in Odisha.

Working women are less likely to utilise antenatal care than non-working women because pregnant working women are not getting time to go to hospitals for antenatal check-up. Utilisation of antenatal care is higher among women who have completed primary, secondary and higher education compared to those women who are illiterate. It shows that mother's education plays a crucial role in utilisation of antenatal care even after controlling other confounding socio-economic covariates. Women belonging to SC/ST category are more likely to utilise antenatal care compared to their counterparts. Women from APL families are utilising antenatal care more than BPL families.

Table 5.6 Effect of Socio-economic factors on utilisation of antenatal care, Odisha, field study, 2011-2012

Explanatory Variables	Exp(B)	Sig	95 CI
Caste			
Non-ST®			
ST	5.157	0.000	(2.458-10.818)
Respondent's Education			
Illiterate®			
Literate	3.639	0.000	(1.806-7.332)
Type of Family			
Nuclear®			
Joint	1.355	0.432	(0.625-2.891)
Respondent's Work status			
Working ®			
Not Working	5.434	0.000	(2.609-11.319)
Family belong to BPL			
Yes ®			
No	6.057	0.000	(2.884-12.722)
Standard of Living			
Low ®			
Middle	7.274	0.064	(0.894-59.196)
High	0.208	0.202	(0.019-2.323)
Constant	0.001	0.00	

Source: Computed from primary data, dependent variable ANC (No=0, Yes=1)

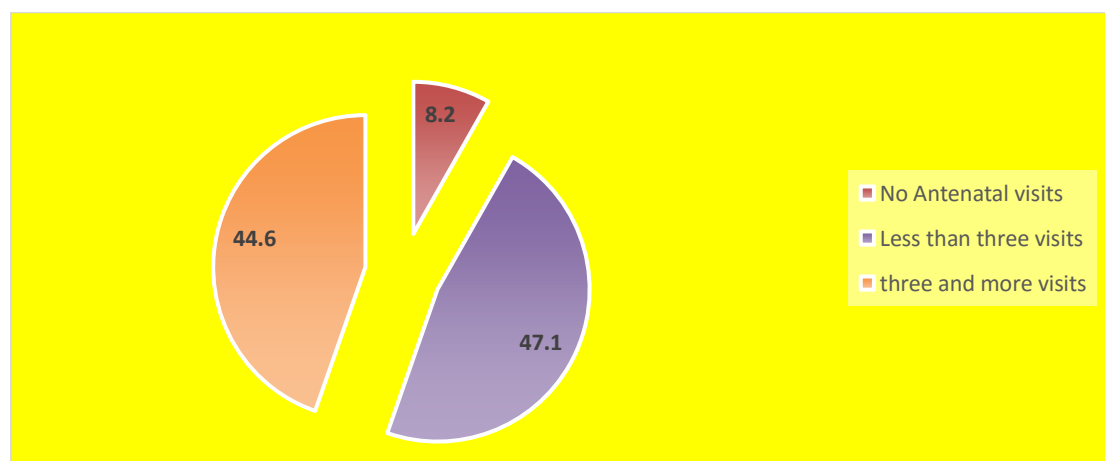
5.4 Non- Utilisation of antenatal care among women in Khordha and Sundargarh district of Odisha

5.4.1 Results from quantitative surveys

The utilisation of antenatal care services depends on the socio-economic status of the household and the availability and accessibility of antenatal care services. The data collected during the study indicate that the utilisation of antenatal care services is higher among non-working women compared to working women.

Figure 5.5 shows that antenatal visits during pregnancy among women in Khordha and Sundargarh districts. Antenatal check-up is very essential during pregnancy for the health of mother as well as her foetus. In the study area, around 8 percent respondents had not gone for antenatal check-up during their pregnancy. Among the respondents, 47 percent had gone for less than three visits and about 45 percent respondents had gone for three or more visits. In the study area, anganwadi workers and ASHA were encouraging women to visit government hospitals for antenatal check-up and for urine test, blood test, hemoglobin test and for ultrasonography.

Figure 5.5 Antenatal visits for pregnancy among women in Khordha and Sundargarh district of Odisha, field study, 2011-12



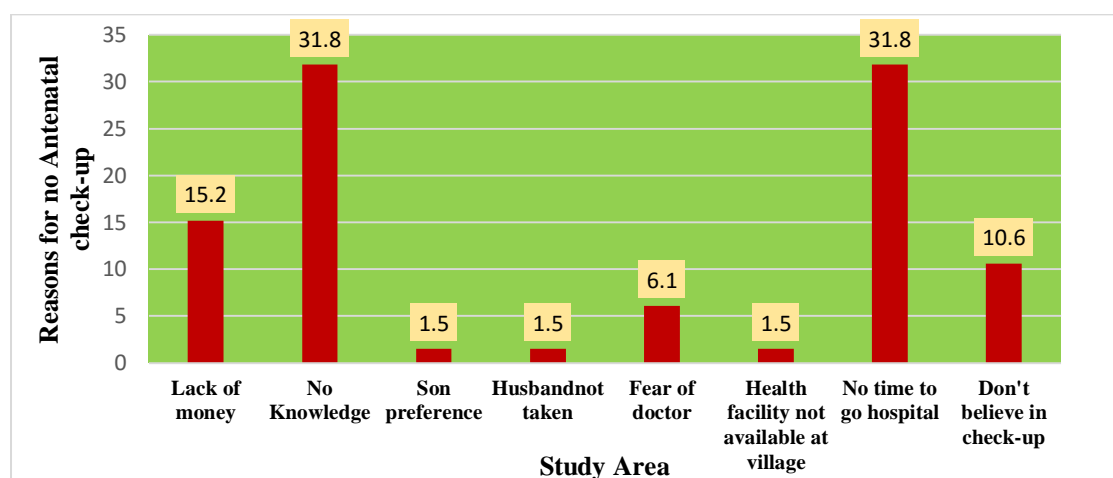
Source: Computed from primary data

The major reasons for less antenatal check-up as told by respondents in the study area were, lack of time to go hospital and lack of money was the second reason for not doing antenatal check-ups. Among poor women, money was the major reason because they were struggling for food, cloth and shelter and not thinking about health. Some of the respondents said that they did not have knowledge about antenatal check-ups.

In the study area, ASHA and Anganwadi workers try to motivate for antenatal care, some respondents do not listen to them.

Figure 5.6 shows reasons for no antenatal checkups during pregnancy among women in Khordha and Sundargarh districts of Odisha. In the study area, 32 percent respondents told that they had not gone for antenatal check-up because of no knowledge and the same percent told that they had no time to go hospital whereas 15 percent respondents had not gone for antenatal checkup due to lack of money. 10.6 percent respondents told that they did not believe in antenatal checkup and 6 percent told that they were terrified to meet doctors in hospital. Son preference, husband's non-cooperative and health facility not available were other reasons for no antenatal visits. Son preference and domestic violence was prevalent in the study areas. Some of the women were careless about their pregnancy as they already had 2-3 girls. Some women reported that in-laws did not allow them to go hospital.

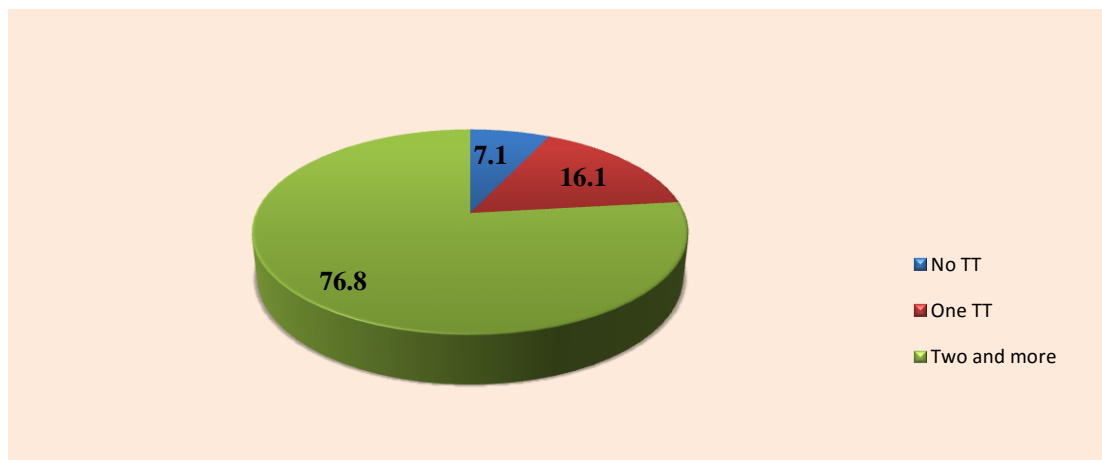
Figure 5.6 Reasons for no antenatal visits during pregnancy among women in Khordha and Sundargarh district of Odisha, field study, 2011-12



Source: Computed from primary data

In the study area, 7 percent women had not taken TT injection during their pregnancy whereas 16 percent had taken one TT injection and 76.8 percent women had taken two or more TT injections as shown in Figure 5.7. In the study area, ANMs from nearby health centres were coming to the area every month and injecting TT injection to the women who were pregnant and also giving vaccination to infants as part of *Mamata Diwas*.

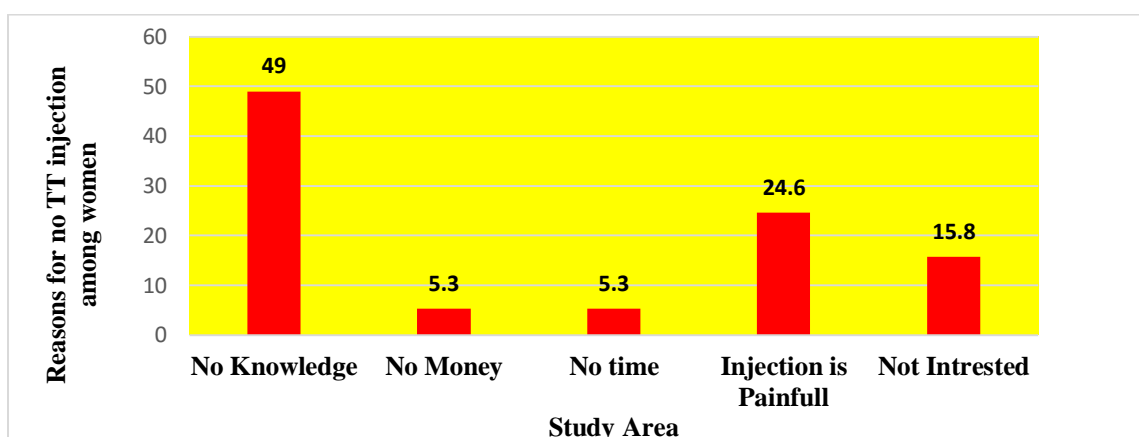
Figure 5.7 Tetanus injection taken by women during their pregnancy in Khordha and Sundargarh districts of Odisha, field study, 2011-12



Source: Computed from primary data

In the study area, among those who had not taken TT injection, nearly 50 percent women told that they had no knowledge about TT injection. Around 25 percent respondents told that injection is painful, 16 percent told not interested to take TT injection and rest of the respondents told that they had no time or money shown in Figure 5.8.

Figure 5.8 Reasons for no TT injection during pregnancy in Khordha and Sundargarh district of Odisha, field study, 2011-12

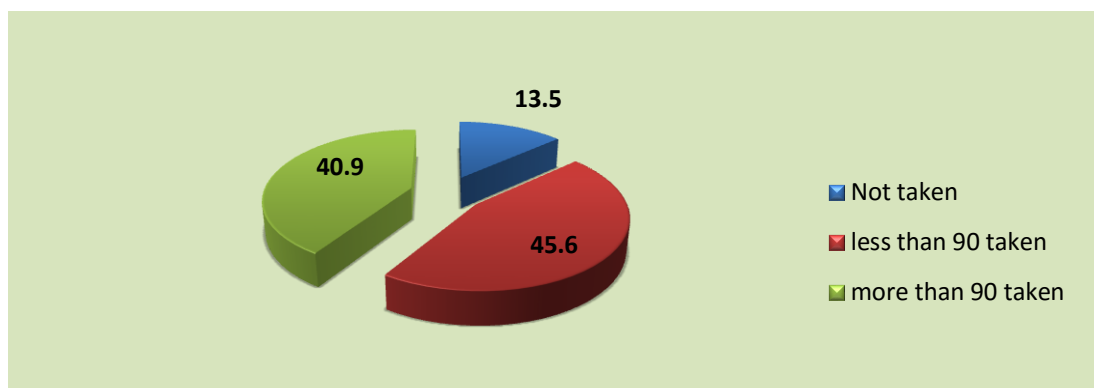


Source: Computed from primary data

Nearly 14 percent respondents had not taken Iron and Folic Acid tablets during pregnancy. 45.6 percent women had taken less than 90 tablets during their pregnancy

and about 41 percent women had taken more than 90 tablets during pregnancy (Figure 5.9).

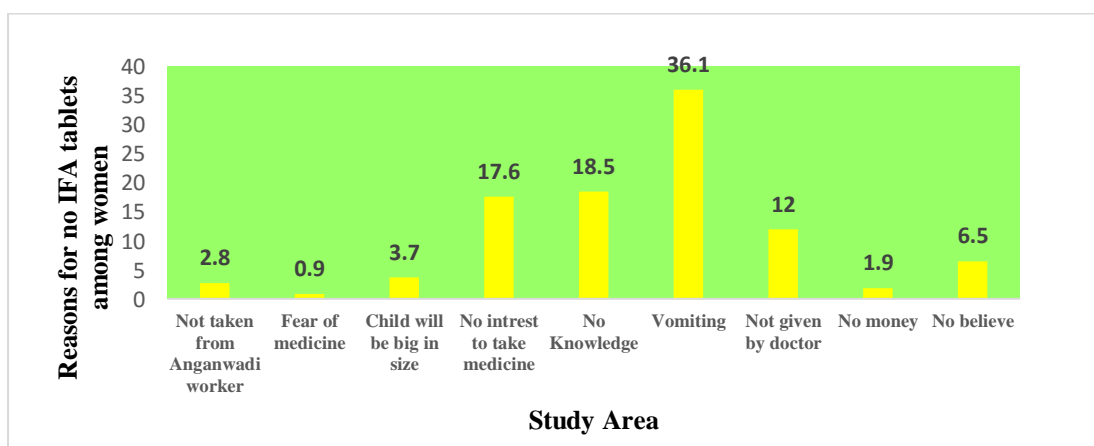
Figure 5.9 Number of Iron and Folic Acid tablets taken by women during pregnancy in Khordha and Sundargarh districts of Odisha, field study, 2011-12



Source: Computed from primary data

In the study area, the main reasons for not taking Iron and Folic Acid tablets among women during pregnancy was vomiting. 18 percent respondents told that they had no knowledge. Some women were not taking because they had no interest to take medicine. Some respondents also told that doctor had not prescribed or not given to them. Some women did not take because of their misconception that the child will be big in size and it would create delivery complications as given in Figure 5.10.

Figure 5.10 Reasons for no IFA tablets during pregnancy among women in Khordha and Sundargarh districts of Odisha, field study, 2011-12



Source: Computed from primary data

However, majority of the women who had completed primary education were not taking IFA tablets, because they did not like to take medicine, although they were aware of the importance of IFA tablets to reduce anemia and prevent undernutrition during pregnancy.

5.4.2 Results from qualitative surveys

In the study areas, it was found that utilisation of antenatal care among working and non-working women was affected by education, sex preference and blind belief.

Education

5.4.2.1 Working women

Education affects utilisation of antenatal care among working and non-working women in study areas. Those women who are educated and working in organised sectors are utilising antenatal care at better rates compared to uneducated working women. As quoted:

“I had completed B.Sc, so I got a job in a private school as a teacher and my husband is working in army. He is getting above Rs. 10,000. During my pregnancy I had gone to private hospital every month for check-up, I had taken two TT injections and 100 Iron and Folic Acid tablets. As per doctor suggestion, I had taken proper care during my pregnancy, so I delivered a healthy baby in a private hospital. As doctor advised me to meet him after 21 days of my delivery, I had gone to hospital for postnatal check-up after 21 days.” (Women 26 years, Saliasahi)

“I came to Bhubaneswar from Mayurbhanj with my husband after marriage. As I am from ST family, my parents had less knowledge about higher education so I had completed graduation through my own efforts. I am working as a receptionist in a private clinic, during my pregnancy I had gone to work till 5 months after that I had not gone to work because size of belly increased and doctor told me that you may get infected by some disease, so do not come to hospital. After six months of my delivery I started my work again. During my pregnancy I had taken full antenatal care from a private hospital. To know the growth of child, I had done two ultrasound tests. I delivered 4.2 kg child in a private hospital. My husband is not getting proper job now,

so he looks after our child. In the morning I finish all my work, I also make ready food for my child then I go to work place". (Women 30 years, Saliasahi)

"I am mix sand and cement in a construction site. I am getting Rs 350 per day. I was also working during pregnancy so I did not get much time for my own health care. I had taken two TT injections and 100 Iron and Folic Acid tablets and had not gone to hospital for any check-up. I had no time to go hospital. I had some complication at the time of delivery, I delivered my baby at Capital hospital in Bhubaneswar, but my child has some problem, so we are giving blood to him every month". (Women 35 years, Saliasahi)

"I am working in Phylite making company as labourer, full time job from 9 AM to 5 PM and for this work I am getting Rs. 1200 per month. During my pregnancy, I was also working there. I had taken only 50 Iron and folic acid tablets, one TT injection and I had not visited hospital for any check-up because my husband had no time to go hospital. Anganwadi worker had visited my home during my pregnancy and had given 50 folic acid tablets and sometimes I was at work place when she came to my home". (Women 20 years, Saliasahi)

"I had no time to go to hospital because, I was earning two hundred and fifty rupees from my daily wage labour and my husband was not earning so much money and whatever he was earning, he had spent that money on alcohol and he did not take care of me or my four children, I did not take iron and folic acid due to lack of money and whenever anganwadi worker came to my home I was at my work place". (Women 35 years, Saliasahi)

"I could not go for ante natal check-up due to busy work schedule, but after five months of pregnancy I went for check-up and even after check-up I did not take any iron and folic acid tablets or TT injections, so I delivered a low birth weight baby". (Women 30 years, Saliasahi)

"Due to less education I am doing house maid work in nearby flat in 3 houses. In the morning at 6 AM, I go to work place and around 11 AM I come back home and again at 4 pm I go to work place for two hours. I am getting around Rs. 2500 a month. It is very difficult to survive in this amount and my husband is a drunkard, he spends his earning on alcohol. I had not visited health facilities during my pregnancy due to lack

of money and lack of time. ANM had given me two TT injections and I did not take iron tablets due to blind belief that child will be big in size.” (ST Women, Saliasahi)

5.4.2.2 Non-working women

“I am not working because of my two young children. My husband is doing daily wage labour and getting Rs. 250 or 300. I had taken only two TT injections given by ANM in Anganwadi centre and at that time she checked my weight. I did not take any Iron and Folic Acid tablets which was given by ASHA because in our family we have some superstition that consumption of iron tablets may increase the size of the child and create pregnancy complication. Now I have two children, one son died after 8 days of birth and one miscarriage due to lack of proper antenatal check-up during pregnancy.” (ST women, Saliasahi)

“We are staying in rented house in Saliasahi as we migrated from Barahmpur. My husband is working as a construction labour. I have eleven months old male child, now I am two months pregnant. I had not taken TT injection as I had no knowledge about TT injection due to no education and nobody told me to go hospital for check-up and I did not take any iron tablets during my pregnancy. I delivered my baby at home and due to lack of proper medical check-up my son is slightly handicapped. I had also one miscarriage.”(Women 23 years, Saliasahi)

“My husband is working in a construction site and he is earning Rs. 4000 per month. As I have two children, elder one is two years and the younger one is 8 months. Now I am two months pregnant and had one miscarriage also. My husband is not taking care of me, he is always physically abusing me. During my pregnancy, I had visited two times Anganwadi centre where ANM comes in every month, she had given two TT injections and 90 Iron tablets.” (ST Women, Saliasahi)

“As I am from a joint family I do not get much time to work outside because of heavy work at home and my husband is earning only Rs. 3000 per month. It is very difficult to manage our family. I have two children. I had not gone to hospital for antenatal check-ups due to lack of time and I did not take iron tablets which was given by ASHA because after consuming iron tablets I was feeling like vomiting.” (OBC women, Kesura)

“My mother-in-law did not allow me to take iron and folic acid tablets because my health was good. She told me that all these tablets will increase the size of the child, and there is no need to take IFA tablets. So my new born baby suffered from Thalsemia.” (Women 25 years, Saliasahi)

“I had taken only 20-30 tablets which had given by Anganwadi worker, but did not complete all the tablets, minimum 90 tablets, because I don’t like to take medicine. Aganwadi worker had told me to take all the tablets, because it is very necessary for my health” (Women 20 years, Ganjubasti)

“I had not taken any IFA tablets during my pregnancy because Anganwadi workers had not given me these tablets and the doctors in government hospital also had not prescribed to take any IFA tablets and I was less aware about this” (Women 24 years, Kesura)

“I did not go for antenatal visits to hospital because I thought this child might be girl as my first birth was girl and my mother-in-law did not allow to go for antenatal check-up” (Women 31 years, Saliasahi)

5.5 Summary

This chapter discussed about utilisation of antenatal care among women in Khordha and Sundargarh districts of Odisha. It also studied the main factors which were affecting utilisation of antenatal care among women.

From the study, it was found that among rural areas of Khordha and Sundargarh districts, more women were utilising antenatal care in Dolposh village of Sundargarh compared to Kesura village of Khordha district, and among working women, utilisation of antenatal care was less compared to non-working women. In urban poor areas between Saliasahi and Ganjubasti, more women were taking antenatal care in Ganjubasti of Sundargarh district compared to Saliasahi of Khordha district. Here also, non-working women were utilising antenatal care better than working women. In Sundargarh, more women were utilising antenatal care compared to Khordha district because of active participation of ANM and Anganwadi workers in Sundargarh district.

In rural and urban poor areas, more women in rural areas were taking antenatal care compared to women in urban poor areas and utilisation of antenatal care was more among non-working women compared to working women in both rural and urban poor areas. But the utilisation of antenatal care was less among urban poor women compared to rural women.

Education is the major factor that affects utilisation of antenatal care among women in the study area. It was found that more utilisation of antenatal care was among educated working women compared to uneducated working women and among non-working there was more blind belief and sex preference and so they were utilising less antenatal care.

CHAPTER 6

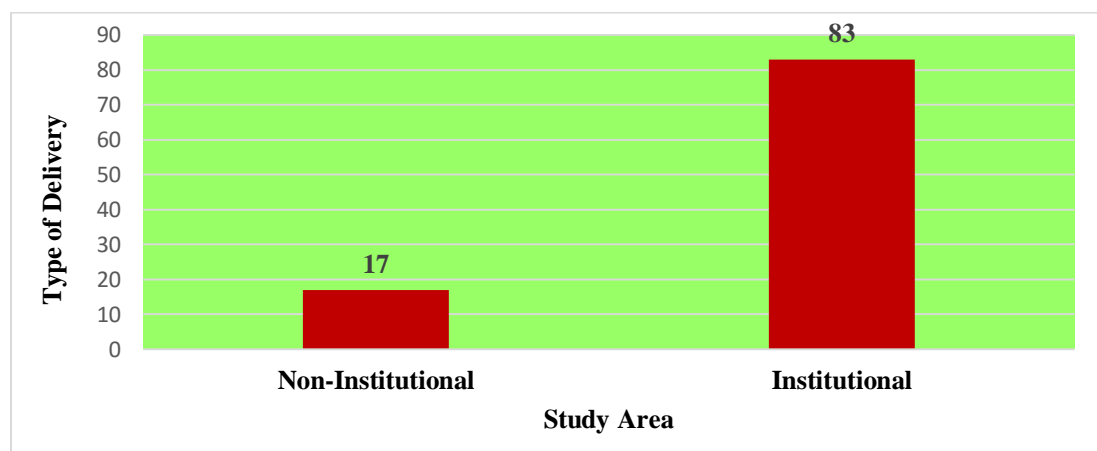
DETERMINANTS OF INSTITUTIONAL DELIVERY AND POSTNATAL CARE

In the context of maternal health, antenatal care, institutional/skilled attendance at delivery and postnatal care are important to achieve better maternal and child health. All these care are necessary to reduce both maternal and child death. More than 80 percent maternal death can reduce if pregnant women utilize proper antenatal, natal and post natal care (Darega et.al, 2016). Higher percent of maternal and child deaths happen within the first 48hours after delivery, so postnatal check-up for both the mother and baby will prevent large amounts of maternal and child deaths; an estimated 310,000 newborn lives (or 10-27 percent) can be saved by postnatal care coverage of 90 percent (Lawn, 2006). Therefore to reduce maternal and child death, it is suggested that both the mother and newborn baby have at least three postnatal care within seven days of delivery (Menash, 2010). One of the key causes in reducing maternal mortality is access to quality antenatal and natal care. Institutional delivery is a source for reducing maternal mortality and thus improving overall maternal health. Percentage of institutional deliveries is one way to estimate coverage of antenatal and natal care services within a country. This chapter presents the current status and factors associated with institutional delivery, postnatal check-up and infant and child deaths among rural and urban poor women in the two districts Khordha and Sundargah of Odisha.

6.1 Institutional Delivery in Khordha and Sundargarh of Odisha

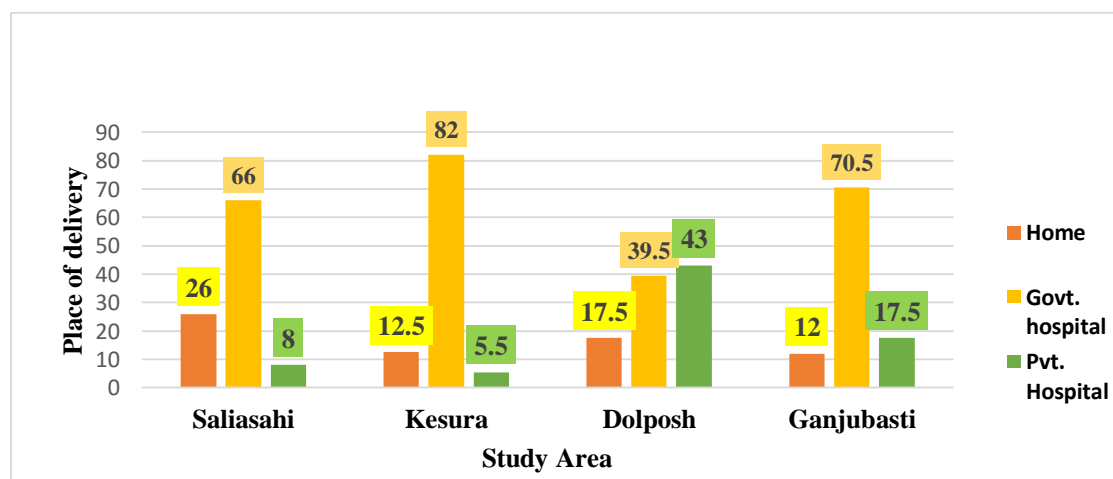
Place of birth and type of assistance got during birth have an impact on maternal health and mortality. Births that take place in non-hygienic conditions or births that are not attended by trained medical personnel are more likely to have negative outcomes for both the mother and the child. In the study area about 17 percent women had delivered their child at home where as nearly 65 percent had delivered their baby at govt. hospital and rest 18 percent in private hospital. Those who had delivered at home most of them told that inadequate time to go hospital and the delivery was done by midwife and also by relatives given in Figure 6.1.

Figure 6.1 Institutional delivery among women in Khordha and Sundargarh district of Odisha, field study, 2011-12



Source: Computed from primary data

Figure 6.2 Place of delivery among women in Khordha and Sundargarh districts of Odisha, field study, 2011-12



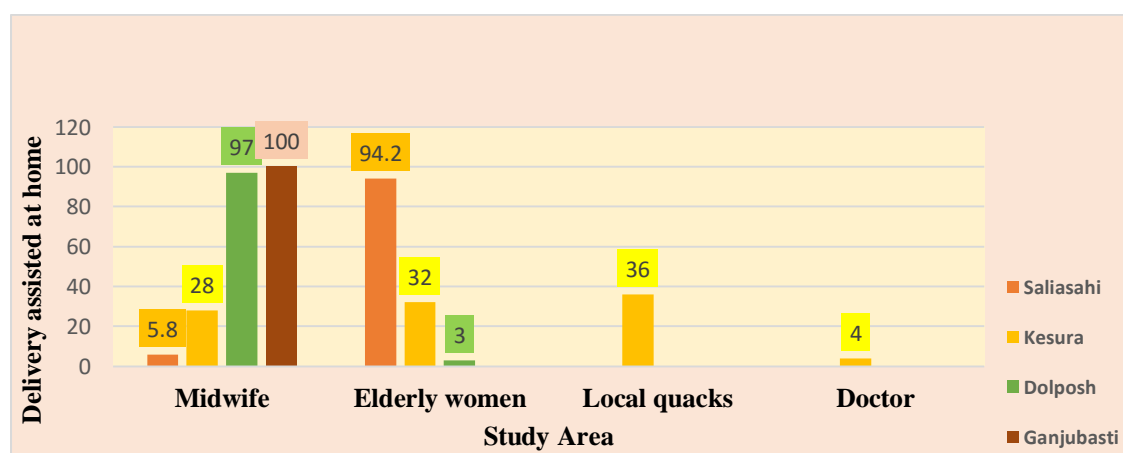
Source: Computed from primary data

Figure 6.2 shows the place of delivery among women in Khordha and Sundargarh districts of Odisha. Home delivery was higher among women from Saliasahi compared to Kesura village of Khordha district. This was because in Saliasahi more than half of the women were ST women and they were uneducated and from poor families. They did not have much knowledge about utilization of antenatal care, natal care and postnatal care. They were unaware about the benefits of institutional delivery during their pregnancy. The Anganwadi and ASHA worker were trying to motivate women for institutional delivery in Saliasahi area. They were giving proper information to them. But due to fear of operation they were not going to hospital for

delivery. Some of them were also not taking antenatal care and no birth control. They were also experiencing higher Infant and child death. In Sundargarh district institutional delivery was higher among women in Ganjubasti compared to Dolposh village but more number of women (43 percent) in Dolposh village had gone to private clinic for institutional delivery. Compared to all other area in Dolposh village higher percent women had delivered their baby at private hospital due to the active participation of ANM and ASHA. They were motivating pregnant women for institutional delivery because they can get better health care in hospital. ASHA was arranged transport to reach health facilities as soon as possible.

In the study area, a majority of the home deliveries were being conducted by traditional birth attendants, called midwives. These women are illiterate and follow traditional methods in conducting delivery including unhygienic ways and thus contribute to high infant mortality. In Saliasahi, 94 percent home deliveries were assisted by elderly women and about 6 percent deliveries were assisted by midwives. In Kesura village, about majority of the home deliveries were assisted by local quacks (36 percent), 32 percent assisted by elderly women, 28 percent assisted by midwives and rest 4 percent deliveries were assisted by doctors. In Dolposh village, 97 percent home deliveries were assisted by midwives and rest 3 percent home deliveries were assisted by elderly women and in Ganjubasti all home deliveries were conducted by midwives as shown in Figure 6.3.

Figure 6.3 Percentage of delivery assisted at home among women in Khordha and Sundargarh districts of Odisha, field study, 2011-12



Source: Computed from primary data

6.2 Socio-economic and Demographic factors affect Institutional delivery in Odisha

There is a great influence of socio-economic and demographic factors like caste, religion, work status and education of women on institutional delivery. In both Sundargarh and Khordha districts, compared to Hindu women, institutional delivery was higher among non-Hindu women. In Dolposh village of Sundargarh district, all non-Hindu women delivered their babies in hospitals whereas in Kesura village, 87.5 percent Hindu women delivered their babies in hospitals. But in comparison with Saliasahi of Khordha district, 73.4 percent of Hindu women delivered their babies in medical facilities, whereas in Ganjubasti of Sundargarh district, 88.8 percent of Hindu women delivered their babies in hospitals. Institutional delivery was better in Ganjubasti compared to Saliasahi because of the availability of hospitals, health workers and anganwadi workers. Dolposh is one of the tribal dominated villages in Sundargarh district whereas Kesura is a developed village in Khordha district. Awareness about institutional delivery is high in Dolposh village because of the active participation of ANM and ASHA as given in Table 6.1.

It was found during the survey that there were no general or other backward caste people in Dolposh village. Contrary to this there was no Scheduled Tribe women in Kesura village. In both Sundargarh and Khordha districts, institutional delivery was higher among non-ST women compared to ST women and this was because of less education among ST women and sometimes it was very difficult to motivate ST women for institutional delivery.

Literacy level or education had a positive role in increasing institutional delivery. In Dolposh village, Kesura village and Ganjubasti, all highly educated women delivered their babies in hospitals. Similarly about 75 percent institutional delivery was among highly educated women in Saliasahi. From previous studies, it was found that higher the income level, higher the institutional delivery. In the study area institutional delivery among women from BPL families was quite less in comparison to women belonging to the APL (Above Poverty Line). Institutional delivery was higher among women whose husbands were earning more than Rs 5000 monthly and those who had medium standard of living compared to lower standard of living.

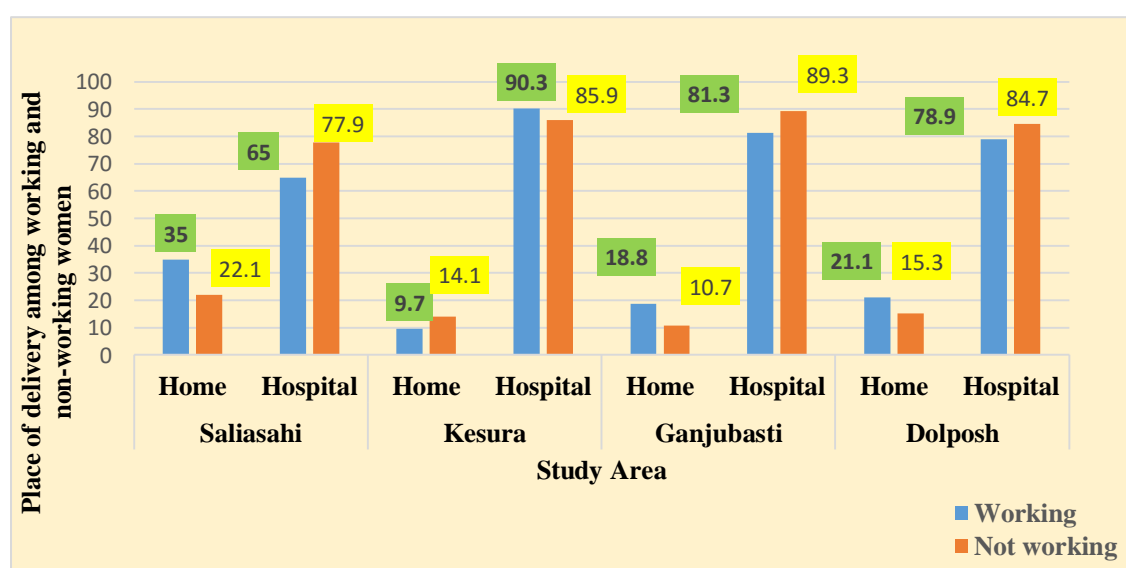
Table 6.1 Institutional delivery among women by socio-economic and demographic characteristics in Khordha and Sundargarh districts of Odisha, field study, 2011-12

Background characteristics	Institutional Delivery			
	Khordha		Sundargarh	
	Saliasahi	Kesura	Ganjubasti	Dolposh
Religion	Sig (0.620)		Sig (0.018)	Sig (0.014)
Hindu	73.4	87.5	88.8	80.0
Non-Hindu	78.3	0.0	50.0	100.0
Caste	Sig (0.008)		Sig (0.000)	Sig (0.644)
Non-ST	83.1	87.5	99.0	100.0
ST	66.7	0.0	76.8	82.4
Education	Sig (0.000)	Sig (0.064)	Sig (0.733)	Sig (0.000)
No education	55.6	79.1	86.8	100.0
Primary and secondary	83.5	88.5	88.1	74.3
Higher	75.0	100.0	100.0	100.0
Work status	Sig (0.057)	Sig (0.373)	Sig (0.200)	Sig (0.301)
Working	65.0	90.3	81.3	78.9
Not working	77.9	85.9	89.3	84.7
Husband Income	Sig (0.514)	Sig (0.000)	Sig (0.519)	Sig (0.224)
<5000	72.8	75.7	87.8	82.8
>5000	77.6	93.8	100.0	50.0
Standard of living	Sig (0.447)	Sig (0.000)	Sig (0.039)	Sig (0.195)
Low SLI	71.2	34.6	86.1	79.6
Medium SLI	79.7	100.0	100.0	87.5
High SLI	75.0	85.7	0.0	100.0
Family belongs to BPL	Sig (0.034)	Sig (0.779)	Sig (0.005)	Sig (0.914)
Yes	62.7	87.0	76.1	82.0
No	77.9	88.4	91.6	82.7
Types of Family	Sig (0.784)	Sig (0.009)	Sig (0.913)	Sig (0.703)
Nuclear	74.5	79.5	88.1	81.4
Joint	72.5	92.1	87.5	83.5
Age at marriage	Sig (0.016)	Sig (0.402)	Sig (0.013)	Sig (0.522)
Blow 20 years	70.4	86.0	91.9	82.1
Above 20 years	89.5	90.1	79.7	90.0
Age at First birth	Sig (0.499)	Sig (0.075)	Sig (0.094)	Sig (0.740)
Below 20 years	72.3	80.4	91.3	81.9
Above 20 years	76.5	89.9	83.5	83.9
Children ever born	Sig (0.000)	Sig (0.923)	Sig (0.380)	Sig (0.001)
One	93.2	87.9	88.4	70.1
Less than 3	76.0	87.2	86.3	89.4
3 and above	22.6	100.0	100.0	94.7
Received Health Massage	Sig (0.393)	Sig (0.000)	Sig (0.519)	Sig (0.513)
TV	75.4	91.9	0.0	100.0
Radio	0.0	100.0	0.0	0.0
Public announcement	63.2	20.0	100.0	0.0
Govt. health worker	100.0	89.0	87.8	82.3
Anganwadi worker	74.1	0.0	0.0	0.0
Decision maker	Sig (0.744)	Sig (0.509)	Sig (0.046)	Sig (0.761)
Husband	74.6	87.3	89.6	82.2
Wife	72.4	100.0	74.1	0.0
Both	0.0	0.0	94.7	84.6
Total (N)	148	175	176	165

Source: Computed from primary data Chi-square significance value in bracket

The work status and institutional delivery association is shown in Figure 6.4. From the study, it was found that institutional delivery was higher among non-working women compared to working women. Whereas in Kesura, most of the working women delivered their babies in hospitals compared to non-working women. In Kesura majority of the working women were educated, so they had knowledge about benefit of institutional delivery.

Figure 6.4 Work status and institutional delivery among women in Khordha and Sundargarh districts of Odisha, field study, 2011-12



Source: Computed from primary data

Results of binary logistic regressions in Table 6.2 indicates that caste, standard of living of women and total children ever born and family's economic status are significant predictors of institutional delivery. Women belonging to ST category were less likely to have institutional delivery compared to their counterparts. This was because of illiteracy among ST women. They had less knowledge about the benefits of institutional delivery. From the study, it was found that they had fear of operation and so they were not going to hospitals for institutional delivery. They also believed in their own culture. In the study area, ASHA and Anganwadi workers were facing some difficulty in motivating ST women to go for institutional delivery. Institutional delivery is high among women who had one child compared to those who had more than 3 children. Women from BPL families were going less to hospitals for delivery

compared to APL families. Women from lower standard of living had less institutional delivery compared to women from medium and higher standard of living.

Table 6.2 Effect of Socio-economic and demographic factors on institutional delivery in Khordha and Sundargarh district of Odisha, field study, 2011-12

Explanatory Variables	Exp(B)	Sig	95 CI
Respondent's Education			
Illiterate®			
Literate	0.913	0.698	(0.577-1.445)
Caste			
Non-ST®			
ST	0.506	0.002	(0.326-0.786)
Respondent's Work status			
Non-Working ®			
Working	0.801	0.305	(0.525-1.223)
Standard of Living			
Low ®		0.000	
Middle	1.094	0.833	(0.474-2.525)
High	0.340	0.016	(0.141-0.816)
Total children ever born			
one ®		0.003	
<3	1.065	0.779	(0.687-1.651)
3 and more	2.948	0.001	(1.521-5.715)
Types of Family			
Nuclear®			
Joint	1.078	0.726	(0.707-1.643)
Family belong to BPL			
Yes ®			
No	1.598	0.025	(1.061-2.407)
Constant	0.276	0.004	

Source: Computed from primary data, dependent variable institutional delivery (No=0, Yes=1)

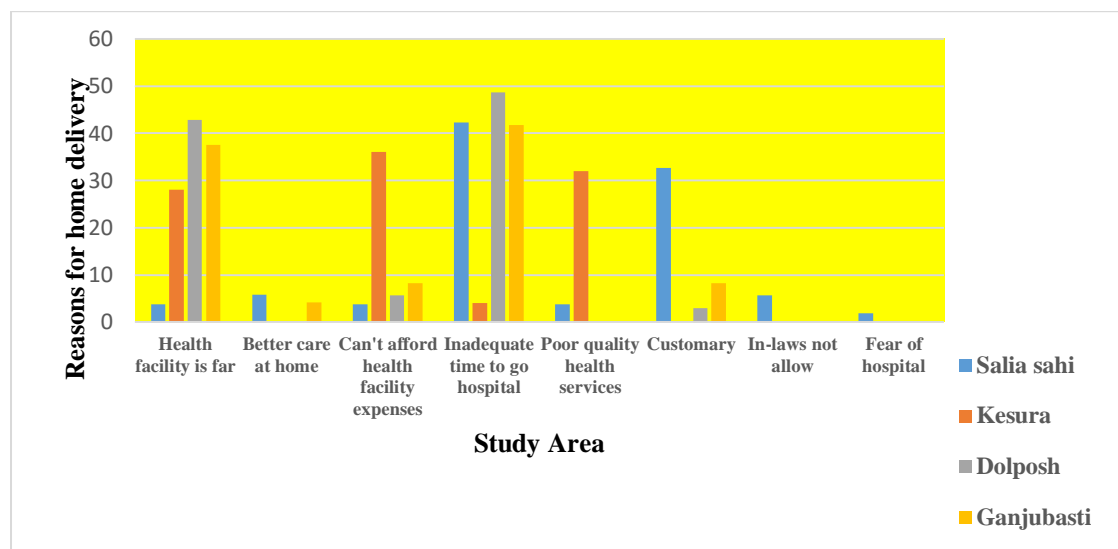
6.3 Reasons for home delivery in Khordha and Sundargarh districts of Odisha

Socioeconomic and cultural factors, such as women's status in the household and society, their educational and economic status, accessibility of facility (distance, transport) and availability and quality of care (availability of staff and equipment in the health facility) affect maternal mortality.

6.3.1 Findings from quantitative Analysis

From the present study, some of the major factors which were responsible for less institutional delivery among women in Odisha were found. These were as follows - health facility was far, better care at home, could not afford health facility, inadequate time to go to health facility, poor quality health services, customary norms, in-laws disallowed and fear of hospital. These are shown in Figure 6.5.

Figure 6.5 Factors affecting institutional delivery in Khordha and Sundargarh of Odisha, field study, 2011-12



Source: Computed from primary data

Higher percentage of respondents (43 percent) from the village of Dolposh said that health facility was so far that they could not go to hospitals for their delivery. In Kesura and Ganjubasti, majority of the respondents delivered their babies at home because the health facility was so far from their place of residence. Another major factor for less institutional delivery among respondents from Dolposh, Saliasahi and Ganjubasti was inadequate time to go hospital. In some cases, the problem to reach medical facilities was because of non-availability of transportation and in some cases the absence of husband or other family members. In Kesura, the major two factors that affected institutional delivery were high health expenses and poor services at the hospital. In Saliasahi, some respondents said that their in-laws were not allowing them for institutional delivery and some told that due to fear of operation they were not going to hospitals for delivery. In Saliasahi, some respondents told that better care at home than hospital was the main factor for less institutional delivery.

6.3.2 Findings from qualitative Analysis

From Focus Group Discussions (FGDs), it was found that major factors like night delivery, lack of transport and fear of operation were affecting institutional delivery.

Night Delivery

Respondents told that they delivered their babies at home because at night and it was very difficult to arrange vehicles to reach hospitals at that time. They were depending on ASHA, but sometimes they were facing problems due to non-availability of ASHA at that time. Relatives and midwives were conducting delivery at home by using blade for cutting of umbilical cord. After delivery, they were not going to hospital for postnatal check-up because they were thinking that everything was normal and so there was no need to visit the hospital. As quoted:

“I delivered my baby at home, due to night we did not get any auto to go to the hospital and the Janani Express the ambulance was at Govt. hospital which is 6 KMs from our home and ASHA didi tried to contact in their number but she did not get any response from there” (Women aged 20, Kesura).

“I am working as labourer. My husband is not earning much. I had taken full ANC in our Anganwadi Centre. When my pain started at night my husband call ASHA but she was not in her house and we could not arrange any vehicle to reach the health facility, so my relative conducted my delivery at home, using new blade for cutting of the umbilical cord”. (Working women, Ganjubasti)

Fear of Operation

Fear of operation was higher among ST women compared to non-ST women. They were unaware of the benefits of institutional delivery. They were thinking that if they went to the hospital, then the doctor would operate on them and for this reason they were not going to hospitals for institutional delivery. In some cases, they had 3-4 children and were not using any contraceptives to limit their family. Due to lack of antenatal check-up and institutional delivery, infant and child deaths were higher among them. As quoted:

“I had not gone to hospital for my delivery due to fear of operation. Relatives those who know how to conduct delivery had done my delivery by using new blade for cutting of umbilical cord. I have three children now, my previous child died due to some disease. My younger son is 9 months old and now I am 6 months pregnant, not taking any contraceptive pills, sometimes I go to work for money and my elder daughter looks after my younger baby”. (Women 35 years, Saliasahi)

“I had gone to hospital for antenatal check-up, doctor told me that you have some complication, we will do cesarean delivery, so I did not go to hospital. I delivered my baby at home and ANM had done my delivery and after pregnancy I had not visited hospital for check-up” (Non- working women, Saliasahi)

Lack of transport

Lack of transport is a major problem in rural areas. ASHA faces problems in arranging transport. As quoted:

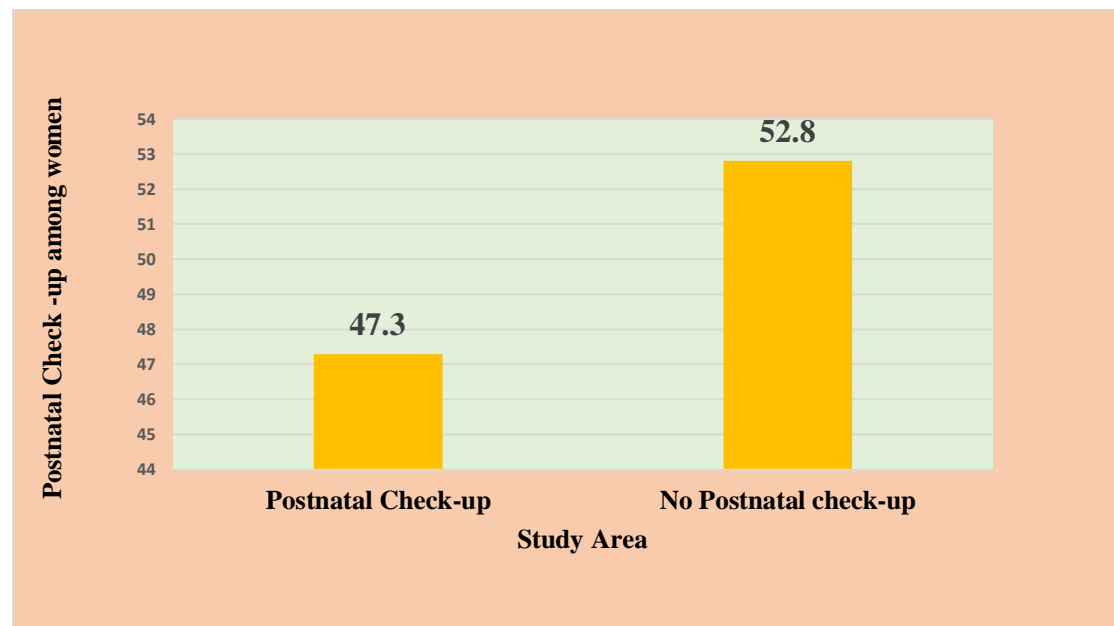
“Now I am staying in Saliasahi with my husband but our native place is in Mayurbhanj district, my husband is working as a daily wage labourer. At the time of my pregnancy, I was at my village, the facility is situated about 26 KMs from my village, so I delivered my baby at home due to transport problem to reach the health facility” (Non-working women, Saliasahi)

“Doctor advised the women to be admitted in the hospital two days before the delivery but the family members did not listen to doctor and came back home. On that night the pain started, it was very difficult to arrange transport, finally one auto was arranged to take her to hospital and on the way to hospital she delivered a baby, I was alone with her. When we reached the hospital the doctor said the baby was already dead”. (ASHA, Kesura)

6.4 Postnatal care among women in Khordha and Sundargarh of Odisha

The postnatal period is defined as the first six weeks after birth that is critical to the health and survival of a mother and her newborn. The most vulnerable time for both mother and child is during the hours and days after birth. Lack of care in this time period may result in death of mother and her newborn. From the present study, it was found that only 47 percent women had gone to hospital for postnatal check-ups as shown in figure 6.6.

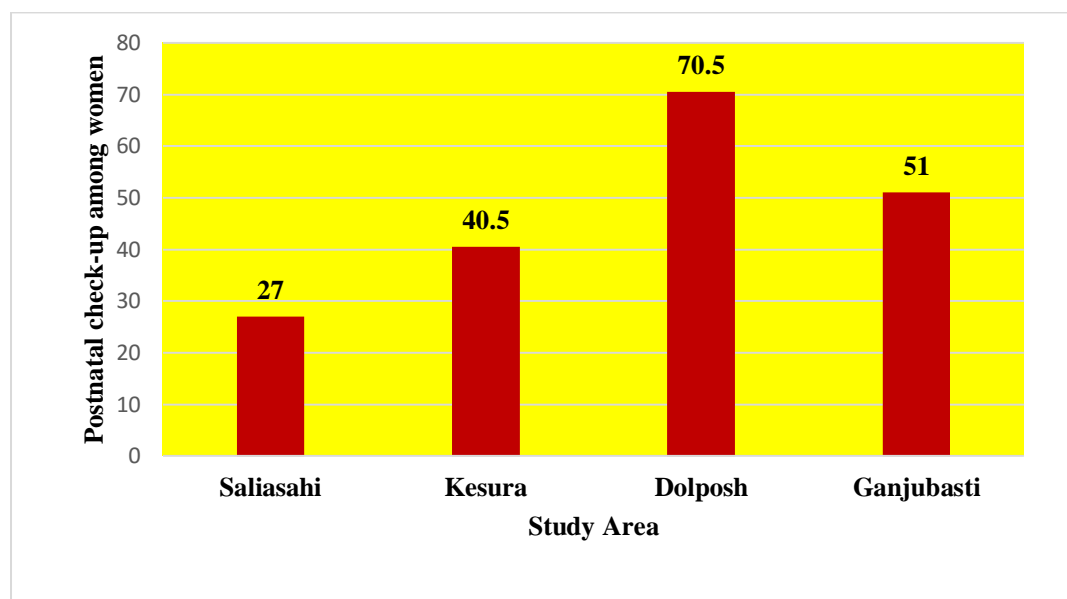
Figure 6.6 Percentage of women visited hospital after delivery in Khordha and Sundargarh districts of Odisha, field study, 2011-12



Source: Computed from primary data

In Khordha district, more respondents were not going to hospitals for postnatal check-ups compared to Sundargarh district. In Saliasahi, about 73 percent women were not going to hospitals for postnatal check-ups whereas about 60 percent women from Kesura were not going to hospitals for postnatal check-ups. Even after home delivery, women were not going to hospital for postnatal check-ups which can lead to neonatal and perinatal mortality. Postnatal care is higher among women from Dolposh village compared to Ganjubasti of Sundargarh. In Dolposh village, around 70 percent respondents had gone for postnatal check-ups after pregnancy, whereas in Ganjubasti about 49 percent women had gone for postnatal care. Compared to Sundargarh, women from Khordha were less utilising postnatal care because of less awareness among women about the benefits of postnatal care. This is shown in Figure 6.7.

Figure 6.7 Postnatal check-up among women in Khordha and Sundargarh of Odisha, field study, 2011-12



Source: Computed from primary data

6.4.1 Socio-economic and demographic factors affecting postnatal care in Odisha

There is a great influence of socio-economic and demographic factors like caste, religion, work status and education of women on postnatal care. In both Sundargarh and Khordha districts, compared to Hindu women, postnatal check-up was less among non-Hindu women. In Saliasahi, very less percent of Hindu women had gone to hospitals for postnatal check-ups (Table 6.3). It was found during the survey that there were no general or other backward caste people in Dolposh village. Almost all people belong to ST, whereas there was no Scheduled tribe women in Kesura village. In both Sundargarh and Khordha districts, postnatal check-up was higher among ST women compared to non-ST women. But in Kesura postnatal check-up was high among non-ST women. Literacy level or education had a positive role in increasing postnatal check-ups.

Although there is a general tendency to believe that higher the income level, higher the rate of postnatal check-ups. This was not true in the case of Dolposh village because for families with income more than Rs. 5000, the percentage of postnatal check-ups was less compared to those families with less than Rs. 5000 income per month.

Table 6.3 Postnatal check-up among women by socio-economic and demographic characteristics in Khordha and Sundargarh districts of Odisha, field study, 2011-12

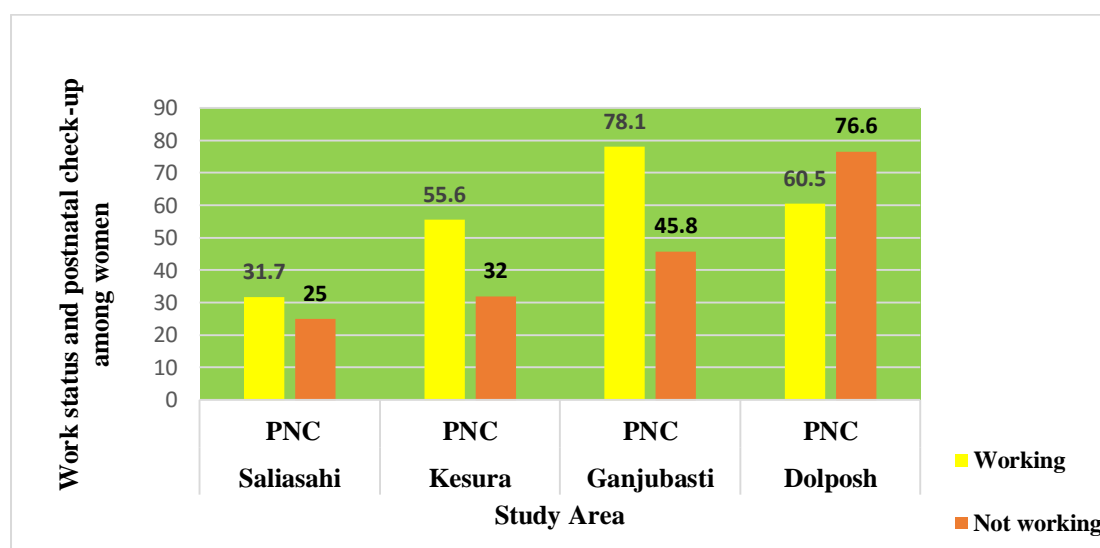
Background characteristics	Khordha		Sundargarh	
	Saliasahi Received PNC	Kesura Received PNC	Ganjubasti Received PNC	Dolposh Received PNC
Religion	Sig (0.004)		Sig (0.968)	Sig (0.446)
Hindu	23.7	40.5	51.0	71.4
Non-Hindu	52.2	0.0	50.0	64.0
Caste	Sig (0.741)		Sig (0.000)	Sig (0.517)
Non-ST	25.8	40.5	21.8	100.0
ST	27.9	0.0	80.8	70.4
Education	Sig (0.002)	Sig (0.000)	Sig (0.012)	Sig (0.075)
No education	11.1	37.2	34.0	64.0
Primary and secondary	35.5	33.8	56.6	75.0
Higher	25.0	100.0	75.0	50.0
Work status	Sig (0.330)	Sig (0.001)	Sig (0.001)	Sig (0.015)
Working	31.7	55.6	78.1	60.5
Not working	25.0	32.0	45.8	76.6
Husband Income	Sig (0.163)	Sig (0.000)	Sig (0.087)	Sig (0.028)
<5000	24.5	17.1	50.3	71.2
>5000	34.7	53.1	100.0	0.0
Standard of living	Sig (0.061)	Sig (0.000)	Sig (0.030)	Sig (0.023)
Low SLI	28.0	0.0	52.0	65.0
Medium SLI	21.9	38.1	70.4	80.4
High SLI	75.0	64.3	0.0	100.0
Family belongs to BPL	Sig (0.311)	Sig (0.000)	Sig (0.000)	Sig (0.000)
Yes	21.6	29.0	87.0	36.0
No	28.9	62.3	40.3	82.0
Types of Family	Sig (0.056)	Sig (0.304)	Sig (0.358)	Sig (0.417)
Nuclear	23.5	45.2	49.4	73.2
Joint	37.3	37.8	57.5	68.0
Age at marriage	Sig (0.020)	Sig (0.000)	Sig (0.000)	Sig (0.499)
Blow 20 years	23.5	28.7	37.5	70.0
Above 20 years	42.1	62.0	79.7	80.0
Age at First birth	Sig (0.490)	Sig (0.000)	Sig (0.000)	Sig (0.857)
Below 20 years	25.2	17.6	35.7	70.1
Above 20 years	29.6	48.3	71.8	71.4
Children ever born	Sig (0.197)	Sig (0.428)	Sig (0.223)	Sig (0.051)
One	34.2	37.9	44.2	67.5
Less than 3	21.9	41.4	56.9	68.3
3 and above	25.8	100.0	50.0	94.7
Received Health Message	Sig (0.013)	Sig (0.000)	Sig (0.075)	Sig (0.028)
TV	40.0	63.6	0.0	0.0
Radio	0.0	0.0	0.0	0.0
Public announcement	31.6	0.0	0.0	0.0
Govt. health worker	0.0	22.0	51.8	71.2
Anganwadi worker	19.4	0.0	0.0	0.0
Decision maker	Sig (0.001)	Sig (0.799)	Sig (0.000)	Sig (0.757)
Husband	20.4	40.6	43.5	70.1
Wife	43.1	33.3	81.5	0.0
Both husband and wife	0.0	0.0	68.4	73.1
Total (N)	54	81	102	141

Source: Computed from primary data Chi-square significance value in bracket

Postnatal check-up among women from BPL families was quite less in comparison to women belonging to the APL (Above Poverty Line) in Saliasahi, Dolposh and Kesura whereas in Ganjubasti the postnatal check-up was higher among BPL families. Those who got married below 20 years went less to hospitals for postnatal check-up compared to those who got married after 20 years. Postnatal check-up was higher in families where women took decisions about their health.

Association between work status and postnatal care is shown in (Figure 6.8). From the study, it was found that postnatal check-up was higher among working women compared to non-working women. Whereas in Dolposh, most of the non-working women had gone to hospitals for postnatal check-up.

Figure 6.8 Work status and PNC among women in Khordha and Sundargarh district of Odisha, field study, 2011-12



Source: Computed from primary data

Results of binary logistic regressions in Table 6.4 indicates that religion, caste, work status of women, education, standard of living, family's economic status and age at marriage were significant predictors of postnatal check-up in Odisha. Non-Hindu women were less likely to utilise postnatal care compared to Hindu women. ST women were more likely to utilise postnatal care compared to non-ST women. Working women had more likely to have postnatal care compared to non-working women. Women from APL families were more likely to utilise postnatal care compared to BPL families. Medium and higher standard of living women were less

likely to utilise postnatal care compared to women from lower standard of living families. Postnatal care was high among women who had more than 3 children compared to those who had one child. Women who got married after 20 years were more likely to utilise postnatal care than women who got married before 20 years.

Table 6.4 Effect of socio-economic and demographic factors on postnatal check-up in Khordha and Sundargarh districts of Odisha, 2011-12

Explanatory Variables	Exp(B)	Sig	95 CI
Religion			
Hindu®			
Non-Hindu	0.429	0.014	(0.245-0.528)
Respondent's Education			
Illiterate®			
literate	1.966	0.000	(1.350-2.863)
Caste			
Non-ST®			
ST	5.691	0.000	(3.918- 8.267)
Types of Family			
Nuclear ®			
Joint	0.955	0.793	(0.679-1.345)
Respondent's Work status			
Not working ®			
Working	1.569	0.015	(1.091-2.255)
Standard of Living			
Low ®			
Middle	5.527	0.000	(2.794-10.933)
High	3.210	0.000	(1.682-6.127)
Family belongs to BPL			
Yes ®			
No	1.971	0.000	(1.390-2.796)
Age at Marriage			
Less than 20 years ®			
More than 20 years	0.359	0.000	(0.245-0.528)
Constant	0.170	0.000	

Source: computed from primary data, dependent variable postnatal check-up (No=0, Yes=1)

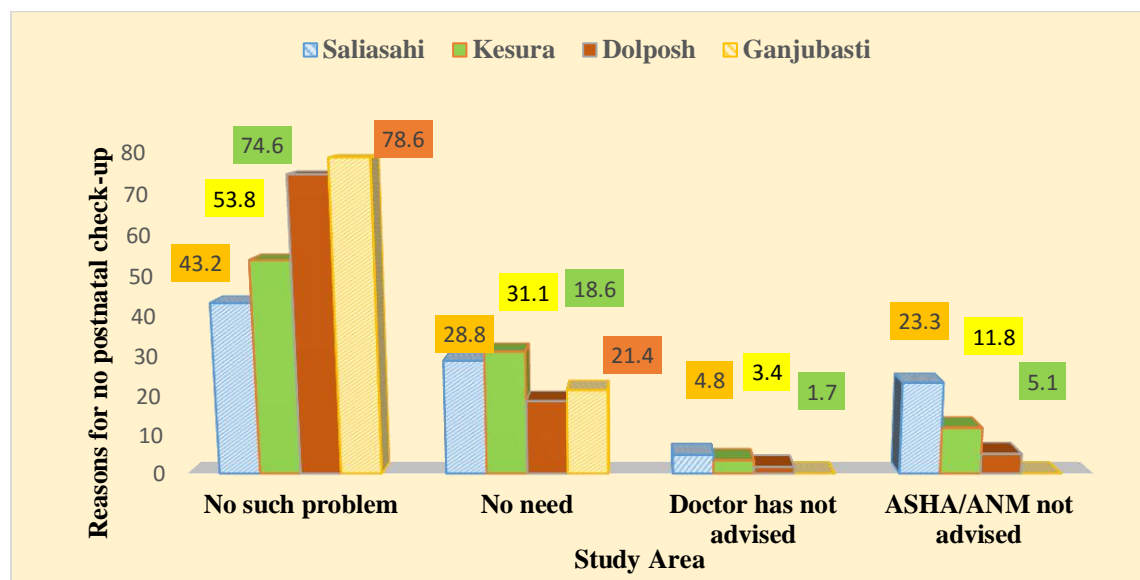
6.4.2 Reasons for no postnatal care in Khordha and Sundargarh districts of Odisha

6.4.2.1 Findings from quantitative survey

From the study, it was found that some of the major factors affecting postnatal delivery in Odisha were like - feeling of no need, faced no problem, doctor did not advise and ASHA/ANM did not advise. In Dolposh and Ganjubasti, above 75

percent respondents told that they were not going to hospital for postnatal check-up because they faced no problem after delivery (Figure-6.9).

Figure 6.9 Reasons for no PNC among women in Khordha and Sundargarh of Odisha, field study, 2011-12



Source: Computed from primary data

6.4.2.2 Findings from qualitative survey

From the Qualitative study, it was found that less postnatal check-up after pregnancy among women because of less knowledge about PNC. As quoted:

“I delivered my baby at home and ANM conducted the delivery. No check-up after pregnancy. I have taken 2 T.T, less than 90 IFA tablets and have visited two times to hospital for antenatal check-up. I delivered a low weight baby”. (Not working women, Saliasahi)

“I am working as a sweeper in NIT, Rourkela and getting Rs. 1500 per month. It is my permanent 8 hours job. I delivered my baby at home and dai conducted the delivery. No check-up after delivery. Due to no education, I had no idea about PNC. I had taken 90 Iron and Folic Acid tablets and 2 T.T Injections which was given by ANM in Mamata Diwas. At that time ANM had checked my weight, hemoglobin and abdomen. I had not gone to hospital for any ANC check-up”. (Working women, Ganjubasti)

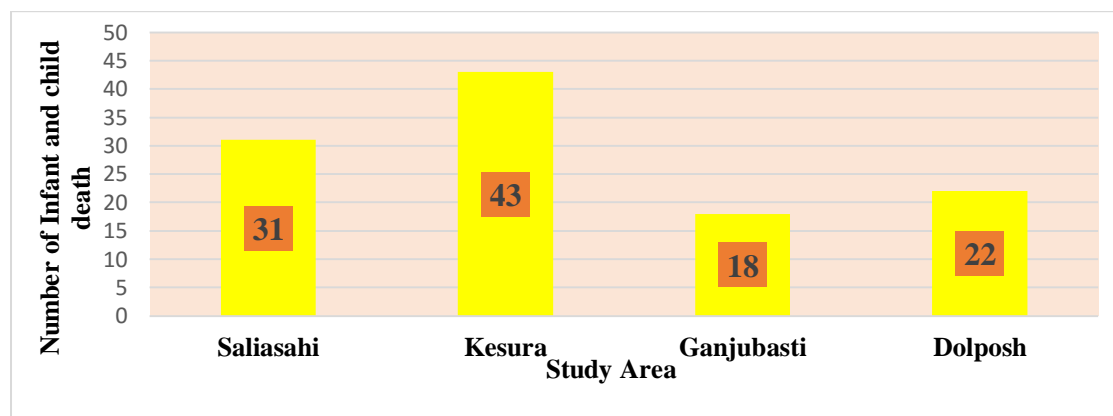
6.5 Infant and child deaths in Khordha and Sundargarh districts of Odisha

One of the serious problems in Odisha is higher level of infant mortality. Infant mortality can be divided into two phases, namely, neonatal and post-neonatal. Neonatal mortality indicates the death of infants from birth to 28 days whereas postnatal indicates death of infant between 28 days to one year. Infant mortality is affected by two major factors, one is endogenous and other is exogenous factors. The endogenous factors are related to the formation of the foetus in the womb and therefore mainly are biological in nature. Among the biological factors affecting foetal and neonatal infant mortality rates, the important ones are the age of the mother, the birth order, the period of spacing between births, pre maturity and weight at birth.

Social, cultural, economic and environmental factors are also found to affect infant mortality, especially during the post-neonatal period. Post-neonatal deaths are therefore mainly due to various epidemics caused by communicable diseases, both of the digestive system such as diarrhea and enteritis and of the respiratory system such as bronchitis and pneumonia, as well as by faulty feeding patterns and poor hygiene. The underlying environmental factors include crowding and congestion, insanitary surroundings, lack of proper sunshine and fresh air, etc. Exogenous factors like breast feeding, religion, and caste, early marriages, sex of the child, quality of mothering, maternal education, quality of health care, broken families, illegitimacy, brutal habits and customs the indigenous dais and bad environmental sanitation affect infant mortality.

From the study, it was found that the number of infant and child deaths was higher in Kesura village and in Saliasahi of Khordha district and it was lower in Sundargarh district (Figure 6.10)

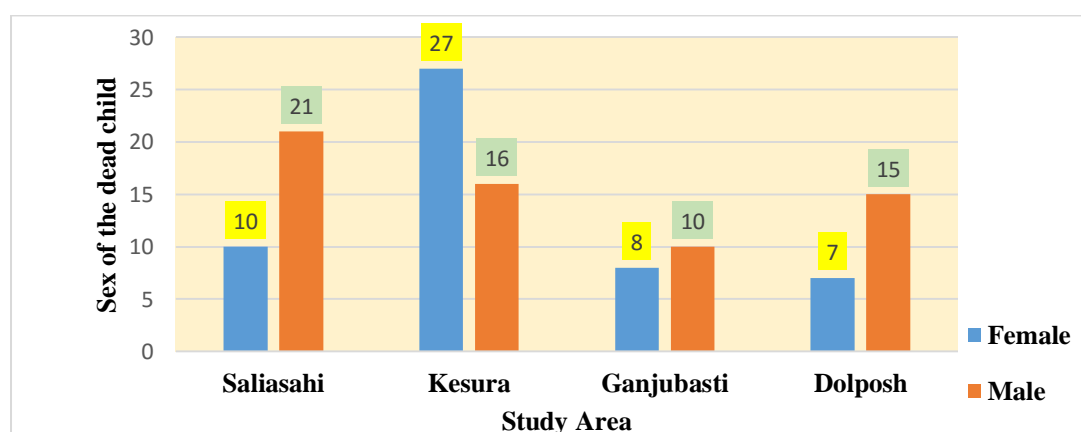
Figure 6.10 Number of Infant and child deaths among women in Khordha and Sundargarh of Odisha, field study, 2011-12



Source: Computed from primary data

In Kesura, the number of female infant and child deaths were more than male deaths. The major cause of female infant and child deaths were pneumonia, diarrhea, jaundice and respiratory problems. The female infant and child deaths were more among non-working women compared to working women. Among women from joint families there may be less care of a female child during postnatal period and so higher infant and child deaths occurred among female babies (Figure 6.11). Whereas in Dolposh and Saliasahi, the number of male and child infant deaths are higher than females. In these areas, there are more tribal women and less utilisation of antenatal and postnatal care which created infant deaths among male children.

Figure 6.11 Sex of the dead child in Khordha and Sundargarh districts of Odisha, field study, 2011-12



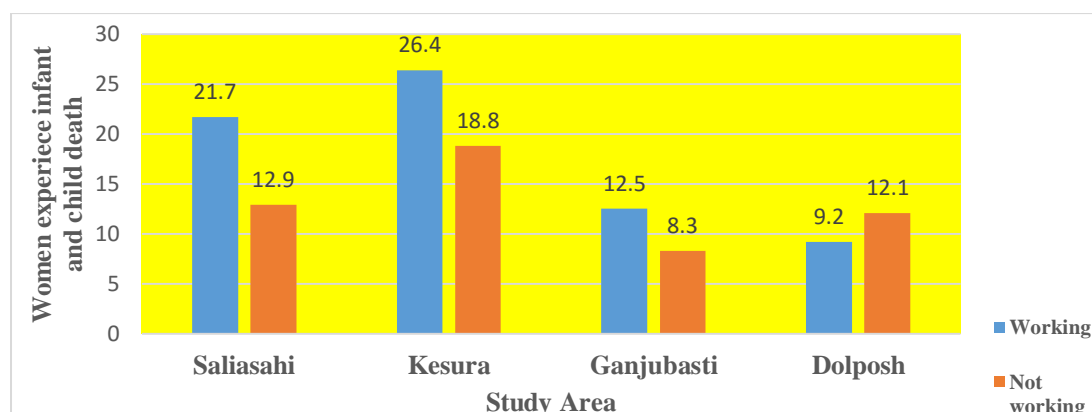
Source: Computed from primary data

6.5.1 Socio-economic and demographic factors affecting women's experience of Infant and child deaths in Odisha

Infant and child death among Hindu women was higher compared to non-Hindu women in Kesura and Ganjubasti, whereas in Saliasahi and Dolposh, infant and child deaths among non-Hindu women was higher compared to Hindu women. It was also found that infant and child death was higher among ST women compared to non-ST women in Saliasahi, Ganjubasti and Dolposh whereas in Kesura, infant death was higher among non-ST women (Table-6.5).

Infant and child death was higher among illiterate women compared to literate women but in Dolposh, infant and child death was higher among literate women compared to illiterate women because most of the death occurred due to fever. From the study, it was found that infant death was higher among women those who had less than 23 months birth space between two children compared to others. Environmental factors like type of drinking water, type of toilet and type of fuel used for cooking affects infant and child deaths. Infant and child death among working women was higher compared to non-working women whereas in Dolposh infant and child death was higher (12.1 percent) among non-working women compared to working women (9.2 percent). Compared to Sundargh district, infant and child death was higher among women in Khordha district. In Kesura, 26.4 percent infant and child deaths were among working women and in Saliasahi, 21.7 percent infant and child deaths were among working women (Figure 6.12).

Figure 6.12 Work status and Infant and child deaths among women in Khordha and Sundargarh districts of Odisha, field study, 2011-12



Source; Computed from primary data

Table 6.5 Infant and child deaths among women by socio-economic and demographic characteristics in Khordha and Sundargarh districts of Odisha, field study, 2011-12

Background characteristics	Khordha		Sundargarh	
	Saliasahi Infant and child Deaths	Kesura Infant and child Deaths	Ganjubasti Infant and child Deaths	Dolposh Infant and child Deaths
Religion	Sig (0.729)		Sig(0.004)	Sig (0.060)
Hindu	15.8	21.5	8.2	12.6
Non-Hindu	13.0	0.0	50.0	0.0
Caste	Sig (0.755)		Sig (0.000)	Sig (0.725)
Non-ST	14.6	21.5	0.0	0.0
ST	16.2	0.0	18.2	11.1
Education	Sig (0.009)	Sig (0.005)	Sig (0.898)	Sig (0.004)
Illiterate	25.4	37.2	9.4	0.0
Literate	10.9	17.2	8.8	14.7
Work status	Sig (0.115)	Sig (0.207)	Sig (0.450)	Sig (0.527)
Working	21.7	26.4	12.5	9.2
Not working	12.9	18.8	8.3	12.1
Husband Income	Sig (0.037)	Sig (0.068)	Sig (0.583)	Sig (0.617)
<5000	18.5	14.3	9.1	11.1
>5000	6.1	25.4	0.0	0.0
Standard of living	Sig (0.290)	Sig (0.001)	Sig (0.301)	Sig (0.608)
Low SLI	18.2	0.0	9.8	10.9
Medium SLI	10.9	29.7	3.7	12.5
High SLI	0.0	14.3	0.0	0.0
Family belongs to BPL	Sig (0.624)	Sig (0.000)	Sig (0.192)	Sig (0.000)
Yes	17.6	32.8	23.9	16.0
No	14.8	0.0	4.5	9.3
Types of Family	Sig (0.685)	Sig (0.804)	Sig (0.805)	Sig (0.227)
Nuclear	16.1	20.5	8.8	8.2
Joint	13.7	22.0	10.0	13.6
Age at marriage	Sig (0.150)	Sig (0.325)	Sig (0.001)	Sig (0.254)
Blow 20 years	17.3	19.4	4.4	11.6
Above 20 years	7.9	25.4	18.8	0.0
Age at First birth	Sig (0.825)	Sig (0.438)	Sig (0.002)	Sig (0.672)
Below 20 years	16.0	17.6	3.5	10.4
Above 20 years	14.8	22.8	16.5	12.5
Children ever born	Sig (0.000)	Sig (0.000)	Sig (0.050)	Sig (0.000)
One	1.4	0.0	3.5	0.0
Less than 3	20.8	31.6	13.7	21.2
3 and above	32.3	100.0	8.3	0.0
Birth Space	Sig (0.715)	Sig (0.000)	Sig (0.441)	Sig (0.009)
< 23 Months	25.0	43.4	7.8	18.4
>24 Months	21.9	13.5	11.2	6.5
Own drinking water source	Sig (0.097)	Sig (0.131)	Sig (0.392)	Sig (0.000)
Yes	0.0	0.0	6.0	22.7
No	16.7	22.4	10.0	5.2
Own toilet facility	Sig (0.763)	Sig (0.363)	Sig (0.181)	Sig (0.594)
Yes	16.5	25.4	4.9	11.9
No	14.9	19.7	10.8	9.5
Type of Fuel used for cooking	Sig (0.199)	Sig (0.000)	Sig (0.008)	Sig (0.122)
LPG	5.7	0.0	0.0	0.0
Kerosine stove	19.0	0.0	0.0	0.0
Wood	16.8	26.5	13.4	13.4
Dung cake	0.0	47.1	0.0	0.0
Total (N)	31	43	18	22

Source: computed from primary data Chi-square significance value in bracket

6.6 Causes of infant and child deaths in Khordha and Sundargarh districts of Odisha

6.6.1 Findings from quantitative survey

From the study, it was found that some of the major factors that affect infant and child deaths in Odisha are like - lack of treatment after birth, cold and fever, low birth weight, premature birth, no treatment in hospital, heart problem, pneumonia, diaorrhea, jaundice and respiratory problems (Table 6.7).

Table 6.6 Reported causes of infant deaths in Khordha and Sundargarh districts of Odisha, field study, 2011-12

Causes of death	Districts			
	Saliasahi	Kesura	Ganjubasti	Dolposh
Any infant and child deaths earlier (number)	31	43	18	22
Causes				
After birth lack of treatment	8	0	3	7
Cold and fever	14	0	15	8
Premature birth	2	0	0	0
Underweight child	3	0	0	0
No treatment in Hospital	2	0	0	0
Heart problem	2	0	0	0
Pneumonia	0	8	0	0
Diaorrhea	0	8	0	7
Jaundice	0	10	0	0
Respiratory Problem	0	17	0	0

Source: Computed from primary data

6.6.2 Findings from qualitative survey

From the qualitative survey it was found that more number of infant deaths in the study area was because of domestic violence and also no proper treatment in hospital.

Lack of better treatment

In the study area, some respondents told that there were no proper bed facility in government hospitals and nurses were not taking proper care during delivery and were also asking money for delivery. As quoted:

“I am working as a domestic worker, during pregnancy I was also working till third trimester, I had taken all antenatal care and delivered in govt. hospital a normal child

but due to no proper treatment by doctors my son died after 4 hours.” (Working women, Saliasahi)

“My husband is working as a security guard in a flat in Bhubaneswar, when my elder son was 6 months I was again pregnant and during my pregnancy I had taken proper care but during last trimester I was travelling to my village, on the way pain started so we went to nearby hospital where I delivered a boy, after 2-3 days he was affected by jaundice, but doctor did not give proper medicine, so my little boy died after 7 days”. (Non-working women, Saliasahi)

Domestic violence

Domestic violence was the major cause for infant and child deaths in study areas in both Khordha and Sundargarh district. Women were not taking proper care during pregnancy because of poverty, illiteracy and physical violence. Their husbands were not earning much but spending a lot on alcohol. As quoted:

“During my pregnancy my mother-in-law forced me to bring water from well and it created abortion because I have 3 girl childs and my husband is not earning much”. (Non-working women, Saliasahi)

“I was tortured by my in-laws and was not allowed to visit the hospital or to take any antenatal care. So my new born girl child died after four days”. (Non-working women, Saliasahi).

“One women died after 15 days of pregnancy, because her husband is a drunkard and due to lack of money he did not give food to her wife, we gave some food (chatua and egg) to her, but due to lack of care by her husband, after 15 days she died.” (Anganwadi worker, Saliasahi)

Anganwadi worker in Saliasahi told that one child died after five days of birth due to kidney damage and it was a premature delivery. They had suggested to her mother for ultrasound during her pregnancy, but due to high cost of ultrasound she did not test. Her husband was working as a labourer in a jewelry shop. One women had complication due to small size of uterus, so she delivered premature baby in 8 months. The baby died after 15 days due to liver damage.

6.7 Summary

The present chapter discussed about institutional delivery, postnatal care and the main factors that affect institutional delivery and postnatal care and reasons for less institutional delivery and postnatal care among women in Khordha and Sundargarh districts of Odisha. Also discussed are the reasons for infant and child deaths in study areas.

In the study area, 17 percent deliveries were home delivery, 65 percent were deliveries in government hospitals and 18 percent in private hospitals. Among Khordha and Sundargarh districts, institutional delivery was less among women in Saliasahi of Khordha district and Dolposh of Sundargarh district. Among ST women institutional delivery was less compared to non-ST women. Among working women, institutional delivery was also less except in Kesura village where it was less among non-working women. The main reason for less institutional delivery were night delivery, fear of operation and lack of transportation facility.

Postnatal check-up among women was less in all the areas, but in Dolposh more women visited health facilities after their delivery. From the study, it was found that postnatal check-up was more among ST women and more working women visited health facilities for postnatal check-up. The main reason for less postnatal care among women was no knowledge about postnatal care. Given the cultural settings in which neither mother nor child is allowed out of the house in the first 40 days, this lack of contact during early postnatal period could have serious implications for reproductive health.

In the study areas, it was found that infant and child deaths were more among women in Khortha district of Kesura village than Saliasahi. In Sundargarh, infant and child deaths were less compared to Kordha district. In Kesura village, more female infant and child deaths were due to pneumonia, diarrhea and respiratory problems. In Saliasahi, main reasons for infant and child deaths were due to premature birth and low weight at birth. Infant and child deaths among working women were more compared to non-working women.

CHAPTER 7

CONCLUSION

7.1 Introduction

Antenatal care (ANC) is medical care during pregnancy. It is very essential for the better health of mother and the child. The use of antenatal care is important for the early detection of mothers who are at high risk of morbidity and mortality during pregnancy. During pregnancy, a woman should have at the least three visits to health care facilities for antenatal check-ups, two TT injections and should take more than 100 Iron and Folic acid tablets. Women should utilise ANC services either by visiting a hospital where such services are available or from health workers like ASHA or Anganwadi Worker during their home visits. One of the most important components of ANC is to give information and advice to women about pregnancy related complications and possible curative measures for early detection and management of complications (Chandhiok, 2006). The use of ANC in developing countries is lower compared to developed countries (WHO, 2005).

There exists large variation in maternal and child health indicators in India across socio-economic population subgroups and across states. Among different states of India, Odisha is one of the most socio-economically backward states with poor maternal health indicators. The state has been experiencing one of the highest maternal mortality rates in India. At the same time, there is huge inter-district variation in all MCH indicators. Generally the economically well-off districts have lower maternal mortality rates as compared to socio-economically backward districts.

A very high level of maternal mortality and morbidity usually relates to higher levels of fertility, less utilisation of antenatal care and less institutional delivery. The prime objective of this thesis was to examine the level of ANC and institutional delivery in Odisha, with a detailed investigation on burden of working women while accessing these services. It also examined the rural and urban gap in utilising these facilities.

In general, women in rural areas are much less likely to receive medical care than in women in urban areas. Population in rural areas live more than 10 kms away from any medical facility. In six coastal districts of Odisha, be it Balasore, Bhadrak, Ganjam,

Puri, Jagatsinghpur or Kendrapara, most of the villages are nearer to the Bay of Bengal. In these areas, people need to cross the river to reach the health facilities. In the absence of enough and equipped water transportation, women face lots of problem to reach health facilities for antenatal care and institutional delivery. They are more dependent on ASHA and Anganwadi workers' home visits. Therefore, if they do not work properly, women need to depend upon untrained midwives or local quacks for their delivery.

In the tribal districts of Odisha like Koraput, Kalahandi and Bolangir, most of the villages are situated more than 10 kms from any health facility. Due to extremely poor transportation availability, doctors are mostly unavailable in health facilities. ASHA and Anganwadi workers are also not interested to go into these remote areas. In these areas, government has setup some maternal homes where pregnant women can come and stay till their delivery. However, family members of some pregnant women are not allowing them to stay there because they are the earning members of their families. They work for livelihood till the end of their pregnancy and beyond. At the same time, superstitions are also widely prevalent among these people. They believe that pregnancy is a natural process during which one does not need health check-ups.

The aim of the present study was to analyse the work status of rural and urban poor women, relation between work status of women and utilisation of antenatal care, institutional delivery and postnatal care in Khordha and Sundargarh districts of Odisha and the reasons for less utilisation of antenatal care, institutional delivery and postnatal care among the rural and urban poor women in Sundargarh and Khordha districts.

7.2 The approach

Taking a total sample size of 800 married women having at least one child below five years of age, 400 from Khordha and 400 from Sundargarh district, it aimed to examine the association between work status of women and utilisation of antenatal care in both rural and urban poor context. The sample was drawn through systematic sampling. With an appropriate interview schedule, the study examined the differences between the two districts. Focus Group Discussions were conducted among working and non-working women to get qualitative results. Secondary data sources were also

explored to examine the status of antenatal care. Appropriate statistical techniques were also adopted to show the differentials and determinants of utilisation of antenatal care. Comparative analysis has been done for the two rural areas and the two urban poor areas of two different districts namely Khordha and Sundargarh. Khordha is a developed district whereas Sundargarh is a tribal dominated district. Kesura village was chosen from Khordha district while Dolposh Village was chosen from Sundargarh district. Saliasahi was taken from the urban poor area of Khordha district and Ganjubasti was taken from Sundargarh district. Two FGDS were conducted in one area between working and non-working women. Total 8 FGDS were conducted in the above districts of Odisha.

7.3 Major findings

Third chapter examined differentials of different components and categories of antenatal care among rural & urban women in Odisha by using Annual Health Survey, 2012-13. It found that in Odisha work participation rates among females was 26.1 percent. The work participation among women in urban areas (19 percent) was less compared to rural areas (27.4 percent). The work participation among females was higher in the tribal dominated districts like Koraput, Kalahandi, Mayurbhanj, Sambalpur and Khandhamal compared to state average. Deogarh district had the highest (47 percent) female work participation rate among all the districts and Nayagarh had the lowest (6.5 percent) female work participation.

The work participation rate was higher among women in tribal dominated Sundargarh district compared to Khordha district in both urban and rural areas. In work participation among women, Sundargarh scored above the state average (31 percent) whereas Khordha (11.6 percent) was below the state average (26.1 percent). In Sundargarh district, higher percentage of (34.4 percent) women were working in rural areas compared to (23.7 percent) women in urban areas. But in Khordha, more women were working in urban areas (15 percent) compared to rural areas (8.6 percent).

As per the Annual Health Survey report of 2012-13, in Odisha, around 82 percent women had visited health care facilities three or more times during pregnancy. Compared to rural areas, in urban areas more women had visited hospitals, almost

three times higher. Above 97 percent pregnant women had received at least one TT injection during their pregnancy. Same percentage of rural and urban women in Odisha had taken minimum one TT injection during their pregnancy. In Odisha, very less (31 percent) pregnant women had consumed IFA tablets for at least 100 days or more and more urban women had consumed IFA tablets compared to their rural counterparts. Among all the districts of Odisha highest (95 percent) women in Jharsuguda district and lowest Kalahandi district (67 percent) had visited hospitals for more than three times during pregnancy. Same 95 percent rural and urban women had visited hospital three or more times in Jharsuguda. In case of TT injection, it was found that in Kandhamal, despite being a tribal district, 100 percent urban women were taking one TT injection during their pregnancy compared to 99 percent in rural areas. Kalahandi is tribal district where about 93 percent women had taken one TT injection which was very less compared to other districts. Here it was found that rural women were taking less TT injections compared to urban women in Kandhamal district. Consumption of iron and folic acid tablets was very less in all the districts, besides these in Jagatsinghpur district, highest percentage of (58 percent) women were taking iron and folic acid tablets during their pregnancy and rural women were taking more iron tablets than urban women. In Bhadrakh district, very low percentage of (19 percent) women were taking iron and folic acid tablets during their pregnancy.

In between Khordha and Sundargarh districts, more number of women in Sundargarh had visited health facilities more than three times during their pregnancy compared to Khordha but in both districts urban women had visited more times than rural women. In Khordha district, 97 percent pregnant women had taken at least one TT injection whereas in Sundargarh, about 98 percent women had taken one TT injection during their pregnancy. Between urban and rural areas in Khordha district, slightly more number of rural women were taking one TT injection compared to urban women. But the case was reverse in Sundargarh district where more number of urban women were taking TT injections than rural women. In both Khordha and Sundargarh district, more number of women had consumed IFA tablets than the state average. In Sundargarh district, same percent of rural and urban women had consumed IFA tablets while in Khordha district, higher percent of urban women had consumed IAF tablets compared to their rural counterparts. In Khordha district, in urban areas more women were consuming Iron and Folic Acid tablets compared to Sundargarh district.

As per 2012-2013 AHS report, in Odisha about 29 percent women had done full antenatal checkup. Higher percent of urban women had done the same compared to rural women. In both the study areas, full antenatal check-up was higher than the state average. In Khordha district, higher percent of women had done the full ante natal checkup and the figure for Sundargarh was less. In Sundargarh, less percent of both rural and urban women had done the full antenatal checkup compared to Khordha district. Institutional delivery was high among women in urban areas compared to rural areas of Odisha. In Khordha district, institutional delivery was very high compared to state average and Sundargarh district. In Khordha district, more institutional delivery was among urban women compared to rural areas whereas in Sundargarh district institutional delivery was higher among rural women compared to urban women.

In Odisha, around 20 percent delivery took place at home and home delivery was higher in rural areas compared to urban areas. Home delivery was higher in rural areas than urban areas in Sundargarh district whereas in Khordha district home delivery was higher in urban areas than rural areas. In Odisha, more urban women received postnatal check-ups within 48 hours of delivery than rural women. In Sundargarh district, more number of urban women had received postnatal checkups compared to rural women. Reverse was true in case of Khordha district as more number of rural women had received postnatal checkups within one week of delivery compared to their urban counterparts.

In the **fourth** chapter, the work status of rural and urban poor women in Odisha was analysed using primary data. It was found that in the study areas, more number of women were working in rural areas compared to urban poor areas. 38 percent women were working in Dolposh village of Sundargarh district. They were mostly doing works like agricultural labour or construction work whereas about 36 percent women in Kesura village of Sundargah district were doing works like seasonal agricultural labour, running own businesses like tea shops or stationery shops and some were working in brick factories. In urban poor areas, women were mostly working as daily wage labourers, house maids, construction workers and very less percentage were doing government jobs. In Saliasahi of Khordha district, 30 percent women were working. They were working as labourers and some were doing works like tailoring

and teaching and very less percent were employed in government jobs. In Ganjubasti, less than 16 percent women were doing work. Among them, higher percentage of women were doing works like daily wage labour and rest were doing work in factories.

From the study, it was found that most of the working women were from Scheduled Tribe households and rest were from Scheduled Caste households. Majority of the working women were illiterate and have lower standard of living. They were mostly from BPL families and their husbands were earning less than Rs. 5000 per month. They were in the age group of 20-25 years and were having 2 to 3 children.

Those who were working as constructional labourers were doing part time work, maximum 15 days in a month. They went to work as per the demand of the contractor, otherwise they remained unemployed. Their daily wage was Rs. 200 which was lower than men's wage. They were working 5 to 8 hours a day. For extra work, the contractors gave them Rs. 50 more. In some cases, the contractors sent vehicles to help them reach the construction sites. Those women who went to work place on their own were given transport fare by the contractors. Some of the respondents sent their children to Missionary Schools (Missionary Crèche) and Anganwadi centres when they went to work, other respondents told that they left their child in neighbour's houses. Some of them took their small babies to construction sites. During pregnancy, some of them were not working whereas women from poor households had gone to work for money to take care of household expenditures and to take care of their children. In urban poor areas of Khorda, more women were working as domestic workers. They were working two to three houses and for cleaning clothes, utensils and houses they were getting about Rs. 1000 per month from one house. For cooking, they were getting Rs. 1500 per month. They worked for more than 5 hours. During their pregnancy, they were going to work place because domestic violence was more prevalent in these areas where most of the husbands were working as rickshaw pullers, auto drivers or some of them were doing work as daily wage labourers. Whatever they were earning, they spent that amount on alcohol. They were giving very less amount of money to their wives and so the women were working for the survival of their families. Majority of the respondents told that their working conditions were not good, there was no proper drinking water facility, toilet facility

and no crèche facility. So they were facing lots of problem. Some were also facing health injuries.

From the present study, it was found that women were working for different reasons. Some of the respondents were working to take care of household expenditures, to help in the survival of their families, to support their families and some of them were working for better education of their children. They were working mainly to support their husbands as their husbands were earning less and most of them had more than 3 children and so it was very difficult to survive with lower incomes. Some women worked during their pregnancy and after two to three months of delivery they started to work again. They were not getting much time to take proper care of their child and also for breast feeding. Most of the time, they left their children with close relatives such as mother in-law or mother or elder daughter.

From the current study, it was found that about 70 percent women were not working in study areas. The main reason was that they had young children and so they were not getting time to work outside. Majority of the respondents told that their husbands and in-laws were not allowing them to work outside. Some of the respondents told that there was non-availability of jobs and also some told that because of less education they were not getting good jobs. Due to ill health, some women were not working in study areas. In Kesura village of Khordha district, some women said that working outside was against their culture.

The study conducted by Kalpana Devi among female construction workers in India has found that construction female workers are unskilled labourers and they were facing problems related to work like wage discrimination, gender and sexual harassment, unhealthy job relationships and lower wages. Their husbands were drunkards and had other sexual partners. Because of such reasons, women were unable to strengthen their skills and economic position in the industry (Devi, 2013).

Another study in Karnataka has found that majority of women construction workers had permanent jobs, so they stayed at worksites. Majority of SC, ST and backward class women were doing temporary, seasonal and permanent jobs. These women were working at residential apartments, shopping complexes, commercial apartments, government administrative buildings, educational institutions and some were working

at construction sites of pools and bridges. It was also found that the majority of the women were working in construction sites of buildings and majority of them were SC, ST and OBC. Due to less education, they were doing unskilled work. Women were not satisfied with their work because of less income, hard work and more working hours (Rajanna, 2015).

The study conducted in West Bengal it was found that female servants were facing various problems in their work place in terms of poor wage bargaining power, time bounding, low paid wages, job threatening and fear to take leave. Monthly wages of part-time maid servant was Rs 3453 (Sen, 2015).

From the study in Howrah, West Bengal found that the women domestic workers were mainly staying in slums, they were from lower socio-economic strata. They were working because of the poor house condition and for earning bread. They were earning monthly Rs 1000 to 4500 per month (Dey, 2014).

The **fifth** chapter examined the differentials and determinants of antenatal care among rural and urban poor women in Odisha, by using primary data. It was found that in the study areas, most of the women were aware about the Mamata scheme because of the financial assistance they were getting from the scheme. Utilisation of antenatal care was less among women in Kesura village of Khordha district compared to Dolposh village of Sundargarh district. In Dolposh, all respondents were utilising antenatal care but the partial utilisation of antenatal care was higher than full ANC. In case of Kesura village, higher percent of respondents were utilising full antenatal care. From the present study, it was also found that utilisation of antenatal care was higher among women from urban poor areas of Ganjubasti (Rourkela) compared to Saliasahi of Bhubaneswar. Bhubaneswar is the capital of Odisha whereas Rourkela is the industrial and developed city of Odisha.

From the primary data, it was observed that in Khordha district, more rural (70 percent) women had visited hospitals more than three times for antenatal check-up compared to (62 percent) urban poor women. In Sundargarh district, it was found that more urban poor women had visited more than three times health facilities for antenatal check-up (30 percent) compared to rural women (16 percent). But in secondary data (AHS, 2012-13), it was found that in both Khordha and Sundargarh

districts, more urban women had visited health facilities more than three times for antenatal check-up compared to rural women.

Primary data analysis revealed that in Khordha district more (87 percent) rural women had taken two TT injections compared to urban poor women (78 percent). Whereas, in Sundargarh, more (73 percent) urban poor women had taken two TT injections compared to rural (70 percent) women. But in secondary data, it was found that in comparison between urban and rural areas, in Khordha district, slightly more number of rural women were taking one TT injection compared to urban women. But the case is reverse in Sundargarh district where more number of urban women were taking TT injections than rural women.

From primary data, it was found that in Khordha district, more (87 percent) rural women had consumed more than 90 iron and folic acid tablets compared to urban poor women (57 percent). In Sundargarh also, higher percent of rural women were taking more than 90 iron tablets compared to urban poor women. But compared to Sundargarh in Khordha, more women were taking iron and folic acid tablets. In secondary data, it was found that in Sundargarh district, same percent of rural and urban women had consumed IFA tablets, while in Khordha district, higher percent of urban women had consumed IAF tablets compared to their rural counterparts.

Utilisation of full antenatal care was higher among rural women in both Khordha and Sundargarh. But higher percent of women had taken full antenatal care in Khordha compared to Sundargarh as per primary data. The same result was also found in secondary data analysis. In Sundargarh, less percent of both rural and urban women had done full antenatal checkup compared to Khordha district.

It was found that working women were utilising antenatal care less in rural and urban poor areas of Khordha district. While in rural areas 19 percent working women had not received any antenatal care during their pregnancy, compared to 8 percent non-working women. But in urban poor areas, higher (25 percent) working women had not received any antenatal care compared to (3 percent) among non-working women. In urban poor areas, working poor women were utilising less antenatal care compared to working rural women in Khordha. In Sundargarh, both working and non-working women were taking proper antenatal care during their pregnancy in rural as well as

urban poor areas. In urban poor areas, very less percent of non-working women had not received any antenatal care. Around 96 percent non-working women had received partial antenatal care and less percent of women had taken full antenatal care, whereas all working women had taken partial antenatal care in Sundargarh. In rural areas of Sundargarh, more working women were taking full antenatal care compared to non-working women.

It was found that higher percent of non-working women in urban poor areas of Khorda had taken full ANC compared to working women in the same area because non-working pregnant women were in their homes when Anganwadi and ASHA visited their homes. Every month in Mamata Diwas, ANM came to Anganwadi centre where she checked weight and hemoglobin level of pregnant women and also gave TT injections to them. She also gave them 100 iron tablets. Anganwadi workers also gave them (*chatua and eggs*) for better health of pregnant women. So poor pregnant non-working women were going to Anganwadi centre for antenatal care. They were also getting money from the Mamata scheme. Some educated non-working women were visiting government hospitals for antenatal check-up and non-working women with higher standard of living were going to private clinic for antenatal care. Some working women were going to Anganwadi centre for antenatal care during their pregnancy. Due to poverty, some working women were going to workplace on Mamata Diwas because they thought that money was necessary for their survival. Their husbands were not earning much and they were not taking care of their children and wife's health. These working women were busy with their work that they had no time for antenatal check-up. They had no money to visit government or private hospitals for antenatal check-up.

But utilisation of antenatal care was higher among working women in urban poor areas among those who had completed higher education because they were employed as teachers and receptionists in private hospital and caretakers in play schools. Their husbands were also working in organized sectors. They had more idea about the benefits of antenatal care and so they were taking proper care of their health during pregnancy. Whereas uneducated working women were facing problems like poverty, domestic violence and repeated pregnancy and some suffered from superstitions like

fear of consumption of iron and folic acid tablets. So they were utilising less antenatal care.

In rural areas of Khordha, most of the non-working women from higher standard of living households went to private hospitals for utilisation of antenatal care and poor working women were not getting time to go to the government hospital which was about 10 KMs from the village and the ASHA was not giving IFA tablets to them.

In Sundargarh, all the respondents were ST women in rural areas and either they were more educated or they had better household standards. Besides these, the utilisation of antenatal care was higher among both working and non-working women. Working women were employed as daily wage labourers and construction workers but they were using antenatal care during their pregnancy. This is because of active participation of ASHA, Anganwadi workers and ANM. First pregnant women informed Anganwadi workers about their pregnancy and registered their name in the Anganwadi register for the issue of immunization card and bank passbook because the money they got from Mamata scheme directly came to their account. It came on instalment basis with the first instalment provided right after pregnancy (Rs. 1500), the second instalment came after 3 months of pregnancy (Rs. 1500), the third instalment came after six months of pregnancy (Rs. 1000) and the fourth instalment was given after 9 months of pregnancy (Rs. 1000) and for this the child should take immunization. In total, they were getting Rs. 5000 from the Mamata scheme and for institutional delivery they were getting Rs. 1400 in rural areas. In every month, the 2nd Tuesday, the ANM came to the Anganwadi centre, where she tested the urine of the pregnant women and also checked the hemoglobin level, blood pressure and weight and also abdominal test. ANM advised them to take iron tablets properly, to take proper rest and to consume enough water. She advised them about better nutritional intake of food for better health. She also told the benefit of ANC, immunization, breast feeding, hospital delivery and about the Janani express. The number of ASHA was given to them to contact ASHA in case of any emergency. They were also providing *chatua and eggs* to pregnant and lactating mothers. In urban poor areas of Sundargarh, very less percent of working women had not taken ANC because of domestic violence and poverty and loss of daily wages.

From a study, it was found that in Bangladesh, non-working women, more than their working counterparts, were more likely to report using skilled services (Kamal, 2012). Another study in Egypt has found that there is positive relationship between work status of women and utilisation of antenatal care (Hassan, 2009). A community based cross-sectional study in Karnataka found out that occupation of women had great influence on utilisation of antenatal care (Javali et al, 2014). From another study in Mumbai, it was shown that the relation between education levels and current usage of antenatal care was significant (John et al, 2016). From another study in Gujrat, it was found that working women were utilising less antenatal care compared to housewives. It was also statistically significant. The reasons for poor utilisation of antenatal care among working women was also partly due to their fear of losing their one day wage (Bhimani et al, 2016). Study in Rajasthan showed that utilisation of full antenatal care decreased with decrease in socio economic status and literacy level of mothers, working mothers and increased parity and nuclear type families (Uppadhaya et al, 2017). The results of this study are consistent with these studies.

The **sixth** chapter examined the determinants of institutional delivery and postnatal care and it has found that most of the women delivered babies at government hospitals. Due to some traditional beliefs and customs, tribal women delivered their babies at home. Those who had delivered their babies at home with the assistance of midwives or some relatives who were aware about delivery care and they had not used sterilized knife for cutting of umbilical cord. The reasons that babies were delivered at home were like inadequate time to go to hospitals and unaffordability of private health facilities, poor quality health services at government hospitals and unexpected night delivery and also lack of transport facilities in rural areas. In government hospitals, doctors were not taking proper care during delivery. Very less respondents told that they had gone for check-up after pregnancy, because most of the women were not aware about postnatal check-up. Only those who were advised by doctors had gone for check-up.

In the study areas, it was found that infant and child deaths were more among women in Khortha district of Kesura village than Saliasahi. In Sundargarh, infant and child deaths were less compared to Kordha district. In Kesura village, more female infant and child deaths were due to jaundice, pneumonia, diarrhea and respiratory problems.

In Saliasahi, main reasons for infant and child deaths were due to premature birth and low weight at birth. Infant and child deaths among working women were more compared to non-working women. This is because of working women were not getting proper time for care of their child. Sometimes they left their small child neighbor house. During pregnancy lack of proper care and less utilization of antenatal they delivered low weighted and premature baby which created infant and child deaths. Some of the working women husband were beating them after consumption of alcohol so the women were working till the last trimester of pregnancy. They were not consuming iron tablets or nutritious food. Another major factor for high infant and child death was lack of proper treatment in hospital.

7.4 Policy and Recommendations

From the present study, it was found that working and non-working women were facing some problems in both rural and urban poor areas.

- There should be a maternal benefits bill for women working in unorganized sector so that during pregnancy women can take proper care of her and after pregnancy, proper care of her new born baby.
- Crèche facility should be made available in both rural and urban poor areas, so that women can go to work every day and their children will also get better care in the crèche.
- Health counselling is important for better utilisation of antenatal care among pregnant women. More education for ST and SC women in rural and urban poor areas should be targeted so that they can take proper care of health during pregnancy.
- Proper communication needed for utilisation of institutional delivery and postnatal chek-up.
- Incentive to doctors for taking better care of pregnant women in government hospitals in tribal dominated and rural areas.
- Socio-economic development of women, so that they can utilise proper antenatal care during pregnancy.

7.5 Scope for further Study

This study reveals that women working in unorganized sector face tremendous challenge of combining work status and their children's health. This is because of lack of facilities, lack of enough financial empowerment and lack of women friendly rules in those sectors. However this study did not discuss the issues of working women in organized sector. Although it can be assumed that organized sector women may have better condition, they may also face the problem of lack of infrastructure, mental pressure and tremendous competition for their performance etc. while accessing the Maternal and Child Health facilities. This should be a future direction of research.

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APPENDIX A

STRUCTURED HOUSEHOLDS SCHEDULE

Schedule No.	_ _ _
State	
District	
Tehsil/Taluk	
I Type of location 1. Urban slum 2. Rural	_ _
II. Name of the selected Village & town ID. No	_ _
III. Name of the Respondent _____	
IV. Address of the household 	
V. Religion of the household 01. Hindu 02. Muslim 03. Christian 04. Sikh 05. Jain 77. Others _____	_ _
VI. Social background of the household 01. General 02. OBC 03. SC 04. ST 77. Others _____	_ _
VII. Types of family 01. Nuclear 02. Joint	_ _
VIII. Types of house 01. Pucca 02. Kutch/Juggi 03. Semi kutch/ pucca	_ _
IX Respondent's Education 01. No education 02. Primary 03 Secondary 04 Higher	_ _
X Current Age of the Respondent _____	
XI Age at Marriage _____	
XII Age at First Birth _____	
XIII Total Children Ever Born _____	

Household composition: Household members include those who live in the dwelling and share the same kitchen.

Line No.	101	102	103	104	105	106	107	108
	Name	Sex Code 01 Male 02 Female	Age in complete years Put 0 for <1	Marital status (Refer codes)	Relationship with head of the HH (Refer codes)	Level of education completed/ studying (Refer codes)	Primary occupation (Refer codes)	Monthly income
1								
2								
3								
4								
5								

Codes for 104	Codes for 105	Codes for 106	Codes for 107
01. Married 02. Unmarried 03. Divorced 04. Separated 05. Widowed	01. Head 02. Wife or Husband 03. Son or Daughter 04. Son-in-law or Daughter-in-law 05. Grand child 06. Parent 07. Wife's relative 08. Brother or Sister 09. Niece or Nephew 10. Not related 77. Other, specify _____	01 Illiterate 02. Literate but no formal education 03. Nursery 04. Primary (std. 1 to 5) 05. Upper primary (std. 6 to 8) 06. Secondary (std. 9 to 10) 07. Senior secondary (std. 11 to 12) 08. Graduate & more 77. Other, specify _____ 88. Not Applicable (children less than 5 years)	01. Farmer / Cultivator 02. Agricultural Labourer 03. Construction & related work 04. skilled / semi skilled / other non agricultural labourer 05. Skilled worker 06. Government job 07. Private job 08. NGO job 09. Petty business / small shop 10. Self employed / Professional 11. Retired 12. Un-employed 13. House wife 14. Student 77. Other, specify _____ 88. Not applicable (for children less than 5 year.

SECTION 1: WOMEN'S WORK STATUS

No.	Questions	Coding Categories	Code	Skip	Coding boxes
101	Respondent's Work Status	<p style="text-align: center;">Working</p> <p style="text-align: center;">Not Working</p>	<p style="text-align: center;">01</p> <p style="text-align: center;">02</p>		<input type="checkbox"/> <input type="checkbox"/>
102	If not working, reason	_____			
103	Types of Work	_____			
104	Nature of Work	_____			
105	Why are you working?	_____			
106	How many times spend in the work place?	_____			
107	What is your monthly Income?	_____			
108	What kind of work?	_____			
109	Condition of Work place	_____			
110	Whether you have faced any health injury in the work place?				

SECTION 2: ACCESS TO BASIC SERVICES

No.	Questions	Coding Categories	Code	Skip	Coding boxes
201	How many living rooms are there in your house?	_____ in complete Nos.			<input type="text"/> <input type="text"/>
202	What is the main source of drinking water for members of your household?	<p style="text-align: center;">Piped water</p> Piped into residence / yard / plot Public tap 01 <p style="text-align: center;">Ground water</p> Hand pump in residence / yard plot Public hand pump Well in residence / yard / plot 03 Public well 04 <p style="text-align: center;">Surface water</p> Spring 06 River / stream Pond / lake 07 Dam 08 Others specify _____ 09 10 77			<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
203	How often do you go outside the house to fetch water in a week?	<p style="text-align: center;">Never</p> <p style="text-align: center;">Every day</p> <p style="text-align: center;">1 to 2 days</p> <p style="text-align: center;">3 to 4 days</p> <p style="text-align: center;">5 to 6 days</p>	01 02 03 04 05	→205	<input type="text"/> <input type="text"/>

No.	Questions	Coding Categories	Code	Skip	Coding boxes
204	What is the total time it takes to get the domestic water from outside source?	_____ minutes			<input type="text"/> <input type="text"/> <input type="text"/>
205	Do you have electricity in the house?	Yes No	01 02		<input type="text"/> <input type="text"/>
07	What type of fuel does your household mainly use for cooking?	Liquid petroleum gas (LPG) Kerosene Stove Electricity Wood Dung cakes Coal / coke / lignite Crop residue Others specify _____	01 02 03 04 05 06 07 77		<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
208	What kind of toilet facility does your household have?	Own toilet Shared common toilet Public toilet No facility / bush / field Others specify _____	01 02 03 04 77		<input type="text"/> <input type="text"/>
209	Do you have a separate room which is used as a kitchen?	Yes No	01 02		<input type="text"/> <input type="text"/>
210	Where do your household members usually bath? 210.1 Men 210.2 Women	Own bathroom at home Public bathroom Public open space Use neighbours/relative's Arrange a space inside the house River / pond / stream / Other specify _____	01 02 03 04 05 06 77		<input type="text"/> <input type="text"/> 210.1 <input type="text"/> <input type="text"/> 210.2

SECTION 3: INCOME & ASSETS

No.	Questions	Coding Categories	Code	Skip	Coding boxes
301	Does your family belong to BPL?	Yes No	01 02		<input type="checkbox"/> <input type="checkbox"/>
302	Whether the household is headed by a woman?	Yes No	01 02		<input type="checkbox"/> <input type="checkbox"/>
303	Please tell me the number of earning members in your household? 303.1 Male 303.2 Female	Male _____ Female _____			<input type="checkbox"/> <input type="checkbox"/> 303.1 Male <input type="checkbox"/> <input type="checkbox"/> 303.2 Female
Does your household own any of the following (Ask about each item separately) mark 01 –Yes and 02 – No					
304.1	Television	<input type="checkbox"/> <input type="checkbox"/>	304.2	Satellite dish/ cable	<input type="checkbox"/> <input type="checkbox"/>
304.3	Radio/Tape	<input type="checkbox"/> <input type="checkbox"/>	304.4	Bicycle	<input type="checkbox"/> <input type="checkbox"/>
304.5	Motorcycle/scooter	<input type="checkbox"/> <input type="checkbox"/>	304.6	Washing machine	<input type="checkbox"/> <input type="checkbox"/>
304.7	Electric fan	<input type="checkbox"/> <input type="checkbox"/>	304.8	Air-conditioner	<input type="checkbox"/> <input type="checkbox"/>
304.9	Car / jeep	<input type="checkbox"/> <input type="checkbox"/>	304.10	Refrigerator	<input type="checkbox"/> <input type="checkbox"/>
304.11	Sewing machine	<input type="checkbox"/> <input type="checkbox"/>	304.12	Pressure cooker	<input type="checkbox"/> <input type="checkbox"/>
304.13	Telephone/mobile	<input type="checkbox"/> <input type="checkbox"/>	304.14	LPG stove	<input type="checkbox"/> <input type="checkbox"/>
304.15	Bullock cart	<input type="checkbox"/> <input type="checkbox"/>	304.16	Tractor	<input type="checkbox"/> <input type="checkbox"/>

No.	Questions	Coding Categories	Code	Skip	Coding boxes	
305	Does the household possess any agricultural land?	Yes No	01 02	→312	<input type="checkbox"/> <input type="checkbox"/>	
	A. Cultivable (in Acres)	B. Non- Cultivable (In Acres)		C. Total Land Area (In Acres)		
306	1. Irrigated	2. Non-Irrigated	3. Irrigated	4. Non-Irrigated	5. Irrigated	6. Non-Irrigated
	_____	_____	_____	_____	_____	_____

Live Stock

No.	Questions	Coding Categories	Code	Skip	Coding boxes
312	Does this household own any livestock?	Yes No	01 02	→316	<input type="checkbox"/> <input type="checkbox"/>
	313. Types of Live stock	314. Whether possessed 01. Yes 02. No	315. Numbers		
1	Bullock	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
2	Cow	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
3	Buffalo	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
4	Goat	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
5	Sheep	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
6	Ox	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
7	Hen / chicken	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
	Others _____	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
	Others _____	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
316	Is there any home based, micro-enterprises run by the family.	Yes No	01 02	→319	<input type="checkbox"/> <input type="checkbox"/>
317	What is the nature of home based enterprise run at home?	_____			<input type="checkbox"/> <input type="checkbox"/>
318	Who are the family members involved in this enterprise?	Only Male members Only Female members Both Male & Female members	01 02 03		<input type="checkbox"/> <input type="checkbox"/>

Please specify the Income pattern from all sources for the household. Try to track either monthly or annually				
	319. Types of sources	320. whether any earning from the sources 01. Yes 02. No	321. Monthly income in INR	322. Annual income in INR
1	Agriculture (includes paddy, wheat, pulses, vegetables, spices, fruits, etc)	<input type="checkbox"/> <input type="checkbox"/>		
2	Job / services /	<input type="checkbox"/> <input type="checkbox"/>		
3	Business	<input type="checkbox"/> <input type="checkbox"/>		
4	Household enterprise	<input type="checkbox"/> <input type="checkbox"/>		
5	Labour (daily wage/ seasonal, etc)	<input type="checkbox"/> <input type="checkbox"/>		
6.	Rent if any (Land / House)	<input type="checkbox"/> <input type="checkbox"/>		
7.	Dairy products	<input type="checkbox"/> <input type="checkbox"/>		
8.	Poultry	<input type="checkbox"/> <input type="checkbox"/>		
9.	Other Live Stocks	<input type="checkbox"/> <input type="checkbox"/>		
	Other Specify _____	<input type="checkbox"/> <input type="checkbox"/>		
	Other Specify _____			
323	Total from all sources			

	Household Expenditure Pattern	Last month in INR
324.1	Cooking fuel	
324.2	Electric bill	
324.3	Communication (telephone/mobile)	
324.4	Food (Rice, flour, edible oil, milk, meat, fish, egg, sugar, fruit, etc)	
324.5	Transport	
	Household Expenditure Pattern	Last month in INR
324.6	Health	
324.7	Total Monthly expenditure	
	Household Expenditure Pattern	Last Year in INR
324.8	Education	
324.9	Clothes/ shoes	
324.10	Social function (rituals, marriage, etc)	
325	Total Annual expenditure	

SECTION 4: HEALTH

No.	Questions	Coding Categories	Code	Skip	Coding boxes
401	If Someone falls sick in your family where does he/she go for consultation or treatment? (Usually)	Private Doctor/Clinic Government Doctors/Health Centres NGO run health centre Village RMP Others (Please specify)_____	01 02 03 04 77		<input type="checkbox"/> <input type="checkbox"/>
402	Why do you prefer that?	Doctor is known to us Doctor is nearby/facility is nearby Doctor is good/staff is good Medicine is effective Treatment is free or less costly Others (specify) _____	01 02 03 04 05 77		<input type="checkbox"/> <input type="checkbox"/>
403	What is the health facility nearest to your home?	Sub centre Dispensary PHC/CHC Govt. hospital Facility by NGO Private Health Facility RMP Other (specify)_____	01 02 03 04 05 06 07 77		<input type="checkbox"/> <input type="checkbox"/>
404	Where is it located?	Within the Village Outside the Village	01 02	→407	<input type="checkbox"/> <input type="checkbox"/>
405	How far is the facility from your home?	_____ Kms			
406	What are the modes of transport available to reach the facility?	Public transport Vehicle from health facility Pvt. transport Bullock cart Other (specify)_____	01 02 03 04 77		<input type="checkbox"/> <input type="checkbox"/>
407	Was any member of your family affected by any major illness during the last one year?	Yes No	01 02	→413	<input type="checkbox"/> <input type="checkbox"/>

No.	Questions	Coding Categories	Code	Skip	Coding boxes
408	How many members in your family were ill?	406.1 Male_____			<input type="text"/> <input type="text"/> 406.1 <input type="text"/> <input type="text"/> 406.2
	Write the name of the member and age.	410. Gender 01 Male 02 Female	411. Types of diseases (2 Responses) 01. Respiratory Problems 02. General Fever 03. Malaria 04. Typhoid 05. Gastro Intestinal Problems 06. Non communicable diseases 07. Diarrhoea 08. Jaundice 09. Diabetes 10. Tuberculosis 11. Eye Problem 77. Others _____		412. Type of treatment taken 01. Allopathic 02. Homeopathic 03. Herbal 04. Traditional 05. No Treatment
1	Member 1_____	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>		<input type="text"/> <input type="text"/>
2	Member 2_____	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>		<input type="text"/> <input type="text"/>
3	Member 3_____	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>		<input type="text"/> <input type="text"/>
No.	Questions	Coding Categories	Code	Skip	Coding boxes
413	During the last 6 months, did you have any contact with government health or family planning worker at home or else where?	Yes No	01 02	→415	<input type="text"/> <input type="text"/>
414	During these contacts, what types of services were rendered? (3 responses)	Pill supply Condom supply Family planning advice Polio immunization Other child immunization Antenatal care Delivery care Post Natal care	01 02 03 04 05 06 07 08		<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>

No.	Questions	Coding Categories	Code	Skip	Coding boxes
		Disease prevention Medical treatment for self / family members Treatment for sick child Awareness on health & hygiene Others specify_____	09 10 11 12 77		
415	What type of Health messages did you receive during last 3 months? (First 3 Responses)	No message received HIV/AIDS Polio Dengue Malaria Diarrhea/ ORT / ORS Tuberculosis Maternity & Child Care Family planning Others specify_____	01 02 03 04 05 06 07 08 09 77	→417	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
416	Where do you generally receive health messages from? (First 3 Responses)	Television Newspaper Radio Public announcement system Street play Banners /Bill boards Leaflets / Pamphlets/Poster Govt. Health Workers NGO Health workers Others specify_____	01 02 03 04 05 06 07 08 09 77		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
417	Did any woman in your household deliver a baby in the last 1 year?	Yes No	01 02	→501	<input type="checkbox"/> <input type="checkbox"/>
418	Where was the baby delivered? (Probe for the youngest baby at home who is less than 1 year)	At home At govt. health facility At Pvt. Health facility At Charitable Health centre Others _____	01 02 03 04 05	→then ask 419 & 420	<input type="checkbox"/> <input type="checkbox"/>
419	Who assisted the delivery at home? <i>(Ask to those HH where the baby is delivered at home)</i>	Doctor ANM / LHV Mid wife Elderly women / family members Local quacks	01 02 03 04 05		<input type="checkbox"/> <input type="checkbox"/>

No.	Questions	Coding Categories	Code	Skip	Coding boxes
		Others _____	77		
420	What was the reason that the baby was delivered at home? (First 2 Responses)	Health Facility is far Better care at home Can't afford health facility expenses Inadequate time to go to facility Poor quality health service Customary Others _____	01 02 03 04 05 06 07		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
421	Where did you get most of the antenatal check up done? (ask about the woman who have delivered during the last 1 years) (First 2 Response)	At home At govt. health facility At Pvt. Health facility At Charitable Health centre Others _____	01 02 03 04 05		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
422	During the last pregnancy how many times the pregnant woman visited a health facility for antenatal check up?	NO Check up Less than three visits Three and more visits	01 02 03		<input type="checkbox"/> <input type="checkbox"/>
423	If No Reason	_____			
424	During the last pregnancy how many times the pregnant women had taken TT injection?	No TT One TT Two or more TT	01 02 03		<input type="checkbox"/> <input type="checkbox"/>
425	If No Reason	_____			
426	During the last pregnancy how many Iron and Folic Acid Tablets the pregnant women had taken?	Not Taken Less than 90 taken More than 90 taken	01 02 03		<input type="checkbox"/> <input type="checkbox"/>
427	If No Reason?	_____			
428	Are you satisfied with the quality of service you received during the antenatal check ups?	Very satisfied Satisfied Not so satisfied Very dissatisfied	01 02 03 04		<input type="checkbox"/> <input type="checkbox"/>
429	Whether you had done check up after delivery?	Yes No	01 02		<input type="checkbox"/> <input type="checkbox"/>
430	Frequency of ASHA/ANM visits to home during pregnancy?	_____ Times			

No.	Questions	Coding Categories	Code	Skip	Coding boxes
431	Size of the child at birth?	Less than 2.5 KG More than 2.5 KG	01 02		<input type="checkbox"/> <input type="checkbox"/>
432	Sex of the child?	Male Female	01 02		<input type="checkbox"/> <input type="checkbox"/>
433	When Child put to breast?	Not Immediately Immediately	01 02		<input type="checkbox"/> <input type="checkbox"/>
434	Current age of the child ?	_____			
435	Whether child is twin?	Single birth Multiple birth	01 02		<input type="checkbox"/> <input type="checkbox"/>
436	Whether the child has health card?	Yes No	01 02		<input type="checkbox"/> <input type="checkbox"/>
437	Whether the child has received BCG?	Yes No	01 02		<input type="checkbox"/> <input type="checkbox"/>
438	Whether the child has received DPT?	Yes No	01 02		<input type="checkbox"/> <input type="checkbox"/>
439	Whether the child has received POLIO?	Yes No	01 02		<input type="checkbox"/> <input type="checkbox"/>
440	Whether the child has received MEASLES?	Yes No	01 02		<input type="checkbox"/> <input type="checkbox"/>
441	Total number of living children now?	_____			
442	Birth Space?	<23months >24 months	01 02		<input type="checkbox"/> <input type="checkbox"/>
443	Children who have died?	Yes No	01 02		<input type="checkbox"/> <input type="checkbox"/>
444	Sex of the dead child?	Male Female	01 02		<input type="checkbox"/> <input type="checkbox"/>
445	Reason for death?	_____			

SECTION 5: MIGRATION

No.	Questions	Coding Categories	Code	Skip	Coding boxes
501	Has any member of the HH migrated outside for Job? Last 1 year	Yes No	01 02		<input type="checkbox"/> <input type="checkbox"/>
502	If yes, No. of members	_____ member / s			<input type="checkbox"/> <input type="checkbox"/>
503	Whether migrated individually or with the family?	Individually With Family	01 02		<input type="checkbox"/> <input type="checkbox"/>
504	What is the Place of Migration? (take responses according to the number of members migrated)	Within the district Other districts Capital city Outside of the state Outside of the country	01 02 03 04 05		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

6. STATUS OF WOMEN (Please fill this section by interviewing the women of the household preferably the spouse or an adult)

No.	Question	Coding categories	codes	Skip	Coding boxes
Economic Activities					
601	Kindly indicate what kind of economic/ non-economic activities female members of your family are engaged in?				
601.1	Cultivation	Yes No	01 02		<input type="checkbox"/> <input type="checkbox"/>
601.2	Allied Activities (Dairy, Poultry, Sheep rearing, etc)	Yes No	01 02		<input type="checkbox"/> <input type="checkbox"/>
601.3	Collection and Sale of forest products	Yes No	01 02		<input type="checkbox"/> <input type="checkbox"/>
601.4	Trade & Business	Yes No	01 02		<input type="checkbox"/> <input type="checkbox"/>
601.5	Agricultural Labour	Yes No	01 02		<input type="checkbox"/> <input type="checkbox"/>
601.6	Non Agricultural Labour	Yes No	01 02		<input type="checkbox"/> <input type="checkbox"/>
601.7	HH Industries	Yes No	01 02		<input type="checkbox"/> <input type="checkbox"/>
601.8	Service	Yes No	01 02		<input type="checkbox"/> <input type="checkbox"/>
601.9	Households Work	Yes No	01 02		<input type="checkbox"/> <input type="checkbox"/>
601.10	Others (Specify):	Yes No	01 02		<input type="checkbox"/> <input type="checkbox"/>
602	If, engaged in economic activities how much they				<input type="checkbox"/> <input type="checkbox"/>

No.	Question	Coding categories	codes	Skip	Coding boxes
	contribute to total family income of the year	Rs _____			
603	Does your female member have any say, in decision making of household matters on the following issues?				
603.1	Financial matters	Yes No	01 02		<input type="checkbox"/> <input type="checkbox"/>
603.2	Education of child	Yes No	01 02		<input type="checkbox"/> <input type="checkbox"/>
603.3	Health care of child	Yes No	01 02		<input type="checkbox"/> <input type="checkbox"/>
603.4	Purchase of assets	Yes No	01 02		<input type="checkbox"/> <input type="checkbox"/>
603.5	Day to day activities	Yes No	01 02		<input type="checkbox"/> <input type="checkbox"/>
603.6	On social functions and marriages	Yes No	01 02		<input type="checkbox"/> <input type="checkbox"/>
603.7	Others.....	Yes No	01 02		<input type="checkbox"/> <input type="checkbox"/>
604	Please tell me what is the time spent on different activities of the household in a normal day (24 hours)				
604.1	Cooking	_____ Hrs			<input type="checkbox"/> <input type="checkbox"/>
604.2	Cleaning (House, clothes, utensils, etc)	_____ Hrs			<input type="checkbox"/> <input type="checkbox"/>
604.3	Fuel wood collection	_____ Hrs			<input type="checkbox"/> <input type="checkbox"/>
604.4	Water collection	_____ Hrs			<input type="checkbox"/> <input type="checkbox"/>
604.5	Daily marketing	_____ Hrs			<input type="checkbox"/> <input type="checkbox"/>
604.6	Caring for the young and sick	_____ Hrs			<input type="checkbox"/> <input type="checkbox"/>
604.7	Watching TV (other leisure activities)	_____ Hrs			<input type="checkbox"/> <input type="checkbox"/>
604.8	Any others _____	_____ Hrs			<input type="checkbox"/> <input type="checkbox"/>
605	Are any women of the household undergone or undergoing any training?	Yes No	01 02	→607	<input type="checkbox"/> <input type="checkbox"/>
606	Types of training	_____ _____			<input type="checkbox"/> <input type="checkbox"/>

No.	Question	Coding categories	codes	Skip	Coding boxes
607	How safe do you regard the neighbourhood / village for women and children during the day time?	Yes (feel safe) To some extent No Don't know / can't say	01 02 03 04		<input type="checkbox"/> <input type="checkbox"/>
608	How safe do you regard the neighbourhood / village for women and children during the night time?	Yes (feel safe) To some extent Not at all safe Don't know / can't say	01 02 03 04		<input type="checkbox"/> <input type="checkbox"/>
609	Do the women of your household can freely go outside to work, for marketing, or accessing hospitals, educational institutes, etc?	Can move freely Only during the day time No cannot move freely Cant say / don't know	01 02 03 04		<input type="checkbox"/> <input type="checkbox"/>
610	How often women of your household go outside the house to fetch water in a week?	Never Every day 1 to 2 days 3 to 4 days 5 to 6 days	01 02 03 04 05	→612	<input type="checkbox"/> <input type="checkbox"/>
611	Does the woman have easy access to get water from out side?	Yes No	01 02		<input type="checkbox"/> <input type="checkbox"/>
612	Do you have a toilet at your household?	Yes No	01 02	→614	<input type="checkbox"/> <input type="checkbox"/>
613	Can a woman access public toilets and bathing facilities in the evening easily?	Yes No	01 02		<input type="checkbox"/> <input type="checkbox"/>
614	Do you have adequate street lighting during the night?	Yes adequate Yes, but only sometimes No street light	01 02 03		<input type="checkbox"/> <input type="checkbox"/>
615	Do you think the provision of adequate street lights will result in the increase of the women's mobility during the evening?	Yes No	01 02		<input type="checkbox"/> <input type="checkbox"/>

Photos from the Field Study



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