CHAPTER -1
INTRODUCTION

Health is not a common theme in most cultures. In fact, all communities have their own concept of health as part of their culture. Health is not only a biomedical phenomenon, but also one which is influenced by social, psychological, cultural, economic and political factors of the people concerned. The widely accepted definition of health is that given by the World Health Organization in the preamble to its constitution, which is as follows “Health is a state of complete physical, mental and social well being and not merely an absence of disease or infirmity.” Health is one of the fundamental human rights. Health is one of the vital indicators of human life. Health has always been a major concern of community development. To improve quality of life it is essential to utilize the health care services and the family welfare services provided to all the citizens. Policy makers all over the world are striving to expand and improve the health care services.

Health and its practices are part of the inmost complexities of social existence, permeating the domains of politics, economics and religion and almost always connected with dimensions that go beyond the body, such as interpersonal, family, and community relationship. Explanations of the causes and patterns of health and disease as anthropologist believe often convey value judgements, senses of right and wrong and of accountability and blame as well as reveal what is morally as stake in definitions of health and its failures. Medical anthropological studies have built upon historical and cultural analyses over a long period of time that indicates an array of difference with respect to the metaphors and meanings that signify health. These studies have emphasized cultural fabrics that give coherence and depth to these meanings such that cosmology and ethical traditions come to define the body in states of sickness and well-being. Anthropological studies focus on local contexts where health and illness are recognized and responded to. Such studies also trace the effects of global flows of commodities, information, finance, images, people, and pathogens on such worlds. Anthropologists have interest in the social roots and consequences of health (and illness) as in their cultural representations. But what most particularly characterizes the anthropological perspective is the use of ethnography to understand health, illness, and health care.
Anthropological perspectives on health bring together individual and collective realities in the way they are organized, narrated, contested, and in every sense lived as social trajectories (Kleinman, 1995).

“Reproductive health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity in all matters relating to the health in multi dimensional reproductive system and its functions and process” (U.N., International conference on population and development, 1994). The Reproductive and Child Health (RCH) Programme was launched throughout the country on 15th October, 1997. This programme aims at achieving a status in which women will be able to regulate their fertility, women will be able to go through their pregnancy and child birth safely, the outcome of pregnancies will be successful and will lead to survival and well being of the mother and the child. The couples will also be able to have their sexual relation free from fear of pregnancy and of contracting sexually transmitted diseases.

Tribal populations are isolated from general population with their own physical, socioeconomic and cultural environment. They are the most backward section of the society, due to various factors like ignorance, poverty, lack of development in the inaccessible areas, illiteracy and exploitation. Several studies have documented a close relationship between tribal ecosystem and their health and nutritional status (Rao & Rao, 1994). The habitat of the tribe has conferred certain advantages. The dietary habits and other related modes of life contributed to their better nutritional and health status in some tribal groups, while in other groups these practices are not conducive to good health (Sen Gupta, 1980). Poverty, consequent low purchasing power, poor environmental sanitation and hygiene, lack of safe drinking water, lack of access to health facilities results in high morbidity and mortality in tribal areas.

India has been adopting many programmes to strengthen and increase quality services to regulate fertility as effectively as possible. Researchers and social scientists have identified a number of factors responsible such as poor accessibility, lack of infrastructures, poor quality of care involved in the way a client is tackled by the providers, lack of faith in the services, delivery system etc. However, the extent of impact of these factors on utilization of services varies according to traits, beliefs and perception of beneficiaries (Verma et al 1993). 9th five year plan has integrated all the related programmes of the earlier plans like Child Survival and Safe Motherhood (CSSM) and
Maternal and Child Health (MCH) programmes. Since the RCH services are focused on women in reproductive age, its utilization is likely to be affected by socio-economic and other individual characteristics of women, viz. education level, modernization, and women’s access to resources like empowerment, their knowledge, attitude and practices. Therefore, delivery of health services which is largely a technological and managerial process has to be viewed with an epidemiology and social dimension. Although, women and children throughout the developing world share common health problems associated with reproductive behaviour and child mortality, the key concerns vary from region to region and from population to population. Improving maternal health status and reduction of child mortality, both of which are eight millennium development goals of India (WHO, 2013) can be achieved by better health facilities and by utilization of reproductive health services.

Approximately 5,29,000 women die from pregnancy related causes annually and almost 99 percent of these maternal deaths occurring in developing nations. Common causes of maternal death, seen in most developing countries are largely preventable. Some basic causes of death during pregnancy, childbirth and postpartum period are obstructed labour, toxaemia and unsafe abortion. In addition, some 25 percent of maternal deaths were attributed to indirect causes. Leading among these were anaemia (Bhatia, 1993; Ganatra, et al., 1998). Major causes of neonatal mortality include neonatal infections, birth asphyxia and trauma, pre-term birth and low weight and other causes, including congenital anomalies (Planning-Commission, 2002). Recent investigations highlight the leading causes of neonatal deaths as pre-maturity, low birth weight, birth asphyxia and neonatal sepsis (Gupta & Keyl, 1998; Kapoor, et al. 1996; Shrivastava, et al., 2001). Postpartum care also plays an important part to control maternal morbidity. Many studies indicate that lack of awareness was the main barrier to the utilization of postnatal care. Dhaher et al. (2008) says that only about one third women in Palestine obtain postnatal care. Antenatal care tends to be perceived as unnecessary and to be availed only in care of health complications (Dhakal, et al. 2007; Dhaher, et al. 2008). Many studies suggest that women who experienced morbidity during pregnancy and sought care were considerably more likely to opt for care from private sector, including unqualified practitioners, rather than access free government services (Bhatia, 1995; Griffiths & Stephenson, 2001). Few studies in rural Karnataka and Pondicherry, however suggested that large proportion of women did not indeed receive timely antenatal care within the first trimester and were not
motivated by perceived health problems (Mathews, et al. 2001; Srivastava, et al. 1997). A large number of studies show that women who received no antenatal care were more likely to die of maternal causes than women who had three or more antenatal contacts (Ganatra, et al. 1998). The still birth and prenatal mortality rate were reportedly lower and birth weight higher among women who received antenatal care compared to those who did not (Brown, et al. 2008; Kapoor, et al. 1985). Moreover women who made regular antenatal visits were more likely to initiate breast feeding promptly and feed colostrum to their infants than other women (Nielson, et al. 1998). The universal immunization of pregnant women and children is positively and significantly correlated with the educational status and income of the mother (Kaur & Narwal, 1988; Mohanty, 2012; Vishwanathan & Rohde, 1990).

The women of India have high mortality rates especially in their productive years. In terms of basic health care Indian women belonging to various social-economic backgrounds are often neglected. Health Facilities are not received by most of the women. Finally, women health affects the economic well being of the household. Prevalence of anaemia and poor nutritional status are generally observed among Indian women. The most widely used indicator of nutritional status is the body mass index (BMI). Women in India has chronic energy deficiency and 13 percent are overweight (NFHS-3). The level of CED is high in the states of Chhattisgarh, Orissa, Madhya Pradesh, Bihar, Jharkhand and Uttar Pradesh. In India, maternal health care services are inadequate which leads to maternal deaths triggering a challenge to achieve optimum maternal health. Antenatal care is an important element for it plays an important role in reducing the risk of health of the mother and her child which contributes to good pregnancy outcome (Kadapatti and Vijayalaxmi, 2012)

Ban Ki-moon, UN, Secretary-General, on World Population Day, 2012 opined that “Reproductive health and rights are integral to sustainable development and poverty reduction. Investing in universal access to reproductive health is crucial investment in healthy societies and a more sustainable future” According to Babatunde Osotimehin, Executive Director, UNFPA, RCH is “Working for the survival and well being of women and girls is a human right imperative and in order to take advantage of women’s full potential in the development of their nations, they must be able to plan their lives and families” (Chandramouli, 2012-13).
In India, women of the childbearing age (15-44 years) constitute 22.2 percent and children below 15 years of age about 35.3 percent of the total population. Together, they constitute 57.5 percent of the total population of India. Mother and children not only form a large group but they are also “vulnerable” or “special risk group”. The risk is connected with child-bearing in case of women; and growth, development and survival in case of infants and children (Park, 2013). The maternal health status is influenced by several factors like early marriages, malnutrition, illiteracy, ignorance, lack of health services, and unavailability of transport facilities. One of the most important reasons for poor maternal health status is non-acceptance or non-utilization of reproductive child health care services. Approximately 80% of the maternal deaths globally occur due to haemorrhage, sepsis, unsafe induced abortion, hypertensive disorder of pregnancy, and obstructed labour (WHO, 2005). Complications related to pregnancy are among the leading causes of mortality among tribal women of reproductive age in developing countries. Inadequate maternal health care is associated with elevated levels of neonatal mortality, child mortality and low birth weight, and adverse pregnancy outcome.

Provisions of maternal health care services to ensure safe motherhood is one of the major components of the Reproductive and Child Health (RCH) programme. The RCH programme services for antenatal care, includes at least three antenatal care visits, iron prophylaxis for pregnant and lactating women, at least one dose of tetanus toxoid vaccine, detection and treatment of anaemia in mothers, and management and referral of high-risk pregnancies, antenatal care, that is encouragement of safe delivery, post-natal care, and management of unwanted pregnancies. In rural areas, the government delivers reproductive health and other health services through its network of Sub-Centres (SCs), Primary Health Centres (PHCs) and other health facilities. In addition, pregnant women and children can get services from private maternity homes, hospitals, private practitioners, and in some case non-governmental organisations (NGOs) and trust hospitals. In urban areas, reproductive health services are available mainly through government or municipal hospitals, Urban Health Posts (UHPs), Urban Family Welfare Centres (UFWCs), hospitals and nursing homes operated by NGOs, and private nursing and maternity homes. (Sardana, et al., 2002-04)

1.1. Maternal and Child Health Programme in India

In 1951, India was the first country in the world to launch a family planning programme. Since then approaches aimed at reducing population growth have taken a variety of
forms. Till 1977 the major health activity was family planning which was changed into Family welfare programme with Maternal and Child Health becoming an integral part of family planning programme with the vision that reduction in birth rate has a direct relationship with reduction in infant and child mortality. The diarrhoeal disease control programme was started in the country in 1978. The main objective of the programme was to prevent death due to dehydration caused by diarrhoeal diseases among children less than 5 years of age due to dehydration. Health education aimed at rapid recognition and appropriate management of diarrhoea has been a major component of the CSSM. Under the RCH programme ORS is supplied in the kits to all sub-centres in the country every year.

National Health Policy 1983, envisioned significant reduction in IMR, NMR & CMR by 2000. Universal Immunization Programme against six preventable diseases, namely, diphtheria, pertusis, childhood tuberculosis, poliomyelitis, measles and neonatal tetanus was introduced in the country in a phased manner in 1985, which covered the whole of India by 1990. Significant progress was made under the programme in the initial period when more than 90% coverage for all the six antigens was achieved. The UIP was taken up in 1986 as National Technology Mission and became operational in all districts in the country during 1989-90. UIP became a part of the Child Survival and Safe Motherhood (CSSM) Programme in 1992 and Reproductive and Child Health (RCH) Programme in 1997. Universal immunisation against 6 vaccine preventable diseases (VPD) by 2000 was one of the goals set in the National Health Policy (1983). The ARI Control Programme was started in India in 1990. It was sought to introduce scientific protocols for case management of pneumonia with co-trimoxazole. Initially 14 pilot districts were selected and later on new districts were included. A review of the health facility was done in 1992 which revealed that although 87% of personnel were trained and the drug supply was regular yet, there were problems in correct case classification and treatment. Since 1992 the Programme was implemented as part of CSSM and later with RCH. Cotrimoxazole tablets are supplied as part of drug kit for use by different category of workers for managing cases of Pneumonia. Under RCH-II activities are proposed to be implemented in an integrated way with other child health interventions. The Child Survival and Safe Motherhood Programme jointly funded by World Bank and UNICEF were started in 1992-93 for implementation up to 1997-98. The Child Survival and Safe Motherhood Programme were implemented in a phased manner covering all the districts of the
country by the year 1996-97. The objectives of the programmes were to improve the health status of infants, child and maternal morbidity and mortality. The programmes seek to sustain high coverage levels achieved under the Universal Immunisation Programme (UIP) in good performance areas and strengthen the immunisation services of poor performing areas. The programme also provides for augmenting various activities under the Oral Rehydration Therapy (ORT) Programme, universalising prophylaxis schemes for control of anaemia in pregnant women & control of blindness in children and initiating a programme for control of acute respiratory infection (ARI) in children. Under the safe motherhood component, training of traditional birth attendants (TBA), provision of asceptic delivery kits and strengthening of first referral units to deal with high risk and obstetric emergencies were taken up. The approved outlay for the CSSM Programme was Rs. 1125.58 crores for the entire IDA credit facility of SDR period. The Programme yielded notable success in improving the health status of pregnant women, infants and children & also making a dent in IMR, MMR and incidence of vaccine preventable diseases.

1.1.1 Reproductive Child Health (RCH) Programme
Since the first and second five year plans (1951-56 and 1956-61) the Government of India took some concrete steps for improving and strengthening the maternal and child health services. Since then maternal and child health has remained a priority programme in context to family welfare programmes of India. Along with family planning services, maternal and child health and nutritional services were integrated as a part of Minimum Needs Programme during the Fifth Five Year plan (1974-79).With safe motherhood and family planning programmes Child survival programme continued the process of integration in 1992-93. Thereafter in 1996, safe motherhood and child health services were incorporated into the Reproductive and Child Programme (RCH). Goals were set and specified for safe motherhood. For 2010, the goal was set so that 80 percent deliveries takes place in institutions, 100 percent of deliveries should be attended by trained personnel and there should be a reduction in the maternal mortality ratio to a level below 100 / 100,000 live births. The RCH Programme is partly funded by World Bank, UNICEF, UNFPA and European Commission etc. Reproductive and Child Health Program is in 5th year of its operation and is currently operational in the entire country. The program follows a differential strategy with inputs under the program linked to the needs of the area coupled with the capacity for implementation. The program was
reviewed extensively not only in context of achievements during mid-term stage, but also in context of National Population Policy. Efforts were made to strengthen the routine immunization as well as pulse polio immunization by launching a project for Immunization Strengthening with the World Bank assistance. The ongoing activities were accelerated and new schemes on Financial Envelop, Dais’ Training, RCH Camps and RCH outreach services were started to address felt gaps. The implementation of European Commission assisted Sector Investment Programme especially State/District level activities and urban RCH component has geared up.

The main problem of under-utilization is embodied in the socio-economic and cultural background of the care-seekers. Not only are they basically unaware of the services available but there is no motivating force to help or guide them to use maternal care services. On the other hand, there is a need to target certain populations such as scheduled castes and tribes and economically backward groups and find a way through which the utilization of maternal health including antenatal services can be accelerated (Mondal, 1997).

To improve the availability of and access to quality health care, especially for those residing in rural areas, the poor, women, and children, the government recently launched the National Rural Health Mission for the 2005-2012 period. One of the important goals of the National Rural Health Mission was to provide access to improved health care at the household level through female Accredited Social Health Activists (ASHA), who would act as an interface between the community and the public health system. The ASHA acts as a bridge between the ANM and the village, and she is accountable to the Panchayat. She helps promote referrals for universal immunization, escort services for RCH, construction of household toilets, and other health care delivery programmes (Ministry of Health and Family Welfare, 2006) and postpartum complications. Unlike NFHS-2 where information on the utilization of maternal services was collected for the last two live births of ever-married women during the three years preceding the survey, NFHS-3 was expanded to include information on all births to women in the last five years. However, in NFHS-3 most of the detailed information on antenatal, delivery, and postnatal care was obtained for only the woman’s most recent birth during the five years preceding the survey (NFHS-3, 2005-06).
1.1.2 Antenatal care

Antenatal care (ANC) refers to pregnancy-related health care, which is usually provided by a doctor, an ANM, or another health professional. Ideally, antenatal care should monitor a pregnancy for signs of complications, detect and treat pre-existing and concurrent problems of pregnancy, and provide advice and counselling on preventive care, diet during pregnancy, delivery care, postnatal care, and related issues. In India, the Reproductive and Child Health Programme aims at providing at least three antenatal check-ups which should include a weight and blood pressure check, abdominal examination, immunization against tetanus, iron and folic acid prophylaxis, as well as anaemia management (Ministry of Health and Family Welfare, 2005). NFHS-3 collected information from women on specific problems they may have had during their pregnancies and whether they saw anyone for antenatal care for their pregnancy. Women who received antenatal care were asked about the care provider, the timing of the first antenatal care visit, the total number of visits, the procedures conducted as part of their antenatal care, and the advice given to them. In addition, the survey asked women whether they received tetanus toxoid injections and iron and folic acid tablets or syrup during the pregnancy period. NFHS-3 asked women who had a birth during the five years preceding the survey whether they saw anyone for antenatal care for their most recent birth. Those who received antenatal care were asked whom they saw and where they received antenatal care. More than three-quarters of women in India received antenatal care for their most recent birth during the five years preceding the survey. Utilization of antenatal care services for the most recent birth among ever-married women increased substantially over time, from 66 percent in NFHS-2 to 77 percent in NFHS-3. The rate of increase was higher in rural areas than in urban areas. There was almost no change in antenatal care coverage in either urban or rural areas between NFHS-1 and NFHS-2 (IIPS, 2005-6 NFHS-3).

Janani Suraksha Yojana (JSY) is a safe motherhood intervention under the National Rural Health Mission (NRHM). It has been implemented with the objective of reducing maternal and neonatal mortality by promoting institutional delivery among poor pregnant women. The scheme is under implementation in all states and Union Territories (UTs), with a special focus on Low Performing States (LPS). Janani Suraksha Yojana was launched in April 2005 by modifying the National Maternity Benefit Scheme (NMBS). The NMBS came into effect in August 1995 as one of the components of the National
Social Assistance Programme (NSAP). The scheme was transferred from the Ministry of Rural Development to the Department of Health & Family Welfare during the year 2001-02. The NMBS provides for financial assistance of Rs. 500/- per birth up to two live births to the pregnant women who have attained 19 years of age and belong to the below poverty line (BPL) households. When JSY was launched the financial assistance of Rs. 500/-, was available uniformly throughout the country to BPL pregnant women under NMBS, was replaced by graded scale of assistance based on the categorization of States as well as whether beneficiary was from rural/urban area. States were classified into Low Performing States and High Performing States on the basis of institutional delivery rate i.e. states having institutional delivery 25% or less were termed as Low Performing States (LPS) and those which have institutional delivery rate more than 25% were classified as High Performing States (HPS). Accordingly, eight erstwhile EAG states namely Uttar Pradesh, Uttarakhand, Madhya Pradesh, Chhattisgarh, Bihar, Jharkhand, Rajasthan, Odisha and the states of Assam & Jammu & Kashmir were classified as Low Performing States. The remaining States were grouped into High Performing States (http://nrhm.gov.in/nrhm-components/rmnch-a/maternal-health/janani-suraksha-yojana/background.html).

1.1.3 Janani Shishu Suraksha Karyakram (JSSK)

Government of India has launched Janani Shishu Suraksha Karyakram (JSSK) on 1st June, 2011, which entitles all pregnant women delivering in public health institutions to absolutely free and no expense delivery including caesarean section. The initiative stipulates free drugs, diagnostics, blood and diet, besides free transport from home to institution, between facilities in case of a referral and drop back home. Similar entitlements have been put in place for all sick newborns accessing public health institutions for treatment till 30 days after birth. In 2013 this has been expanded to sick infants and antenatal and postnatal complications.

1.1.4 Maternal Death Review (MDR)

The process of maternal death review (MDR) has been implemented & institutionalized by all the states as a policy since 2010. Guidelines and tools for conducting community based MDR and Facility based MDR have been provided to the States. The States are reporting deaths along with its analysis for causes of death.
1.1.5 Delivery Points (DPs)
All the States & Union Territories have identified DPs above a certain minimum benchmark of performance to prioritize and direct resources in a focused manner to these facilities for filling the gaps like trained and skilled human resources, infrastructure, equipments, drugs and supplies, referral transport etc. for providing quality & comprehensive RMNCH (Reproductive, Maternal, Neonatal & Child Health) services.

1.1.6 Web Enabled Mother and Child Tracking System
Name Based Tracking of Pregnant Women and Children has been initiated by Government of India as a policy decision to track every pregnant woman, infant & child up to 3 yrs, by name for provision of timely ANC, Institutional Delivery, and PNC along-with immunization & other related services.

1.1.7 A Joint MCP Card
Ministry of Health & Family Welfare and Ministry of Women and Child Development (MOWCD) has been launched as a tool for documenting and monitoring services for antenatal, intranatal and postnatal care to pregnant women, immunization and growth monitoring of infants.

1.1.8 Tracking of severe Anaemia during pregnancy & child birth by SCs and PHCs
Severe anemia is a major cause for pregnancy related complications that may lead to maternal deaths. Effective monitoring of these cases by the ANM as well as the Medical Officer in charge of PHC has been started to line list these cases and provide necessary treatment.

1.1.9 Technical Guidelines & Service Delivery Posters
Government of India has developed & disseminated standard technical guidelines & service delivery posters for standardizing the quality of service delivery during ANC, INC, PNC, etc from tertiary to primary level of institutions.

WHO recommendations “In settings where vitamin A deficiency is a public health problem** (prevalence of night blindness is 1% or higher in children 24–59 months of age or where the prevalence of vitamin A deficiency (serum retinol 0.70 µmol/l or lower) is 20% or higher in infants and children 6–59 months of age), high-dose vitamin A supplementation is recommended in infants and children 6–59 months of age” (WHO, 2011).
India has been adopting many programmes to strengthen and increase quality services to regular fertility as effectively as possible. Researchers and social scientists have identified a numbers of factors responsible such as poor accessibility, lack of infrastructures, poor quality of care involved in the way a client is tackled by the providers, lack of faith in the services, delivery system etc. However, the extent of impact of these factors on utilization of services varies according to traits, beliefs and perception of beneficiaries (Verma et al 1993). 9th five year plan has integrated all the related programmes of the earlier plans like Child Survival and Safe Motherhood (CSSM) and Maternal and Child Health (MCH) programmes. Since the RCH services are focused on women in reproductive age, its utilization is likely to be affected by socio-economic and other individual characteristics of women, viz. education level, modernization, women access to resources like empowerment, their knowledge, attitude and practices. Therefore, delivery of health services which is largely a technological and managerial process has to be viewed with an epidemiology and social dimension. Although, women and children throughout the developing world share common health problems associated with reproductive behaviour and child mortality, the key concerns vary from region to region and from population to population.

1.2 Rationale of the study

Many factors limit the utilization of maternal and child health services in the tribal areas of developing countries. These factors include the availability, accessibility, and quality of services as well as the characteristics of the users and communities in which they survive. Specifically, these may include distance to health service, cost of services, technical qualifications of health practitioners, socioeconomic status of the users, and women’s autonomy in household decision-making etc.

In order to improve child survival and decrease childhood mortality, it is important to understand the determinants of health care use so that appropriate policies may be developed to maximize health utilization. Earlier studies indicated that the likelihood of receiving any antenatal care was lowest among the scheduled tribe women (IIPS, National Family Health Survey (NFHS-3) 2005-06, 2007), central Indian tribes however showed low level of utilization of health care services as compared to the tribes of southern and eastern India. Cultural, demographic and social-economic factors may be attributed to this diversity (Shah & Belanger, 2011). There is a need to understand the
factors acting as barriers in the utilization of health services among Bhunjia tribal women. Keeping the above mentioned factors in mind the present study was undertaken to understand the determinants for utilization of reproductive child health care among the Bhunjia tribe of Chhattisgarh.

1.3 Aims and objectives

The aims and objectives of the present study are the following:-
(I) To assess the health status of Bhunjia pregnant and lactating Bhunjia women.
(II) To assess the level of utilization of reproductive and child health services among Bhunjia tribe of Chhattisgarh.
(III) The present study will highlight prevailing practices for maternal health care namely antenatal care and delivery care among Bhunjias.

1.4 Review of Literature

The review of literature section of this chapter has been divided into two parts. First part deals with maternal health describing the nutritional and anaemic status of women and the second part presents a review of literature on the utilization of reproductive and child health services.

1.4.1 Maternal health

Maternal mortality was reported to be high among various tribal groups but no exact data could be obtained. The chief causes of maternal mortality were found to be unhygienic and primitive practices for parturition. It was observed that among Kutia Khondhs delivery was conducted by mother herself in a half squatting position holding a rope tied down from the roof of the hut. This helped her in applying pressure to deliver the child (Basu, 2000).

Maiti et al (2005) have found that the whole tribal communities are deficient in adequate food intake and therefore have high rates of anaemia. The other factors responsible for poor health of tribal woman are poverty, poor hygiene, lack of access to health services. Only 38% ST woman of Chhattisgarh have received antenatal check up from public health facilities. Approximately 22% ST woman reported symptoms of reproductive tract infection and 16% reported of having problems related to menstruation (IIPS, 2004).
Early infant mortality rate and maternal mortality rate levels were reported to be high in Khairwars of Sidhi district of Madhya Pradesh. Lack of antenatal care (ANC), low consumption of special food during pregnancy, conduction of delivery by traditional birth attendants at home, use of unsterilized sickle for cutting umbilical cord and discardance of colostrum etc. were the probable reasons for the high infant mortality rate (IMR) and maternal mortality rate (MMR) in Khairwars. For improvement of RCH of Khairwars it is essential that suitable education programs, proper use of health family welfare program (HFWP) should be implemented in the area (Roy, Saha, & Abbad, 2010).

Agrawal, (2013) conducted a study to explore the health and utilization status of women and children of Orissa and compared it with that of non tribals. She used the data from NFHS-3 the observation was that the tribals were 2.3 times more likely to give birth to a child by the age of 19 years, 2.1 times more likely to receive tetanus toxoid, 2.7 times more likely to have more than 4 children, 1.3 times more likely to be underweight and anaemic (Agrawal, 2013).

Tribal women of Jammu Kashmir and Ladakh region were particularly vulnerable with regard to under nutrition as compared to women in rural and urban areas. 16.9 percent women had chronic energy deficiency, (56.4%) of women from all the three regions were observed to have clinical signs of nutritional deficiency, (30%) of women had taken insufficient calories. Clinical signs of nutritional deficiency were uniformly distributed in three regions (p> 0.01), whereas indicators like BMI and caloric intake showed significant difference (P< 0.01) between the three regions. 49% studied women were found to be anaemic. The study concludes that highly significant differences exist between the three regions of Jammu, Kashmir and Ladakh with respect to socio demographic characteristics, feeding practices and nutritional and health status. Lower and middle socio economic people made most of the population in all the three regions. The study highlights that the consumption of traditional supplementary foods duration was 40-45 days post partum. These foods were rich in fat and energy dense which contributed to the adequate intake of energy. However, once their intake was stopped the energy density of food came down. Special foods with galactogogues and high caloric intake and protein intake need to be stressed amongst the lactating women of all the three regions, especially in Ladakh, whereas 36% of them were found to be malnourished.
Malnutrition and Anaemia is common in Paniya tribe of Wyanad district of Kerala (Vasudevan, 2010). Khan and Khan, (2012) studied the factors influencing the nutritional status of lactating women in Jammu Kashmir and Ladakh regions. They were of the opinion that the health of women is linked to their status in the society. The study also suggested strengthening of health and nutrition education through departments of health and ICDS (Khan & Khan, 2012).

The mean height among both tribal and non-tribal women of Jharkhand is 150 cm, which is one point less than all India average. 17% of tribal women are below 145 cm of height compared to 19% among the non-tribals. The mean BMI for tribal women of Jharkhand is 19.1 compared to 19.5 among the non-tribal women. Though more than half of the women in Jharkhand have a BMI between 18.5 – 25 kg/m² (normal condition), still about 41% of both tribal and non-tribal women in Jharkhand, have a BMI less than 18.5 kg/m² which indicates a high prevalence of chronic nutritional deficiency. They even observed a high prevalence of anaemia among the tribal women in Jharkhand (Maiti, Unisa, & Agrawal, 2005).

Maternal and child health care practices were found to be largely neglected in various tribal groups i.e. Tribal groups of Bastar, Kutia Kondhs of Orissa, Santals, Jaunsaris and Kharias. Expectant mothers to a large extent were not inoculated against tetanus. From the inception of pregnancy to its termination, no specific nutritious diet was consumed by women. On the other hand some pregnant tribal women (i.e. Dudh Kharias, Santals) reduced their food intake because of the fear of recurrent vomiting and also to ensure that the baby may remain small and the delivery may be easier. The consumption of iron, calcium and vitamins during pregnancy was poor. The habit of taking alcohol during pregnancy was found to be common among the tribal women and almost all of them continued their regular activities including hard labour even during advanced pregnancy (Basu, 1993).

Chauhan et al., (2012) conducted a study among tribal women of Bastar of Chhattisgarh. Highest maternal mortality 65 cases (54.166%) was noted in Primigravida (Nullipara) between age group 18 to 35 years, second highest maternal mortality 44 cases (38.333%) was noted in 2nd to 4th Gravida (Multipara) between age group 22 to 42 years, 10 cases
(8.333%) were in 6th and 7th Grand Multigravida (Grand Multipara) between age group 27 to 35 years, and 01 case (0.833%) was in 8th Great Grand Multigravida, of 25 years. Total Maternal Mortality among Primigravida (Nullipara) to Greatgrand Multigravida (Great Grand Multipara) was noted between 18 to 42 age group (Chauhan, Chauhan, & Shrivastava, 2012).

Low socio economic status, high illiteracy and lack of awareness were identified as causal factors of poor health status of Dhur gond of Mahasamund district of Chhattisgarh (Chandraker, Chakrabarty, Mitra, & Bharati, 2009).

In Uttar Pradesh majority of women experience various problems during pregnancy and in most of the cases they suffer from more than one problem (night blindness, blurred vision, convulsions, swelling, excessive fatigue, anaemia, etc). These problems are usually related to nutritional deficiencies, which results from women’s low status in the household along with her poor socio-economic backgrounds. The study also revealed that religion plays a vital role in influencing the woman’s health problems during pregnancy (Raj, 2005).

The prevalence of chronic energy deficiency (CED) was significantly higher among tribal women. The prevalence of CED was 56% among tribal non-pregnant non-lactating women against 36% in rural. Similarly the prevalence of CED was high with 58% among tribal lactating women against 40% among rural lactating women (Rao et al. 2010).

The tribal women showed a significantly higher prevalence of CED as compared to rural women. The prevalence of CED was 58 percent among tribal lactating women as compared to rural lactating women (40%) as reported by Mallikharjuna et al (2010). The NFHS-3 data from M.P. showed that the prevalence of CED was 44.9 % and recorded to be second highest in India and 61 percent of the women were anaemic. The CED of women from Jammu Kashmir and Ladkh region was reported to be 56.4 percent by Khan and Khan (2012). The overall prevalence of CED was observed to be 10.5 percent among Nyishi tribal women of Arunachal Pradesh (Bharali, Mondal, & Singh, 2017).

The study conducted by Ghosh-Jerath et al (2017) observed 42.4 percent of CED in Sahariya tribal community of Madhya Pradesh . 7.4 percent of them were classified under
CED III, 10.9 percent from CED grade II, and 24.1 percent from CED grade I and the prevalence of anaemia was 90.1 percent and 40 percent had moderate anaemia while 2.8 percent had severe anaemia (Ghosh-Jerath et al. 2017).

The health and nutritional problems are most common in tribal women of India. Nutritional anaemia is one of the major problems of Indian rural nontribal and tribal women. According to UN 1984 at least half of the non pregnant and two thirds of the pregnant women were anaemic in developing countries (U.N., 1984). Average 56 percent with a range of 35-75 percent is the prevalence of anaemia globally as estimated by world health organization (W.H.O., 1992). Primary cause of anaemia is iron deficiency, which coexists with a number of other causes, such as malaria, parasitic infection, nutritional deficiencies and hemoglobinopathies (Ghosh, 2009). Anaemia is a major cause of high incidence of premature births, low birth weight, perinatal mortality and maternal mortality. Earlier studies have indicated that maternal deaths occur among women in the age group 20-30 years and anaemia contributes to 19% of maternal deaths in India (SRS, 2001-03 in, 2001-03; SRS,1997-2003).

Prevalence of anaemia was reported to be very high in tribal population by many other investigators viz. 59.82 percent among the north Indian tribe of Assam and 53.77 percent among Arunachal Pradesh, 57.45 percent among the women of Tripura (De, et al. 2006). Prabhanar & Gangadhar, 2009 also reported 77.1 percent prevalence of anaemia among Jenukuruba tribe of Mysore (Jai Prabhanar & Gangadhar, 2009).

Prevalence of anaemia was found to be high among pregnant and lactating women in district of Dehradun. The problem of anaemia was more serious in the hilly and tribal area of the state, which drew attention to the need for further in depth field based studies in the flung area of Uttaranchal (Singh, et al., 2009). 10% severe clinical anaemia, about 29.32% mild to moderate anaemia was observed among the pregnant women of eastern coast of Orissa. Only 28.9% of pregnant women had haemoglobin level in normal range in Orissa (Balgir, et al., 2011).

Most of the tribal women of Visakhapatnam district were suffering from nutritional anaemia. They do not consume IFA tablets provided by government health worker. Pregnancy, BMI, education, wealth, childhood residency and region of residence factors are associated with anaemia in Mali (Srinivas, Sambasiva, Laksmi, & Giridhar, 2012).
Kamath, Majeed, Chandrasekaran, and Pattanshetty reported 55.9 percent prevalence of anaemia among tribal women of Udupi Taluka, of Karnataka. The study revealed a mean haemoglobin value of 11.3g/d (Kamath, Majeed, Chandrasekaran, & Pattanshetty, 2013).

The prevalence of anaemia has been reported to be 57.6 percent among the women of Chhattisgarh by Galhotra et al (2014). He also recorded the prevalence of anaemia among pregnant women of Chhattisgarh to be 63.1 (Galhotra, Padhy, Pal, Giri, & Nagarkar, 2014).

Prevalence of anaemia in rural women of West Bengal was found to be 66.87 percent. The study also revealed that subjects with higher BMI would have less risk of occurrence of anaemia compared to underweight subjects (Pal, De, Sengupta, Maity, & Dhara, 2014).

The prevalence of anaemia among Kamar tribe of Raipur district was found to be 50 percent and one fourth of women were reported to suffer from night blindness (Kumar, Goel, & Verma, 2015).

96.5 percent prevalence of anaemia was found among tribal women of Wayanad district of Kerala. Prevalence of anaemia seemed to be highest among tribal women aged between 15-25 years. However among general population of Kerala, it was found in 20-29 years age group (Shrinivasa, et al., 2014).

Blood pressure in different gestational trimesters, fetal growth and the risk of adverse birth outcomes was studied by Bakker et al (2011). They concluded that higher blood pressure was associated with smaller fetal head circumference and femur length, as well as lower fetal weight from the third trimester onward. They also observed that there is an association of adverse birth outcome with an increase in blood pressure from second trimester to third trimester. The study showed that higher maternal blood pressure levels were associated with impaired fetal growth from the third trimester onward and increased risks of adverse birth outcomes. The study has also shown that maternal high blood pressure is strongly associated with high risk of preterm birth, low birth weight, small size for gestational age at birth (Bakker, Steegers, Hofman, & Jaddoe, 2011).
Anand & Singh (2017) studied the stage of hypertension and their association with risk factors among adult Indian women. They used WHO data on global aging and Adult Health (SAGE) which included women aged 18-49 yrs. The risk factors examined in their study were age, place of residence, religion, caste, educational status, wealth index. The study assessed the mean arterial pressure which is a less explored indicator of hypertension. The result of the study indicated that overweight women had high MAP irrespective of any background characteristic and education was considered as one of the most important predictors of hypertension. They also emphasized the need for early screening of hypertension at the community level (Anand & Singh, 2017).

Laxmaiah et al (2015) in their study indicated the prevalence and determinants of hypertension among tribals and their awareness, treatment practices and risk behaviours in nine states of India. The study showed that the prevalence was higher in states of Odisha and Kerala and lowest in Gujarat. People using tobacco and consuming alcohol were at a higher risk of hypertension as compared to non users and 6-8 times higher in elderly people. The study also revealed high prevalence of hypertension among tribals in India (Laxmaiah, et al., 2015).

Raghupathy et al (2014) studied the prevalence, awareness and control of blood pressure among Indian patients searching 142 articles from Medline, Web of Science and Scopus databases from 1950 to 30 April 2013. They concluded that almost one third of urban adult Indians and close to one fourth rural Indians are hypertensive. Only one tenth of rural and one fifth of urban Indians suffering from hypertension have their BP under control (Raghupathy, et al., 2014). They have also reported that the prevalence of HTN increases with the increase in age as studied by various authors and has shown a positive correlation (Borah, Shankarishan, Hazarika, & Mahanta, 2012; Dutta & Ray, 2012; Sathish, Kcannan, Sarma, Razum, & Thankappan, 2012; Manimunda, et al., 2011; Mohan, Deepa, Farooq, Datta, & Deepa, 2007; Hazarika, Biswas, Narain, Kalita, & Mahanta, 2002). Smokers were two fold at risk for HTN (Thankappan, et al., 2006; Sathish, Kcannan, Sarma, Razum, & Thankappan, 2012; Mohan, Deepa, Farooq, Datta, & Deepa, 2007; Gupta, et al., 2013). Tobacco and Khaini consumer and extra salt intake (Hazarika, Biswas, Narain, Kalita, & Mahanta, 2002), who had a sedentary life style (Meshram, et al., 2012), obesity (Thankappan, et al., 2006; Sathish, Kcannan, Sarma, Razum, & Thankappan, 2012; Mohan, Deepa, Farooq, Datta, & Deepa, 2007; Gupta, et
al., 2013), had at least BMI of 25 (Thankappan, et al., 2006; Dutta & Ray, 2012), and consumption of alcohol (Borah, Shankarishan, Hazarika, & Mahanta, 2012; Manimunda, et al., 2011; Hazarika, Biswas, Narain, Kalita, & Mahanta, 2002; Meshram, et al. 2012) also showed a two fold risk of high blood pressure.

Manimunda et al (2011) reported a high prevalence of hypertension (50.4%) among Nicobarese and was more than the rural and urban populations in India and was double that of African population groups reported by Cappuccio et al. 2004 and Opie and Seedat, 2005. The usage of tobacco and alcohol did not add to the risk of hypertension among the Nicobarese due to the consumption of smokeless tobacco. Nicobarese showed that the determination of hypertension was obesity in 37 percent, tobacco use in 88 percent, alcohol consumption in 54 percent and illiteracy in 30 percent (Manimunda et al. 2011).

A study among the tribal population in Tamil Nadu was carried out by Radhakrinana (2015) revealed that 42 percent women were normotensive, 30.30 percent had prehypertension, 17.6 percent women had stage 1 hypertension and only 9.4 percent women had stage 2 hypertension. Meshram et al. (2012) reported that the prevalence of hypertension was 35.8 percent among the tribal population of Kerala (Meshram et al. 2012). Laxmaih et al (2015) reported 26.4 percent prevalence of hypertension among the tribal women of India (Laxmaiah et al. 2015). Tiwari (2008) reported a low prevalence of hypertension i.e. 17.5 percent in tribal populations of Gujarat. Kshatriya and Acharya (2016) reported only 14 percent hypertension among tribal women.

The prevalence, awareness, treatment and control of hypertension were reported by Yuvraj et al. (2010) from rural areas of Devanagere of Karnataka. The prevalence of hypertension was reported to be 18.3 percent and prevalence was higher in males. About 6.9 percent of the total hypertensive had severe hypertension (Yuvvaraj et al. 2010).

1.4.2 Utilization of RCH Services

Several studies have been conducted to identify and understand the determinants of underutilization of Reproductive and Child health services in developing countries including India (Obermeyer & Potter, 1991; Elo, 1992; Backer, David, Ronald, Connie, & Robert, 1993; Goldman & Pebley, 1994; Bhatia & Cleland, 1995; Raghupathy, 1996; Govindasamy & Ramesh, 1997; Dharmalingam, Hussain, & Smith, 1999; Magadi,
Madise, & Rodrigues, 2000). Women with primary schooling did not differ from women with no schooling in receiving delivery assistance in Bangladesh and Thailand (Raghupathy, 1996; Dharmalingam, Hussain, & Smith, 1999). But, women with primary level education were observed to receive more delivery assistance in Peru and Guatemala (Elo, 1992; Goldman & Pebley, 1994). Elo (1992) and Raghupathy also opined that older women give less importance to obtain institutional care as they have more confidence about pregnancy and childbirth. Elo, 1992; Bhatia & Cleland, 1995; Raghupathy, 1996 observed that higher parity women give less attention to MCH care services. MCH care were also higher if a women had a stillbirth or an abortion (Bhatia & Cleland, 1995). According to Caldwell, 1979; Caldwell & Reddy, 1983; Mosley & Chen, 1984; Cleland and Van Ginneken, 1988; Raghupanthy, 1996; educated mothers have greater confidence and capabilities to make decisions for themselves with regard to use of health care services (Caldwell, 1979; Caldwell, Reddy, & Caldwell, 1983; Mosley & Chen, 1984; Raghupathy, 1996).

A study examined the influence of socio-economic and demographic variables on the utilization of antenatal care (ANC) services from public or other health professionals among tribals and non tribals of Jharkhand and Chhattisgarh. They also examined the effect of availability and accessibility of RCH services on utilization of ANC services. In Chhattisgarh, problem during pregnancy and child loss have positive effect and utilization of ANC services among STs. With the increase in the proportion of ST population. The utilization of ANC services has declined from 46 percent to 37 percent. With the increase in educational attainment of women, the utilization has increased from 37 percent to 49 percent among STs but has decreased from 29 percent to 52 percent among non STs. They have concluded that surviving children, problem during pregnancy, education of women, SLI and husbands, education are some common factors affecting ST and non ST on their utilization of ANC services from public health centres. In Jharkhand problems during pregnancy and child loss have negative effects on utilization of ANC services among ST and non ST women. In Jharkhand also educational attainment has increased the level of utilization of health from 11 percent to 32 percent among ST. Availability and accessibility of services have also increased the utilization among ST and non ST women. The study also revealed that connectivity of road has positive effect on utilization of ANC services among STs (Negi, Sekher, & Ganguly, 2010).
Utilization of safe motherhood, with especial antenatal care among the schedule caste and schedule tribe of Orissa study found antenatal care services are poorest among schedule caste and schedule tribal as compared to general population. Acceptance of the antenatal care among these populations influencing factors are various socio-economic and cultural factors (Nayak & Babu, 2001).

A study on factors affecting the use of maternal health services in Madhya Pradesh showed that household socio-economic status and mother’s education are most important factors associated with the use of ANC and skilled attendance at delivery. The community level was only significant for antenatal care (ANC) and skilled attendance at delivery but not for post natal care (PNC). None of the district level variables used in this study were found to be influential factors for the use of maternal health services (Jat, Nawi, & Sebastian, 2011).

Utilization of ANC services were irrespective of standard of living index (SLI) status. Roy at al. (2003) worked on determinants of utilization of ANC services in rural Lucknow. 352 women selected by systematic random sampling formed the sample. In order to find out the determinants of three ANC services logistic regression was computed. The study reported 85.5 percent ANC. They observed significant difference between the women who took three ANC and who did not in terms of age, socio-economic status and timing of registration. They reported that introduction of ASHA at the rural level have influenced the health seeking attitude of the women. Their study also showed the influence of religion, caste, education family type or parity was not very significant although higher utilization was observed with increase in education (Roy, Mohan, Singh, Singh, & Shrivastava, 2013).

According to Becker et al (1993), mother’s education is the most consistant and important determinant of the use of child and maternal health services. Onasoga et al. (2012) also reported the same. Javali (2014) however showed contradictory result in his Karnataka study and by Roy et al. (2013) in a study conducted in Lucknow where both of them revealed 100 percent ANC registration. Significant association with factors like maternal education and S.E.S. was also reported by other authors .As literacy helps to enhance women’s autonomy, their confidence level and decision making in health issues they are more likely to seek higher quality services (Onasoga, Afolayan, & Oladimeij,
2012; Javali, Wantamutte, & Mallapur, 2014; Merged, Katti, Mallapur, & Wantamutte, 2009; Sahu & Kushwah, 2007).

Adhikari et al (2016) conducted a study on the utilization of ANC care services among ST women of Rajasthan, Odisha, Chhattisgarh and Madhya Pradesh. They pointed out that the health system factors and socio economic factors are the reasons behind non utilization of ANC services. Their study emphasized the need for woman’s educational attainment of high school and above and to create awareness among family members and pregnant tribal women on the importance of early ANC care. National health policy (1983), plan document of ninth plan as well as National population policy (2000) made special mention for improvement of basic health and reproductive and child health services (Adhikari, et al., 2016).

The factors influencing the utilization of maternal health care services in Uttarakhand revealed that the place of residence, educational level of women, exposure to mass media, birth order and wealth index are significant predictors in explaining the use of maternal health care services. The major obstacles of the institutional delivery are traditional attitudes and cultural beliefs surrounding pregnancy and childbirth (Digambar, Chimankar, & Sahoo, 2011).

Hamid, Vaida and Ali (2017) studied the utilization of antenatal care and its determinants among the Gujjar and Bakkerwal schedule tribe women of Kashmir. Only 42.8 percent of the mothers received ANC care, 57.8 percent had received TT injections and 31.1 percent had consumed iron and folic acid tablets. The study also revealed that only 26.7 percent women were informed about financial assistance/help and support under Janani Suraksha Yojana and only 7.3 percent received free transport, medicine and baby care. According to them literacy level, age at marriage, parity, income level and education level of husband were found to be the factors which contributed towards level of utilization (Hamid, Vaida, & Ali, 2017).

The comparative differentials study in maternal health care service utilization between states of Tamilnadu and Karnataka showed wide variation in the utilization of ANC services. The difference could be attributed to relatively better socio-economic, demographic scenario as well as the better infrastructural facilities available in
Tamilnadu. In addition, the poorest performances of the utilization of ANC services in case of Karnataka have been explained by relatively poor status of women. The study revealed that some of the factors which influence antenatal health utilization are religion, education and occupation of women and wealth index (Rejoice & Ravishankar, 2011).

A cross sectional study was conducted among the scheduled caste (SC) and scheduled tribe (ST) women of Rajasthan to understand the reproductive health profile. A total of 600 samples were collected. The age at marriage, age at gauna (second marriage) and age at 1st conception was found to be relatively higher among SC women as compared to ST women. It was also found that the SC women had relatively better educational status than the ST women and better reproductive health profile as adjudged by contraceptive used, place of child deliveries, antenatal care and consumption of vitamin/iron pills during pregnancy (Bhardwaj & Tungdim, 2010).

Ahmed et al. (2010) examined the relationship between women economy, education and empowerment status (stated as 3Es) and utilization of maternal care health services in developing countries. They used Demographic and health survey (DHS) data from 33 countries subjected to women of reproductive age (15-49yrs). They investigated the quantitative and qualitative heterogeneity among the selected countries. They showed that the 3Es are directly linked to uptake of three of the basic maternal health service. The study also showed the multi-country evidence of the magnitude of their association with the use of contraception, ANC care and skilled birth attendants of the developing countries with utilization of RCH care services. Their study concluded that women’s empowerment was the least strong factor associated with the use of MCH care services. The study also highlights the need to enhance women’s autonomy to raise maternal health services. The study emphasized on expansion of high quality services in order to increase women’s motivation for the use of MCH services (Ahmed, Creanga, Gillespie, & Tsui, 2010).

Singh and Patra (2013) studied the utilization of maternal health care services in empowerment action groups status using Indian Human Development Survey (2005). Their study was focused on the utilization of antenatal care services by women of age group 15-49 years. The study showed that about 90 percent educated women have visited for three or more antenatal checkups. Their observation was that as the birth order
increases, the percentage of women who received at least three ANC decreases (64.8, 53.7 and 35.5% for first, second and third order birth respectively). The study also revealed that some of the factors which affect utilization of antenatal health services are religion, education level, caste and wealth index. They also observed that the women who have previous experience of stillbirth and abortion are more likely to receive at least three ante-natal checkups (Singh & Patra, 2013).

Shah and Belanger (2011) called for different strategies for the implementation of health care services in different tribal regions of India. The paper highlighted the effect of maternal characteristics on woman’s likelihood of using prenatal and delivery health care services among the tribal woman in the north-eastern states and central states of India. This study showed that tribal woman in the north-eastern state of India use more health care facilities as compared to the central states. Working women are less likely to use the health care services. The positive influence of education is highest for seeking trained assistance during delivery (Shah & Belanger, 2011).

Kushwaha et al. (2016) studied the level of utilization of antenatal care services in Peri urban area of Aligarh. The study comprised of 200 recently delivered women out of which only 62 percent were registered during first trimester. They reported that only 59 percent had full utilization of ANC services. Factors effecting utilization of ANC services were financial constrains (34%), lack of awareness (31%) and others such as socio-economic status, education status, traditional and unavailability of accompanying person (Kushwah, Mehnaz, Ansari, & Khalil, 2016). Hamid et al. (2017) studied schedule tribe women of Kashmir. Poor utilization of ANC, low educational status, age at marriage and income are significantly associated.

Sen (2009) reported that 72.3 percent of female sterilization, 8.1 percent IUD/loop, 6.8 percent oral pill and 12.8 percent condom were used among Telis of Raipur district of Chhattisgarh. 51.16 percent were users and 48.84 percent were non users of contraceptive. Awareness about contraceptive was found to be 85.48 percent about any modern spacing method and 94.72 percent any modern method (Sen, 2009).
Rao, Mishra & Ratherford (1998) Ratherford & Mishra (1997) were of the opinion that exposure to electronic media may enhance to militate against cultural barriers and hence increase the use of MCH (Rao, Mishra, & Ratherford, 1998; Ratherford & Mishra, 1997).

It was implemented that multisectoral health and development projects which covered 235 underserved and tribal villages of Ahmednagar district of Maharashtra for a period of four years (2006-2009) achieved significant improvement in the MCH indicators in the target population. According to them unless we find out the bottlenecks in the implementation of the program, the 2015 target cannot be achieved (Somasundaram, Bangal, Patil, & Dhore, 2012).

The utilization of ANC services and deliveries at health centres were significantly associated with education of the women and their spouses, and the socioeconomic status of the family. Traditional practice was the main reason for conducting the deliveries at home, followed by unsatisfactory or unacceptable hospital services and lack of transport facilities. The investigation emphasized the need of health services to increase the rate of deliveries conducted at health centre or at least by a trained person (Mumbare & Rege, 2011).

Navaneetham and Dharmalingam (2002) used NFHS data (1992-93) and showed that the utilization of maternal health services is higher in Kerala as compared to Tamil Nadu, Andhra Pradesh and Karnataka. According to them interstate differences in utilization is due to variations in implementation of maternal health care program and due to the differences in availability and accessibility (Navaneetham & Dharmalingam, 2002).

Gupta et al. (2016), studied the delivery practices in mother aged (15-49 years) and their knowledge regarding antenatal care services and its utilization in Miran sahib zone of block R.S. Pura of North India. The result showed that they had adequate knowledge about ANC services. The women opted for quite high institutional deliveries. The result showed statistically significant associations of status and type of family. According to them role of health workers are strong in increasing awareness among mothers about the importance of ANC. The mothers should also be made aware of the danger signs of pregnancy which can decrease non-awareness, financial constraints and non-availability of transport facilities (Gupta, et al., 2016).
Edward and Iyer (2014) showed that utilization of antenatal care services were high in a rural population near Chennai. Ansari & Khan (2011) also showed that 40.3 percent of the women had ANC check up, 70.3 percent had two doses of TT and 47.6 percent had not received iron folic acid. Seth (2012) also observed 72 percent ANC visits and 62 percent of IFA tablets and 86.6 TT coverage in a rural area of Ahmedabad (Edward & Iyer, 2014; Ansari & Khan, 2011; Sheth, Shah, Joshi, & Bala, 2012).

Jat (2011) showed that only 61.7 percent of the respondents used antenatal services in a rural area of Madhya Pradesh. Bajpai et al (2012) observed a very low ANC i.e. 11.5 percent (Jat, Nawi, & Sebastian, 2011; Bajpai, Arora, & Singh, 2012; Govindasamy & Ramesh (1997) and Jat (2011) found that the educated mothers used MCH care services to a greater extent as compared to non educated mothers (Govindasamy & Ramesh, 1997; Jat, Nawi, & Sebastian, 2011).

More et al. (2009) conducted a cross-sectional study of maternity in low-income areas tracing pathways from antenatal care to delivery care amongst the women in Mumbai. They came to the conclusion that once they had entered the health care system antenataly, they were likely to remain in it until delivery. They have pointed out two things i.e. an advance planning of where to go for delivery, how long will it take to go there and what means of transport they will use should be made so that proper decision is made when labour begins (More, et al., 2009).

Dey & Mishra (2014) studied the determination of choice of health care services utilization using NFHS-3 data. Their findings revealed that age, gender, low socio-economic status, uneducated, wear sections of society and those having access to utilize public health care services as compared to private ones in India. They observed that with an increase in age, the odds of utilizing public health care services are likely to increase (Dey & Mishra, 2014).

Sharma et al. (2007) explored the level of utilization of RCH services from different districts of Madhya Pradesh. Five best and worst performing districts with regard to respective values of social development index were selected. Quality of health services was observed to be poor in eastern region and tribal dominated districts of Madhya
Pradesh. Those have better socio-economic development also have better reproductive and child health higher utilization of health facilities. The reproductive and child health showed high and positive association with utilization of RCH services, utilization of public health services and quality of services (Sharma, Ranjan, Kumar, & Pandey, 2007).

A study of knowledge, attitude and belief of pregnant women regarding safe motherhood in a slum area of Jaipur was conducted by Sharma and Sharma (2012). Awareness for antenatal checkups, immunization and supplementation, exclusive breast feeding, health, hygiene, rest and family planning were the knowledge based enquiries. A structured questionnaire was also used to collect personal information on demographics. The results reveal that the pregnant women were least aware of the safe motherhood practices and suggested individual counselling of pregnant women to bridge the gap of the knowledge of pregnant women regarding safe motherhood (Sharma & Sharma, 2012).

Kumar, Goel, & Verma (2015) reported the level of utilization of maternal health care services among Kamar tribe of Raipur district. The study comprised of 457 women (who had given child birth within last 5 years) out of which only 53.4 percent received at least one ANC services and tetanus toxoid immunization in 62.7 percent women during last pregnancy. Consumption of IFA tablets was observed to be 75 percent. Utilization of ANC was found to be low due to lack of awareness and poverty (Kumar, Goel, & Verma, 2015).

The tribes of Visakhapatnam showed that 98.4 percent women received ANC three or more than three times and 64.9 percent women were immunized with 2 tetanus injection. The study reported that most of the respondents (99.2%) received IFA tablets but 36.2 percent have consumed all tablets. The study revealed that the reason for not consuming all IFA tablets is due to smell and bitterness of tablets. Only a small proportion of tribal women were attending the government health facilities to undergo examination and tests during pregnancy (Srinivas, Sambasiva, Laksmi, & Giridhar, 2012).

Singh & Patra, (2013) studied EAG states of India for differentials in the utilization of antenatal care services. They found that 60 percent of women aged 15-35 years have received at least three antenatal checkups which is higher compared to age group 35-49
years (47.4%). 80 percent women belonging to higher socio-economic status quintile have received at least three antenatal care (Singh & Patra, 2013).

Deshpande (2011) studied an insight from Karnataka and observed that only 25 percent pregnant women were registered at first trimester, 36 percent women received Janani suraksha card (JSY). They found 40 percent delivery is institutional where 29 percent deliveries were at government health facilities and 11 percent were in private hospitals. He also reported reason for home delivery was due to fear of stitches, unavailability of transport facilities and non affordability of institutional delivery (Deshpande, 2011).

The utilization of maternal health care services in three states of South India viz Andhra Pradesh, Karnataka & Tamil Nadu was examined by Navaneetham and Dharmalingam (2000) showing the patterns and determinants across different social setting-using data from NFHS. According to them the difference in access to health care facilities between rural and urban areas is an important factor for lower utilization of maternal health care services, particularly for institutional delivery and delivery assistance by health personnel in the rural areas of the three states. Interstate differences in utilization could be due to differences in availability and accessibility (Navaneetham & Dharmalingam, 2000).

A study on reproductive and child health care practices among the Telis of Raipur district shows that increased age at delivery and higher order births are negatively associated with the utilization of maternal health services. They are less likely to conduct delivery in health centres. This may be because younger woman realize the benefits of availing maternal care services, and another reason could be, that woman are more concerned which is probably related to fear of complication or excitement over first pregnancy. Mordernizing characteristics such as education, exposure to mass media has shown significant positive association with the utilization of maternal child health care services. (Sen, 2009).

Mothers in the highest wealth quintile were significantly more likely to use modern trained providers for antenatal care, birth attendance, post natal care and child health care than those in the poorest quintile ($\chi^2$, p < 0.01). The differentials were less pronounced for other factors examined, such as education, age, and the relative decision-making power of a woman, in both bivariate and multivariate analysis. Within rural areas of
Bangladesh, where overall poverty is greater and access to health care more difficult, wealth differentials in utilization remain pronounced. Those programs with high international visibility and dedicated funding (e.g., Immunization and Vitamin A delivery) have higher overall prevalence and a more equitable distribution of beneficiaries than the use of modern trained providers for basic essential health care services (Amin, Shah, & Becker, 2010).

The effect of place of residence and ethnicity for utilization of health services was investigated with evidences from Greece from a representative sample of 1372 individuals. Poor physical and mental health was associated with higher likelihood of use. They concluded that health care needs were the main determinants of health services utilization in both the urban and rural population. Socio-economic and ethnic differences are also seen to contribute to the inequities observed in some types of health services use, favouring the better off (Lahana, Pappa, & Niakas, 2011).

Ethnicity is an important social determinant for maternal health care utilization in Vietnam, and ethnic minority women form a clearly disadvantaged group. Ethnic minorities tend to reside in rural areas and poor households, as well as have low education. Physical distances to health facilities as well as lack of transportation and means to accommodate women and their family members, are factors for explaining the lower rates of maternal health care utilization in areas inhabited mainly by ethnic minority groups (Goland, Hoa, & Målqvist, 2012).

Mishra et al. (2015) studied migrant tribes of an eastern Indian city. They pointed out barriers of access to government health services. Only 18 percent participant visited government health facility during the past year. Distance and lack of knowledge and lack of trust in the government services are responsible for low use of health services. Another cause of low access for health care is etiology of illness and faith in traditional healer (Mishra, Kusuma, & Babu, 2015).

Reproductive and child health services and their utilization by adolescent woman in rural Madhya Pradesh shows that the lack of knowledge about post natal care is the most important factor for not obtaining post partum services. Results of multivariate analysis shows that an increase in the institutional deliveries also increases the likelihood of
receiving postnatal care among adolescent women. It is quite possible that if women deliver in a health facility they become more aware of the services available as well as the significance of utilization of services. Place of delivery has also emerged as an important determinant of treatment seeking for obstetric problems after delivery. Results of the study show that those women who deliver in a health facility are more likely to seek treatment for obstetric problems after delivery. Therefore, measures are also needed to increase the use of professional delivery care to reduce infant as well as maternal mortality and morbidity among adolescent women (Sharma, 2004).

Use of traditional healer services was negatively associated with child immunization among Haiti. The study also revealed that controlling factors for use of traditional healer services were education, age of mothers, religion and distance from the nearest health care facility. (Muula, Polycarpe, Job, Siziya, & Rudatsikira, 2009)

The study conducted by Ager and Papper (2005) found no statistical difference between the pattern of service utilization in villages with and in those without sub-centre individuals living in villages with a sub-center gave reason for their limited use of such facilities which reflected concerns about quality and availability. Subsequent sections examined in further detail the manner in which such factors as perceptions of health worker competence, perceived efficacy of medicines and staff availability influence village choice of health provision, and thereby militate against the potential impact of local peripheral health facilities (Ager & Pepper, 2005).

In order to improve access to health and health services for the urban poor, expansion of public health functions and capacities will be required, including building partnerships between health providers, municipal authorities and civil society (Soeung, Rundy, Sokhom, Blanc, & Thor, 2012).

Hill Korwa women of Chhattisgarh are very little aware of the antenatal services provided by the PHC. Women, who are approached by health personnel, do not avail of the services because of misconceptions. The study also revealed that mean age at marriage for boys is 17 years while for girls it is 14.9 years in Hill Korwas of Chhattisgarh (Pandey & Abbad, 2002).
48.6 percent Pando tribal women of Chhattisgarh had not received any ante-natal check-up during their last pregnancy (Bais, 2014). However, it is better than the Dhur Gond tribal women of Chhattisgarh, where 51.72 percent Dhur Gond women had not received ante-natal check-up (Chandraker, et al., 2009).

Reproductive child health (RCH) services refers to pregnancy related and after deliveries health care provided by a doctor or a health worker in a medical facility or at home and institution. The Safe Motherhood Initiative proclaims that all pregnant women must receive basic professional antenatal care. In Chhattisgarh, increase in the age and number of surviving children of ST women have declined utilization of ANC services from public health services. It is because of the fact that women are going to other health services and it may be due to their inclination to consult the traditional health healers who have an important place in the society (Negi, Sekher, & Ganguly, 2010). Haiti mothers were also observed to use traditional healer services due to mistrust and lack of awareness about RCH services (Muula, Polycarpe, Job, Siziya & Rudatsikira, 2009).

Das, Biswas & Mukherjee (2014), reported maternal mortality in teaching hospital of rural India. Most of the women (60.92%) died within 12 hours of admission suggesting majority patients reach the tertiary hospital quite late. 67.17% of the women were below 25 years age group. Most of the maternal deaths are preventable by optimum antenatal, Intranatal and postnatal care. Early referral, quick and well equipped transportation facilities and promotion of overall safe motherhood is essential to reduce maternal deaths (Das, et al., 2014).

The interventions for improving the health status of women under the Government of India’s Child Survival and Safe Motherhood Program, has not significantly been able to improve the services for women specially in the tribal areas of Jharkhand (Maiti, Unisa, & Agrawal, 2005). Almost four out of five women in India received any antenatal care during their last birth in five years preceding the survey (Tyagi & Jain, 2009).

An investigation was carried out among married adolescent tribal girls in Lohardaga district of Jharkhand by Rani, and Ghosh and Sharan, 2007. An adolescent married girl aged 15-19 years was interviewed. 59 per cent young women received some antenatal services like an antenatal check-up, iron and folic acid tablets or tetanus toxoid injections.
The proportion of women who received full antenatal services was 12 per cent further, only 14 per cent received an antenatal check-up in the first trimester and 13 per cent received three or more antenatal check-ups. 69 percent received any antenatal check-up, 47 percent of mothers received iron, folic acid tablets and 56 per cent received tetanus toxoid injections. The vast majority (90%) girls reported that they preferred to deliver at home (Rani, Ghosh, & Sharan, 2007).

In case of three fourth of tribal women, the antenatal care provider was not a doctor, one-fourth of tribal women had not received more than 2 tetanus toxoid injection, making disadvantage ratio of 2.5 and 2.1 respectively. Tribal women were 1.8 times at higher risk of infant and under five mortality in comparison to non tribal women (Agrawal, 2013).

1.4.3 Place of Delivery and Assistance during Delivery

Most tribal women considered pregnancy is a normal and natural phenomenon and no special care is given to ladies during pregnancy. Pregnant women are not given any special care (including ANC) till the delivery takes place. No well preparation is taken for delivery in advance (Verma & Roy, 1993).

More than 90 percent of the deliveries were conducted at home attended by elderly ladies of the household. No specific precautions were observed at the time of conducting deliveries which resulted in an increased susceptibility to various infections. Services of paramedical staff were secured only in difficult labour cases. (Basu, 1993; Pandey & Abbad, 2002; Maiti, Unisa & Agrawal, 2005; Rani, Ghosh, & Sharan, 2007).

Hill Korwas of Chhattisgarh also conducted delivery at home. Delivery takes place inside the room. Old ladies of the village mostly conduct deliveries. The lady who conducted delivery is locally known as dagrin among Hill Korwas of Chhattisgarh (Pandey & Abbad, 2002).

Maiti, Unisa & Agrawal (2005) reported that more than 92% of the most recent delivery among the tribal mothers had taken place at home compared to 74% among the non-tribal mothers. Only about 5% of the deliveries of tribal mothers have taken place in institutions compared to 18% among the non-tribal women of Jharkhand. It is distressing to note that
94% of the births among the tribal mothers have been attended by untrained persons compared to 82% among the non-tribal women. This is very dangerous to the life of the woman as well as of the child (Maiti, Unisa, & Agrawal, 2005).

83 percent of deliveries of tribal women of Orissa were conducted by untrained persons (Agrawal, 2013). Vasudevan reported 50 percent home delivery among Pania tribe of Wayanad district of Kerala (Vasudevan S., 2010).

88 percent of tribal women had non institutional deliveries reported among tribal women of Orissa. 96.7 percent Pando tribal women had home delivery and delivery assisted by untrained dai during their last delivery, only 1.0 percent women delivered at hospital and delivery assisted by doctor (Bais, 2014).

1.4.4 Postnatal Care
After delivery, care of mother is known as postnatal care. Soon after delivery, the health checkups must be frequent, i.e., twice a day during the first 3 days (Park, 2013). After delivery Hill Korwa mothers were shown to take bath with warm water and soap. Turmeric fermentation is applied to her and she drinks turmeric water to warm the body. Turmeric is used as an antiseptic, which causes early healing (Pandey & Abbad, 2002).

Only 11% of the births among the tribal women were followed by a check-up within two months of the delivery compared to 19% among the nontribal women. 59% of the check-ups took place within 2 days of births for tribal women as compared to 66% in the case of non-tribal women of Jharkhand and Chhattisgarh (Maiti, Unisa, & Agrawal, 2005).

Only around 30 percent of the schedule tribal women reported that they received postnatal care within 2 days of the delivery while their new born were examined within 24 hours of birth (IIPS, 2010)

In Orissa three-fourth of tribal women had no post natal check up and 81 percent did not have a post natal care within 2 days of delivery (Agrawal, 2013).

Expected mothers to a large extent are not inoculated against tetanus. From the inception of pregnancy to its termination, no specific diet is consumed by women. On the other
hand, some pregnant tribal women as Dudh Kharias, Santals reduced their food intake because of simple delivery. The consumption of iron, calcium and vitamins during pregnancy is poor (Basu, 2000).

A study was conducted to bring out the differentials in the health care and health condition among the tribal and non tribal woman in Jharkhand. The study revealed a high prevalence of anaemia among the tribal women in Jharkhand. Utilization of health care and modern methods of contraception is also less when compared to non tribal. The study emphasized the need for focus on tribal culture, medical training of tribal women and knowledge of health care delivery system catering to the needs of tribal women (Maiti, Unisa, & Agrawal, 2005).

A study explored the health and nutrition disadvantage among the tribal women and children in Orissa in comparison to non-tribals using bivariate analysis to compute key health and nutritional indicator for women and children. The study demonstrated that tribal women and children of Orissa were deprived from important aspects of health and nutrition. According to Agrawal (2013) their health status can be improved significantly by executing intervention icons with target appropriate educational material techniques and well designed health delivery system (Agrawal, 2013).

Vasudevan expressed his views as a doctor working among the tribes of Wayanad for 5 years. According to Vasudevan disease, suffering and death are accepted as a part of life, as display of hysteria and mourning is usually not seen in Paniya tribal community. Most of the Paniya women go for regular work or at least occasional antenatal check up. Most of them deliver at home which may be one of the possible reasons for high maternal mortality rate. Malnutrition and anaemia are also common in the tribal mothers (Vasudevan, 2010).

Khan and Khan studied the factors influencing the nutritional status of lactating women in Jammu Kashmir and Ladakh regions. They were of the opinion that the health of women is linked to their status in the society. The study also suggested strengthening of health and nutrition education through departments of health and ICDS (Khan & Khan, 2012). Women are not aware that first clinical examination should be more extensive nor do they comment directly on the collection of information concerning antecedent risk.
factor, both of which are identified by the professional evaluation as poorly done. Physical side-effects and beliefs about the role of blood in the body as explanatory factors for rejection of iron sulphate pills (Atkinson, 1993).

World Health Organizations Expanded Programme of Immunization (EPI) was first adopted by India. It was started globally in 1974 and initiated in 1978 in India. The burden of disease was reduced to a considerable degree after the initiation of EPI programme. But the burden of vaccine preventable disease still remains unacceptably high in India as compared to other developing countries (WHO, 2011). NFHS have shown that the coverage of vaccination is very low. The result report of NFHS-3 shows that the national average for complete vaccination is 43.5 percent but it varies from population to population. It has been reported to be 81 percent in Tamil Nadu but only 21 percent coverage in Nagaland (IIPS, 2007). The data from UNICEF 2009-10 reported a very good progress in vaccination coverage and the rate of complete vaccination was 61 percent (UNICEF, 2009). NFHS-3 showed that only 18 states had a coverage rate of 50 percent. States like M.P., Rajasthan, Chhattisgarh, Jharkhand and Uttar Pradesh showed inequity in coverage of immunization in analysis by area wise residence in rural and urban region. Bihar ranked highest in the proportion of completely unvaccinated infants (NFHS). West Bengal showed 54 percent complete vaccination rate. NFHS surveys showed that higher birth order infants had lower vaccination coverage and the girls were disadvantaged (IIPS, National family health survey (NFHS-3).

ICMR (1999) survey reported complete vaccination rate of 46.4 percent among infants of illiterate mothers compared to 64.9 percent among primary educated mothers and the coverage increased with increase in level of education. NFHS data showed that access to health services and other infrastructure can be associated with better vaccination coverage of infants (Singh & Yadav, 2000).

Singh and Yadav (2000) reported that 63 percent of the children received all the doses of vaccine. In Karnataka, Kerala, Tamil Nadu and Pondicherry coverage of immunization was more than 90 percent, but it was 37 percent, 40 percent and 51 percent in Bihar, Rajasthan and Uttar Pradesh respectively.

Chhabra et al. (2007) conducted a community based, cross-sectional study in two urbanized villages of East Delhi. The study revealed that the coverage levels for BCG
was highest 82.7 percent and DPT/OPVI (81.5%) and lowest for HBV3 (24.3%). 17.5 percent had not received any vaccine. IMRs survey in their evaluation covered 90 district of the county and found that 81 percent had received three doses of DPT/OPV, 86 percent received BCG vaccine and 67 percent measles (Chhabra, et al., 2007).

Sokhey et al. (2001) has also reported high level of full immunization in their study conducted in 1999. The coverage of BCG was 71.6 percent, 13.1 percent for OPV zero dose, 53.6 percent for DPT third dose and 51 percent for OPV zero dose, 53.6 percent for DPT third dose and 51 percent measles as reported by NFHS-2. A better immunization status was observed with higher literacy level of both mother and father. Maternal education has also been associated with better coverage of immunization (Sokhey, Jain, Harit, & Dhariwal, 2001).

Across the world the largest cause of morbidity among the under five children is childhood respiratory infection. Pneumonia is solely responsible for almost one fifth of total mortality in under five children. Most of the health care agencies have focused on this area. In all the government programs top priority has been given to pneumonia including the current RCH program, phase II, age specific incidence of hospitalized pneumonia was highest in infants less than 5 months old, declining with increasing age (Gupta, Sarkar, & Pal, 2014).

A systematic review by Lahariya et al. (2010) reveals that the mortality attributable to pneumonia ranged from 10 to 33 percent according to SRS report. Respiratory infection was a leading cause of death in infants as well as children from 1 to 5 years of age. A study conducted by Gupta et al (2014) among children under five years of age in slums of Bankura, West Bengal revealed that the overall prevalence of ARI was 44.73 percent and children less than one year age were affected most and it decreased with increase in age. A study from Delhi also reported a prevalence of 14.6 percent pneumonia in children (Gupta, et al., 2007). Botelho (2003) reported the prevalence of pneumonia to be 49.8 percent where hospitalization was required in 7.6 percent of cases. A community based study from rural Delhi reported the prevalence to be 12.1 percent among under five children and concluded that the rate declined with increasing age (Botelho, Correia, Dasilva, Macedo, & Silva, 2003). The rate of prevalence was reported to be 22 percent in a cross sectional study from Ahmedabad (Prajapati, Talsania, & Sonaliya, 2011). A study
carried out in West Tripura reported that the incidence of pneumonia was 16/10000 children with highest incidence in infancy in urban area (Deb, 1998). The prevalence of diarrhoea was reported to be 6.5 percent among children aged 0-59 months according to the UNICEF report of 2013-14. The report also revealed that 7.4 percent children aged below 6 months of age and prevalence of diarrhoea increased to 10.2 percent among children aged 6-11 months. 78 percent of children received treatment for diarrhoea. Majority of the children (62%) received treatment from private hospital. Only 23 percent of children received treatment of diarrhoea from government health facility. 11 percent children had taken treatment from AWC and 10 percent children received treatment from medical shopkeepers. Utilization of private health facility was higher (69%) in urban area as compared to rural area (58%) in India (UNICEF, Rapid survey on children 2013-14 national report, 2013-14).

Chopra and Makol, (2004) studied some tribal communities viz. Muria, Gond, Halba and Bhatra of Bastar district and reported that 49.5 percent children suffered from cough and cold and 39.0 percent children suffered from diarrhoea. Shrivastava and Kanungo (2014) identified 17 plants and its parts which were used (leaf and stem/bark )for the treatment of diarrhoea among Oraon tribe from 10 villages of Sarguja district of Chhattisgarh. Kurrey et al. (2017) studied prevalence of diarrhoea and reported it to be 6 percent among Birhor children aged 5-18 years of Chhattisgarh.

Prusty, (2014) studied tribes of India using data from DLHS-RCH-III (2007-8) and observed that 22.8 percent tribes of Jharkhand, 43.5 percent of Chhattisgarh, 50.2 percent of Madhya Pradesh and 44.6 percent of India used contraceptive. The study also revealed that 17.2 percent Jharkhand, 40 percent Chhattisgarh, 48 percent Madhya Pradesh, 39.5 percent Indian tribal women population used modern contraceptive methods. Awareness about any contraceptive method among tribe of Jharkhand, Chhattisgarh, Madhya Pradesh and India were found to be 88.6 percent, 99.3 percent, 97.3 percent and 97 percent respectively. The studies also revealed that awareness about modern contraceptive methods were successively 86.5 percent, 99.2 percent, 97.2 percent and 96.5 percent (Prusty, 2014).

Basu, Kapoor and Basu, (2004) study conducted among tribes of Jamboni block of Midnapur district of West Bengal showed that 25.3 percent Santals and 56.0 percent
Lodhas used any method of contraceptive. 73.7 percent Santals, 97.6 percent Lodhas used tubectomy, 1.3 percent Santals, 2.4 percent Lodhas used vasectomy, 9.2 percent Santals used oral pill, 2.6 percent Santals used traditional methods. 80.3 percent Santal women and 87.3 percent Lodha women were aware about sterilisation. Jain (2006) studied that contraception prevalence rate was 31.2 percent among Gond tribe of Kundam block of Jabalpur district, Madhya Pradesh.

Jhariya, Sharma and Goutam, (2013) found that 51.6 percent female and 3.2 percent male used permanent contraceptive methods (tubectomy & vasectomy) and 1.6 percent used oral pill. 64 percent were users and 35.9 percent were non users of non contraceptive method. Non users couple experienced high proportion of child death. 2.8 percent used spacing method, condom and oral pill was used for birth of child spacing among Baiga tribe of Madhya Pradesh. Awareness about contraceptive among Baiga women were higher (98 %) regarding male contraceptive (vasectomy and condom) they have also higher (96-97%) awareness regarding female contraceptive methods (Jhariya, Sharma, & Gautam, 2013).

Bhandhi et al. (2014) reported that 53.02 percent women of slum of Raipur city used methods of contraceptive. 49.23 percent women used permanent methods of contraceptive and 3.8 percent temporary, 1.27 percent used oral pills and 0.28 percent used herbal contraceptive methods. The causes of non utilization of contraceptives was reported as anaemia, weakness, lactation amenorrhea, fear of side effect, ignorance, compulsion of non use of husband. 91.56 percent women knew about one or multiple methods of contraceptive. Verma (2012) observed that 35.31 percent of Bhatra women of Bastar used any type of contraceptive methods. 20.77 percent went for female sterilization, 4.45 percent male sterilization, 2.08 percent for oral pill, 4.15 percent condom, 0.29 percent IUD and 3.26 percent were users of traditional contraceptive methods. 80.12 percent of Bhatra women were aware about any method of family planning. Bais (2014) concluded that 51 percent were non users of contraceptives methods, 16 percent opted for female sterilization, 11.5 percent preferred condom, 0.5 percent oral pill and 11 percent used traditional contraceptive methods among Pando tribe of Sarguja district of Chhattisgarh (Bais, 2014).