CHAPTER TWO

REVIEW OF LITERATURE

There are plenty of studies that focused on knowledge, attitudes, awareness and practice prevailing in a community regarding Maternal and Child Health (MCH) care services throughout the world especially among the developing countries. The MCH care studies are done in different parts of the countries and they gave good insights about the state of services provided its actual availability, accessibility and utilization. Some of those important studies are mentioned here because their findings are taken here to provide a kind of background to undertake this present exercise in the area of Chennai, Tamil Nadu.

As far as the review of literature is concerned, it consists of two parts viz.

I - Studies related to Availability and Accessibility of Mother and Child Health.

II - Studies related to Utilization and Non-Utilization of Mother and Child Health.

The reviews which are available to the study of Mother and Child Health are categorized in chronological order.
2.1 STUDIES RELATED TO AVAILABILITY AND ACCESSIBILITY OF MOTHER AND CHILD HEALTH

Chen (1982) in his study explained the concept of physical access has been comprehensively and stresses on the significance of studies of physical access to health care, health service use and health status from policy and planning point of view. Physical access is one of the two components of access, and the other being financial access. Chen has considered the time taken to reach a health facility and the absolute distance in terms of km/miles travelled by the user as variables to measure access to health care services.

Rahaman et al (1982) in their study revealed that long distances can be actual obstacles in reaching to the health facilities and they can provide disincentives to those seeking health care. In developing countries, the effect of distance on using health care service becomes stronger when combined with the lack of transportation and poor roads, which contribute towards the indirect costs of visits.

Stock (1983) stated that a number of factors determine physical access to health care, including distance from health facility, availability of transportation and the condition of roads. The distance separating potential patients from the nearest health facility is an important barrier to its use, particularly in rural areas. The greater the distance, the lesser the services are used.

Rao and Richard's (1984) analysis of socio-economic and demographic correlates of medical care and health practices in a rural sample from North Arcot District in Tamil Nadu stated that distance from a town plays a prominent role in utilization of health services in rural areas. Decision to seek treatment was
postponed much more among those living close to town because such people were assured of reaching the health centre in case the problem turned serious; which declined with increasing distance as those living further away were more insecure about their illness and hence sought treatment sooner than others.

Ruffing and Smith (1984) analyzes the obstacles to improve maternal and child health care in Ecuador and examine the steps that have been followed to alleviate these problems. The principal factors hindering maternal-child health programme effectiveness are the lack of a grassroots programme and insufficient organization development. This analysis has value for developed and developing countries which are interested in improving the delivery of maternal-child health services.

Joshi (1987) has made an attempt to study the impact of mother's age, husband's literacy and occupation on the extent and type of maternity care. The findings of the study conducted in a rural community of Allahabad district, revealed that Trained Birth Attendants (TBAs) were the primary source of assistance during the time of delivery. For women aged below 19 years, the deliveries were usually conducted by Auxiliary Nurse Midwives (ANMs) or TBAs. The service of doctors had been utilized by women beyond 19 years of age. The association between the husbands' literacy and occupation and the type of birth attendants were statistically significant. Female literacy often considered as an index of women's status, has been found to have a significant effect on maternity care.

Khan et al (1987) carried out a detailed study of a PHC in a tribal area of Bihar to investigate the reasons for under-utilization of health services. The proportion of patients declined with increasing distance from the PHC. Other factors which
influenced utilization were economic status of patients, caste/tribal status and poor quality of services offered including absence of doctors, irregular supply of medicines, poor extension work and so on.

Gupta (1988) has also cited inaccessibility to be one of the main reasons for low utilization of health centres in his appraisal of the health and family welfare programme in Rajasthan. Accessibility is poor and also costly in terms of transportation cost or lack of transportation facilities altogether. All other reasons for low utilization are similar to those mentioned in earlier studies.

Khan and Gupta (1988) analyzed the Indian Council for Medical Research (ICMR) survey data of Uttar Pradesh to find out the role of familial values in influencing the use of contraception and utilization of MCH services in rural Uttar Pradesh. As per the study, the longer distance is an obstacle for the effective utilization of MCH services. It is one of the reasons for 23.5% of women for non-utilization. The analysis also revealed that the non-availability of drugs, lack of proper facilities in PHCs and availability of private Doctors at lower cost influenced the women for non-utilization of MCH services in Government hospitals.

Khan and Prasad (1988) conducted a comparative study. In a comparative study of Bihar and Kerala regarding the functioning of the health and family welfare programme, the authors attempted to account for their differential performance of the programme in the two States. Data from a survey by ICMR in 1982 - 1983 has been used for the analysis. Distance of the source from residence was one of the input variables. About 48 per cent of respondents in Kerala depended entirely on government sources as compared to 30 per cent in Bihar. The major reason for non-utilization of PHCs in both the states was inaccessibility due to
distance, more so in Kerala. The other prominent reasons were lack of medicines and lack of transportation, non-availability and corruption of staff.

**Khan et al (1988)** in their study had discussed the change in maternity care from traditional methods to modern methods taking into consideration the literacy of women. The study has been done in selected villages of Uttar Pradesh, where pregnant women have facilities for medical care and periodical checkups, immunizations against Tetanus and protection against nutritional anaemia. These facilities were available earlier from local doctors or from PHCs. Illiterate pregnant women were guided by old traditional practices, while educated women approached modern maternity health care services. The other basic problem in maternity care is knowledge about modern health care services.

**Ghose B.N., and Mukherjee A.B., (1989)** have conducted a study at Chanditala PHC of Hooghly District, West Bengal in 1978, the authors observed that the distance did not have any influence on the acceptability of medical care and immunization services. Acceptability of health care within 10 km of PHC using medical care, MCH and family welfare were 2.6%, 1.3% and 14.6% respectively compared to 57.1%, 85.5% and 44.4% of the families who lived in the PHC village itself. The significant findings of the study are:

- The Schedule Castes had the lowest acceptance (39.3%) rate of family planning service.
- Utilization of MCH services was higher with skilled labourers followed by agricultural workers (32.9%).
- People with higher income utilized the PHC services least. Income seems to have significantly influenced the utilization of health services.
Kanitkar and Sinha (1989) concluded that literacy of mother has a significant effect on maternity care as compared to other associated factors. The findings of the study carried out in five states of India (Bihar, Rajasthan, Orissa, Maharashtra and Gujarat) clearly indicate that low percentage of pregnant women both in rural and urban areas have approached for antenatal checkups. But in villages where medical health facilities are available, the percentage of women with antenatal care is higher. However, most of the mothers are not motivated for antenatal checkups, because they do not perceive any need for it. The study brought out the positive relationship between utilization of antenatal services and socio-economic backgrounds of mothers in terms of literacy and standard of living of the household. The findings suggest that information, education and communication activities have tremendous impact on utilization of antenatal services.

Ramchandran (1989) study was attempted to bring out the antenatal morbidity of women, pregnancy outcome, postnatal morbidity and mortality of women who have received different levels of ante-natal, natal and post-natal care and those who have not received any care. The results of this study indicated the poor coverage of antenatal services. It also reveals the fact that registration for antenatal care is related to the extent of early complications. If a woman experiences difficulties she is more likely to get herself registered at the PHC. Education of woman has showed a positive relationship with antenatal registration. The relationship of quality of health care services with maternal care points out that no clear differences are noticeable in the outcome of deliveries at home and at institutions, indicating the poor quality of antenatal care. The results suggest that low birth weight is affected by social and economic status. As maternal education increases, the probability of having low birth weight baby, in fact, decreases consistently among rural and urban population.
Rangnathan and Rao (1990) emphasized the need of medical infrastructure and trained medical manpower for good maternal care. They suggested a package of interventions for improving maternal and child health services in rural areas of Pune through the existing health infrastructure. In the first stage, an assessment of existing infrastructure had been made and in the second stage, training was conducted. The community education programme was also carried by the medical social workers. The major contents of education were contacting the ANMs for early antenatal registration, estimation of hemoglobin levels in pregnant women, measuring height and weight, recording blood pressure, etc. At the community level, women's organizations were encouraged to discuss topics such as maternal and child health and utilization of health services. The results showed that substantial improvement had been made in antenatal registration, immunization against Tetanus and referrals. The study indicated that the referral system had not taken firm roots as economic factors and cultural practices were found to come on the way of full utilization of services.

Reddy and Reddamma (1990) explained that the maternal morbidity in developed countries is the least while in most of the developing countries it is still phenomenally high. The rate of maternal morbidity per 100000 live births was estimated to be 640 in Africa, 572 in south Asia, 270 in Latin America, whereas it was 55 in East Asia and 20 in North America and Europe. Among women in child bearing age, one-fourth of all deaths are maternal deaths in developing countries compared to less than 1/1000 in USA. Although maternal morbidity has been declining in India since the last two decades, it is considerably high compared to several other developing countries. According to World Health Organization, the maternal mortality rate is 340 in India as against only 50 in Thailand, 60 in Sri Lanka and 90 in Burma. Significant variations in maternal morbidity are also observed among the different states in India in accordance with the socio-
economic status of the people, their attitude in utilizing the available health services and the standard and degree of availability of domiciliary as well as institutional obstetric care. The studies conducted so far in India are mostly on maternal mortality which is retrospective in nature.

**Biswas R, et al** (1991) have conducted a study in slum community of Calcutta in 1988 revealed that, 74.9% mothers were examined during the antenatal periods and 64.5% received two doses of tetanus toxoid, 37.8% of deliveries took place at home and was conducted by health workers. The immunization status of children shows that more than half (59.5%) of children aged 12-23 months were fully protected with OPV, DPT and BCG vaccines and another quarter (28.3%) were partially immunized. Family planning practice by eligible couples revealed a high prevalence of contraceptive use (42.4%). Acceptance of permanent measures (32.9%) was significantly higher than use of spacing methods (9.5%).

**Facuveau V. et al** (1991) study revealed that maternal survival can be improved by the posting of midwives at village level and they suggested that they must be given proper training, means, supervision, and back-up. According to them, the inputs for such a programme to succeed and the constraints of its replication on a large scale should not be underestimated.

**Stokoe, U.** (1991) concludes that maternal mortality is the culmination of a series of detrimental events in a woman's life, pregnancy being the last one. He found in his study that the underlying pathology is the lack of education, sanitation, accessible health care, as well as poor nutrition and poverty. These affect women during pregnancy and childbirth when they are more vulnerable.
Devarapalli (1992) in his study of the Konda tribe analyzed their traditional beliefs about pregnancy care and child births. The Konda tribes are guided at different stages of pregnancy and child birth by a number of observations, rites and ceremonies of the society. A pregnant woman is expected to observe a number of taboos and restrictions in her movement, activities and food habits. The study brought out the fact that tribal norms guide the maternity care instead of modem medical care services. Caste is found to be an important determinant of maternity care in India.

Majumdar (1992) established the relationship between poverty and domiciliary birth and its impact on maternal and child health. This study confirmed that non-availability of trained health personnel and economic factors such as poverty are to some extent responsible for the high incidence of domiciliary births as well as high attendance at deliveries by untrained persons. It is a well-established fact that health status and care of people are associated with their socio-economic condition. The poor female has less access to good medical health care service during pregnancy and after childbirth. Poor women are mostly dependent upon Government health facilities, which are neither sufficient nor efficient to serve all the needy pregnant women.

Sundari (1992) studied the maternal mortality in developing countries by collecting evidence on maternal mortality. She stated that an inadequate health care systems characterized by misplaced priorities contributes to high maternal mortality rates. Inaccessibility of essential health information to the women and the physical as well as economic and socio-cultural distance separating health services from the vast majority of women are only part of the problem. Even when the woman reaches a health facility, there are a number of obstacles to her in receiving adequate and appropriate care. These are a result of failures in the
health services delivery system: the lack of minimal life-saving equipment at the first referral level; the lack of equipment, personnel, and know-how even in referral hospitals; and worst of all, faulty patient management. Prevention of maternal deaths requires fundamental changes not only in resource allocation, but also in the very structures of health services delivery.

Further, concluded that most of the maternal mortality is due to “avoidable factors” either patient factors or structural factors. Patient factors are defined as those actions by the patient that are faulty, delayed arrival or non-arrival to the health care centre, failure to seek legal abortion or interference with pregnancy, nonuse of prenatal care, and transportation problems. Structural factors are inaccessible health services and failures in the health services delivery system with shortage of trained personnel, lack of equipment and supplies, and poor patient management.

Chatwin and Macarthur (1993) examined the maternal perceptions of their low birth weight infants, the neonatal hospital environment and attitudes toward general parenting during the perinatal period. It has long been realized that preterm birth precipitates a series of adjustments for the mother. The sample population consisted of thirty mothers whose infants fell into low birth weight (1501-2000 grams) and very low birth weight (1500-1000 grams) categories. The variables, maternal age and socio-economic status, were associated with maternal perceptions of the neonatal hospital environment. When changes in perceptions over time were assessed, mothers suggested that the medical variables (birth type, gestation and maternal health problems) and the psychosocial variables (maternal smoking and length of infant hospitalization) contributed significantly to the way they responded to the infant and birth experience. In the area of general parenting, analyses also revealed that the
psycho-social variables ordinal position in the family appeared to influence the variations in maternal attitudes.

Pillai G. (1993) in their study found that the immediate causes of maternal mortality include pregnancy and delivery and the management of complications such as hemorrhage, toxic and bacterial infections (sepsis), eclampsia, and obstructed labor. The poor health, nutrition, and socio-economic status of women are the underlying causes of maternal death. Gender bias in the allocation of meager food supplies results in the poor health and nutritional status of women, rendering a woman's pelvis too small which causes obstructed labour and even death. Socio-economic status is linked to access the family planning and health services which affect mortality and reproductive health.

Ram (1994) tried to present the experiences of maternity care among low caste women of the coastal fishing belt of Kanyakumari in Tamil Nadu and women's responses to modern medical management of pregnancy and births. The analysis reflected that women's decision whether or not to seek medical care during pregnancy and delivery and where to give births are based on a highly tuned appreciation of the ways in which class and caste power shape their experience of medical institutions.

Martey J.O. et al (1994) found in their study that prenatal care alone is not sufficient to prevent some deaths. The high mortality rate during delivery is a justification to improve the quality of care during delivery at all levels of the district health system. Causes of maternal death were postpartum hemorrhage (45.5%), jaundice in pregnancy (22.7%), obstructed labor (6.8%), eclampsia (6.8%), and fever (4.6%). 2.3% of deaths were attributed to ante partum hemorrhage, ectopic pregnancy, and septic abortion.
Nath L.M. (1994) study shows that in rural areas where the Government centers are particularly deserted, the community has chosen to erect its own health care system of private practitioners of all sorts and qualifications. Even in rural areas where a comprehensive health service is provided, with each household visited regularly by health workers, people depend upon practitioners of various types. Upon analysis, it was discovered that the reason for using this multiplicity of practitioners had nothing to do with the level of satisfaction with the Government service or with the accessibility of the services. Rather, when ill, the people make a diagnosis and then go to the proper place for treatment. If, for instance, they believe their malady was caused by the evil eye, they consult a magico-religious practitioner. These various types of practitioners flourish in areas with the best primary health care because they fulfill a need which is not met by the primary health care staff.

Thaddeus S. et al (1994) research mentioned the factors that:

- Delay the decision to seek care;
- Delay arrival at a health facility; and
- Delay the provision of adequate care.

Findings from their study indicate that while distance and cost are major obstacles in the decision to seek care, the relationships are not simple. There is evidence that people often consider the quality of care more important than cost. These three factors distance, cost and quality alone do not give a full understanding of decision-making process. Their salience as obstacles is ultimately defined by illness-related factors, such as severity. Also they found in their study that shortages of qualified staff, essential drugs and supplies, coupled
with administrative delays and clinical mismanagement become documentable contributors to maternal deaths.

**Bhatia JC** and **John Cleland** (1995) studied the self-reported symptoms of gynecological morbidity and their treatment in South India. This cross sectional community survey consisted of 3600 women aged below 35 years and having at least one child younger than 5 years. They noticed that anaemia, and lower reproductive tract infections, menstrual problems and acute pelvic inflammation were the reported problems by women. The women who reported that their symptoms lasted for more than one year were around 20-25 percent. The mean duration for symptoms associated with prolapsed, and vaginal/coloured vaginal discharge were 12 months and 26 months respectively. The proportion of women who sought treatment for various conditions except for infertility ranged from 43 to 55 percent. Women who had lower economic status, less education (fewer than 6 years of schooling), and lower class background were more likely to report symptoms of illness compared to other women.

**Parvez et al** (1995) made a community-based longitudinal study of discharge cases among women in Chandigarh during the period 1992-93. They observed that 30 percent of women had vaginal discharge for more than one year. These women were referred to a post–graduate institute located 5 kilometers away for further check-up and treatment. More than half of these women refused to go to the institute for treatment for various reasons such as lack of time, difficulty to go, unsuitable dates, and fear of multiple follow–up visits, nobody to take care of their children, expensive treatment and difficulty in locating outpatient department in the institute. All the women who came for check-up had chronic gynecological morbidity like cervical erosion, chronic cervicitis, non-specific vaginitis and cervical polyp.
Kwast B.E. (1996) found in his study that access was improved through training of Traditional Birth Attendants (TBAs) in timely recognition and referral of pregnancy/delivery/neonatal complications, while quality of care in health facilities was improved through modifying health professionals' attitude towards TBAs and clients, and implementation of management protocols.

Kumar et al (1997) studied the impact of availability of health centre on utilization of 600 married women in a rural area of Haryana. The study had focused on the utilization of maternity care and pregnancy outcomes. Out of the four villages selected, one had a Primary Health Centre, one had a Sub Centre and the other two, though not having any health centre, were located within 5 km of the health centre. All villages thus had a similar status of access to health centres. There was a high utilization of modern maternity care methods in the village PHC, though knowledge regarding antenatal care was uniformly poor in all the selected villages. Respondents in the villages having PHC and SC showed a greater preference for Modern Birth Attendant rather than Traditional Birth Attendant. On the whole, awareness and availability of modern maternity services had a positive influence on health seeking behaviour of pregnant women and pregnancy outcomes.

Ramasubhan, Rathika and Bhanwar Singh (1997) have conducted a qualitative study was done in Mumbai. The study tried to delineate the experiences of slum dwelling women regarding weakness and explore its linkages with reproductive health problems. Causes of weakness perceived by women were neglect of diet during pregnancy and childbirth, experience of sterilization, white discharge, tuberculosis, excessive housework, menstruation and mental stress. Health seeking for weakness takes place only when distress is so acute and it is not possible for them to do household works to fulfill their family member’s needs.
Asari V. Gopalakrishnan and Sathiya Susuman A., (1998) study based on married women in Kerala described that most pregnant women in the sample area attend the antenatal clinics, which had indirect effect on the lowering pregnancy wastage in term of miscarriages and still births. They also held the view that the increase in the rate of immunization of women and children and the improvement in food habits, personal hygiene and safe drinking water had influenced the reproductive health of women.

Begum (1998) conducted a hospital based prospective study at the Sree Avittom Thirunal Hospital in Trivandrum, Kerala. She noticed that 90.5 percent of the pregnant women were from rural areas and two–third belonged to lower socio-economic group; primigravide were 45 percent and around 93 percent of them had regular antenatal check-up. Among the study population, 53.3 percent were at high risk and 5.3 percent were of severe risk group rating. There were two maternal deaths among the high risk pregnancy group and were related to caesarian section. Caesarian section was greater in the high risk group compared to the low-risk group. This was statistically found significant. This study noticed that there was an increase in the rate of Caesarian sections with the increase in maternal age. It was also found that prenatal mortality and low birth weight were associated with high risk pregnancies. Manual labour and reduced food take during pregnancy have adversely affected the pregnancy outcomes.

Koenig et al (1998) analyzed the major issues related with the reproductive health among women in India. These studies demonstrate the central importance of close engagement with the community for the successful completion of such studies. This study illustrates the importance of giving appropriate medical care to the respondents. Many women utilized these surveys as an opportunity to address their reproductive health problems. The importance of ascertaining and
using local terminology and language when querying about gynecological conditions were well illustrated in this study. The biggest methodological problems in self-reported response on gynecological morbidity may be the underreporting of gynecological problems by women.

**Bloom S.S. et al (1999)** in their study of evidence to support that ante-natal screening and interventions are effective in reducing maternal mortality found out through Logistic Regression that the women with relatively high level of care had an estimated odds of using trained assistance at delivery than that was almost four times higher than women with low level of care. And similar results were shown for the women delivering in health facility versus home. This strong positive association between level of care obtained during pregnancy and the use of safe delivery care may help to explain why antenatal care could also be associated with reduced maternal mortality.

**Fazili F. et al (1999)** found in their research that perinatal mortality reflects the amount of pregnancy wastage due to fetal and neonatal deaths, and it is considered as a sensitive indicator of maternal and child health status in particular and community health status in general. Peri Natal Mortality Rate (PNMR) was significantly higher among illiterate mothers, in extremes of age, among those living in joint families, and those having incomplete antenatal care. PNMR was low among the higher socio-economic classes. Maternal weight had a significant effect upon perinatal loss.

**Pendse (1999)** examines changes in the profile of women dying in childbirth in Zanana Hospital, a specialist hospital in Udaipur, Rajasthan, India, based on information about 100 consecutive maternal deaths in the hospital during 1983-1985 and 1994-1996. The women who died in childbirth in the hospital in 1994-
1996 were poorer and in poorer health compared to women who died in childbirth in the hospital during 1983-1985, and most of them belonged to socially disadvantaged groups. Almost the same proportion had been attended by a trained midwife during the initial stages of delivery. Many had traveled longer distances and spent more money getting to the hospital in 1994-1996 than in the previous decade, and many had arrived at the hospital in a moribund condition that could not be saved.

Lastly, many of them succumbed to preventable causes of death than in the previous decade complications resulting from illegal abortions, severe anaemia and malaria. Most of the women who died in hospital in 1994-1996 would have died at home in the earlier decade, and their deaths would never have been recorded. To that extent, the changes over the decade may be viewed as positive. However, poverty, gender and social inequalities and lack of access to care and treatment at a point when their lives could have been saved are still bringing as many women to die in the hospital as ten years ago. Until these problems are addressed, women will continue to die needlessly in childbirth, within and outside hospital.

Acharya L.B. et al. (2000) in their study with regard to the access quality trade-offs, the evidence strongly suggests that basic improvement to health facility quality, (which are measured through availability of trained staff, equipment, supplies and facilities) is given more important priority than increase the number of health facilities to improve the access (measured in terms of travel time based on a normal mode of transport). All of these are user-perspective studies, that is, they predominantly aim to measure perceived quality of care of those people who actually visit the health facilities. The resulting information is then used as a basis to further improve quality of care with the ultimate goal to improve the
effectiveness of care, and/or to increase utilization. However, in assessing community preferences on modern health facilities, it is important not only to be informed about the preferences of those who actually use the facilities but also of those who do not use them.

**Oomman et al (2000)** studied the determinants of morbidity as perceived by women in relation to their socio-economic context. The study was carried out in three phases. First, an ethnographic study, second a cross section community based survey and third, a clinical study. In addition to key informant’s interviews, focus groups discussion, body mapping, participant observation, and direct observation, free listing, past illness narratives and semi-structured interviews were conducted. The study found that 47.9 percent of women had menstrual problems. The causes described by the women were weakness, worry, abortions, problems in delivery, eating hot foods, drinking too much tea, wearing a copper–T and illegal contacts. Around 20 percent of the women who claimed that they had prolapse could not distinguish between vaginal and uterine prolapse. Economic constraints are considered the significant underlying cause of all women’s illness because women’s perception of it can lead to physiological weakness. Majority of women did not seek any treatment for their illness like discharge, menstrual problems etc. In the case of severe illness, the most frequent first informed person was husband.

**Das, Mishra and Saba (2001)** had studied the effect of community access on the use of health and family welfare services in rural India based on NFHS data. The community access variables included in the study were distances to health facilities, family welfare/health worker’s visit and availability of all-weather road and presence of media/educational activities. Four northern States Uttar Pradesh, Madhya Pradesh, Bihar and Rajasthan were included in the study. The
results showed that distance from nearest health facility and availability of all-weather road has greater effects on contraceptive knowledge than use. The latter is more influenced by health workers' visits to the village. Distance also did not have a significant effect on vaccination of children or treatment of chronic illness. On the whole, community access showed little effect on use of preventive and curative health services as well as family planning methods. The factors, which did influence this significantly, were standard household living, women's education, women's exposure to mass media. Socio-economic and demographic factors are thus more important as compared to physical access in this regard.

Drazancic (2001) in their study found that the bad socio-economic background and a lack of organized antenatal and perinatal health care system are the reasons for high maternal and perinatal mortality. The author concluded that the policy with respect to improvement of antenatal booking, the number of prenatal visits of pregnant women, their childbearing under professional assistance to be adopted to decrease maternal and perinatal mortality.

Kaur M., et al (2001) in their study conducted at Slums of Delhi in 2001 was found that, 69.3% of the children were fully immunized with BCG, DPT3, OPV3 and measles, 15.7% were non-immunized. The major cause of incomplete immunization was postponement of immunization due to illness of the child (30.8%), whereas mother's lack of information about place, schedule and age of immunization (64%) constituted the main reasons for non-immunization. Immunization coverage of 69.30% was reported.

Kapil (2002) mentioned that the Integrated Child Development Services (ICDS) scheme is the largest program for promotion of maternal and Child health and nutrition. As per the findings the program services are coordinated at the village,
block, district, state and Central Government levels. The beneficiaries are children below 6 years, pregnant and lactating women and women in the age group of 15 to 44 years. The beneficiaries of ICDS are, to a large extent, identical with those under the maternal and child health programme. The programme provides an integrated approach for converging all the basic services for improved childcare, early stimulation and learning, health and nutrition, water and environmental sanitation aimed at the young children, expectant and lactating mothers, other women and adolescent girls in a community.

**Andersen et al (2002)** aimed to study the pregnant women’s diet, nutrient levels and how these match recommendations. It also attempts to describe how factors such as education level, economy and folk dietetics influence the women’s food choice and to give suggestions for the improvement of nutrition education in the existing antenatal care systems. Eating customs and economy appear to influence the women’s food choice negatively in relation to recommendations while factors such as education level, family type, pregnancy number and folk dietetics do not seem to have a negative effect. The amounts of foods recommended, especially green leafy vegetables must be shown to the women. The nutrition advice given by all levels of health providers must be the same and based on cheap, local, commonly consumed foods.

**Barathi and others (2002)** conducted a study in Thanjavur Medical College hospital from January 2001 to April 2001. The weight, height, head circumference, chest circumference and mid arm circumference were determined for 4000 mothers and their newborn within 24 hours of delivery using the standards prescribed by World Health Organization to access the influence of maternal anthropometry on neonatal anthropometry and to arrive at a formula to calculate the expected birth weight from the maternal anthropometry. Maternal
and neo-natal anthropometry was statistically correlated. It was found that the maternal weight has direct positive correlation with all the neonatal parameters. Maternal height directly influences neonatal Head Circumference (HC), Mid Arm Circumference (MAC) and height. So, weight gain in pregnancy is to be promoted by proper health education, dietary device and supplements of nutrition and Iron Folic Acid (IFA). High risk approach of pregnant mothers will be possible even at field level.

**Gokhale and others** (2002) explained the slow reduction in infant mortality rate in the last couple of decades. State-level aggregate data from the National Family Health Survey, 1992 and micro-level data on rural mothers were used for examining the influence of female literacy on reduction of infant mortality through increased use of Maternal and Child Health (MCH) services. Illiteracy of women was strongly associated with all variables relating to maternal care and infant mortality rate. Use of maternal health services increased in the worst to become the best groups, for tetanus toxoid, iron and folic acid tablets, hospitalized deliveries, and childcare services (vaccination). Illiteracy of women had a more detrimental impact on rural than on urban areas. Programmes like providing free education to girls, will yield long-term health benefits.

**Gokhale M.K. et al** (2002) showed in their study that illiteracy of females had a more detrimental impact on rural than on urban areas. In the event of high female illiteracy, male literacy was beneficial for improving the use of services and for reducing infant mortality rate. The micro-level study supported all major findings obtained for the national-level aggregate data. Programmes, like providing free education to girls, will yield long-term health benefits.
Lien et al (2002) analyzed that it is a well-accepted fact that Reproductive Tract Infection (RTI) is a major threat for women’s health. Globally, the morbidity and mortality among women are significantly caused by three different types of RTI. They are sexually transmitted diseases, endogenous infections and iatrogenic infections. The common sexually transmitted diseases among women are gonorrhea, chlamydia, syphilis, tri-chomenas and recently HIV infections. The endogenous infection is resulting from the overgrowth of organisms normally present in the reproductive tract, for example, candidacies and bacterial vaginitis. The iatrogenic infections are mostly related to medical procedures such as menstrual regulations, abortion and insertions. So, the prevalence of iatrogenic infections gives an ideal of the general quality of health service provision available for women in a community.

Mala (2002) in her study on “Reproductive and Child Health Issues in Kerala” clearly states that Kerala has impressive record in the area of reproductive and child health when compare to the rest of India. It enjoys low infant mortality rate and child mortality rate. This State has the lowest effective reproductive span for women in the country. High age at marriage and potential for short birth intervals independently contribute to low birth weight.

Partha De et al (2002) study’s results showed that children are more likely to receive immunization if their parents are a couple, with the father literate and the mother with at least a middle-school-education level who received antenatal care or delivered in an institutional environment.

Biswas, R., (2003), in his study on ‘Maternal Care in India reveals the gaps between Urban and Rural, Rich and Poor’. He says that in West Bengal State, it is common to see women in labour travelling on the backs of open, three-wheel
‘cycle vans’ over pot-holed roads to distant rural health centres. Many other women opt for home delivery, often under dangerously unhygienic conditions. By contrast, upper and middle class women in metropolitan areas spend thousands of rupees for delivery at private nursing homes. These women would not venture to the Government hospitals in the city, where, at times, two mothers with newborns must share a single bed. These and other scenarios illustrate the lopsided nature of maternal care in India, where maternity related complications are leading causes of death and disability among women of reproductive age. In this country of roughly 1 billion people, where women have, on average, about three children, some 440 women die of maternity related complications of every 100,000 live births. The United Nations estimates that at current levels of fertility and mortality, one out of every 55 women in India faces the risk of maternal death, compared with one in 80 in Pakistan and one in 610 in Sri Lanka.

**Adam Wagstaff et al** (2004) evidently showed in their study that in most countries, rates of mortality and malnutrition among children continue to decline, but large inequalities between poor and better-off children exist, both between and within countries.

**Mehra and Agrawal** (2004) stress that adolescents among the urban and rural poor have a high incidence of Chronic Energy Deficiency (CED) and anaemia, more so in girls than in boys. Adolescent pregnancies (15-19 years) contribute to 19 per cent of total fertility in India and record the highest maternal mortality rates. Besides maternal age, lack of education, low socio-economic status, maternal under nutrition and limited access to maternal health services are important determinants of poor pregnancy outcomes. Low birth weight is the major adverse outcome for the infant and an important determinant of increased child mortality.
Nirmala Murthy et al (2004) carried out a study to explore non-medical factors responsible for the persistently high maternal mortality in India showed that most deaths occurred at home and during the postnatal period. Most 'death cases' belonged to high-risk age groups, had high parity (3+), were socially disadvantaged, had not received pre-natal care and women with complications either had not gone to hospital or had gone too late. Delay in care was also because of lack of transport facilities, inappropriate referrals or poor emergency preparedness of referral facilities. Data suggested that about half the deaths could have been avoided if the health system had been alert and accessible. The critical determinants of avoidable death were families’ awareness about complications, emergency transport and preparedness of referral facilities. The study highlighted the need for health workers to stress on health education, care during the third trimester and postnatal period, and referral to appropriate and accessible facilities, even bypassing the hierarchical referral system if necessary.

Pallikadavath and others (2004) made an attempt to examine factors associated with antenatal care in rural areas of north India. They also attempted to investigate the access of those factors to specific critical components of care. They also brought out differences in the pattern of services received via health facilities and home visits. There was significant under-utilization of nurse/midwives in the provision of antenatal services and doctors were often the lead providers. The average number of antenatal visits reported in this study was revealed that the higher socio-economic status is associated with increased chances of receiving an antenatal check-up, and of receiving specific components including blood pressure measurement, a blood test and urine testing but not the obstetric physical examination, which is however linked to ever-use of family planning and the education of women and their husbands. Thus, pregnant women from poor and uneducated backgrounds with at least one
child are the least likely to receive antenatal check-ups and services in the four large north Indian States. Basic antenatal care components are effective means to prevent a range of pregnancy complications and reduce maternal mortality.

Yadav R.J., and Singh P., (2004) study conducted at Madhya Pradesh was found that lack of information (40.82%), fear of complications or obstacles (33.2%) and lack of motivation (25.97%) were the main reasons for non-immunization of children. It was also observed that about 78% of pregnant women received both the doses of TT2/Booster. Further, about 42% of pregnant women received full package of ANC, that is, minimum three ANC visits, TT2/Booster and Iron Folic Acid tablets as in the state as compared to about 53% of women for India as whole. Though, the immunization programme reached about 88% of target children, only about 61% received all the vaccines, that is, BCG, DPT, OPV measles.

Taffna N., and Chepngeno G., (2005) in their article, “Determinants of Health Care Seeking for Childhood Illness in Nairobi” has found that, of the 999 (33.10%) children who were reported to have been sick, medical care of some sort was sought for 604 (60.50%) children. Lack of finances (49.60%) and a perception that the illness was not serious (28.10%) were the main reasons given for failure to seek health care outside the home. Health care seeking was most common for sick children in the youngest age group, that is, 0-11 months. Household income was significantly associated with health care seeking behaviour up to certain household levels above which its effects were stabilized.

Agarwal and others (2006) in their study reveal the prevalence of anaemia during pregnancy. The lactation was significantly lower as disclosed in the National Family Health Survey (NFHS) 1998-1999 when compared to earlier
surveys. The contributing factors found on multiple regression analysis for anaemia in pregnancy and lactation are: literacy, occupation and standard living index of the women study; their awareness about anaemia, its prevention by regular consumption of iron foliate tablets and increase in food intake. Maternal height, age at marriage, parity and foetal loss also contribute to hemoglobin level. There are interstate differences; lower fertility, higher literacy and better diet were observed in Himachal Pradesh as compared to that of Haryana.

The literacy and nutritional status of women in Tamil Nadu is lower than that in Kerala. The remaining 3 States have poor fertility, lower social living index and nutritional status with 90 per cent women being anaemic during pregnancy and lactation. Low prevalence of severe anaemia in Orissa as compared to Assam greatly owes to availability and consumption of iron folate tablets. The antenatal services in the first trimester and checkup by a doctor, along with availability and consumption of iron folate tablets over 3 months in all the States has influenced hemoglobin levels.

Baker and others (2006) aimed to demonstrate that the breastfeeding practices can be improved to a level in developing countries. About one-fourth to one-half of all infant deaths in developing countries occurs in the first week of life. Immediate breastfeeding within the first hour, followed by early exclusive breastfeeding, improves the health and survival status of newborns. Breastfeeding is an entry point to work at all levels of the healthcare system. Hence, within communities, a comprehensive training for health care workers and also the community members is essential.

Krishna D. Rao et al (2006) found in their study that better staff and physician interpersonal skills, facility infrastructure, and availability of drugs have the largest
effect in improving patient satisfaction at public health facilities. Also in their study they concluded that, in India and many developing countries, the excessive emphasis on service coverage and inputs in the provision of health services has ignored the needs of the people for whom these health services exist. Incorporating patient views into quality assessment offers one way of making health services more responsive to people’s needs. It also gives users an opportunity to voice their opinion about their health services. While conducting this study, they found many instances in which patients were eager to record their concerns about the services they had received in the hope that some action would be taken. It is likely that the very act involving patients in evaluating their health services will make providers more sensitive and alert to patient needs.

Mony et al (2006) focus on the demographic and domestic environmental status, and maternal health care services in two slums of Vellore town, Tamil Nadu, in 2001. There were 3334 families settled in the two slums and their population was 15280. Their sex ratio was 965:1000. Among the antenatal women, 87 per cent took iron tablets and 94 per cent took tetanus toxoid. Of them, 85 per cent had normal vaginal deliveries. The crude birth rate was 25.7/1000. A sizeable proportion had inadequate access to high quality antenatal and obstetric care services. They observe that reliable, local information is essential for managing a decentralized health care system.

Moran A.C. et al (2006) highlight their findings from their study that how birth-preparedness and complication readiness may be useful in increasing the use of skilled providers at birth, especially for women with a plan for saving money during pregnancy. Controlling for education, parity, average distance to health facility, and the number of antenatal care visits, planning to save money was associated with giving birth with the assistance of a skilled provider.
Ager A. et al (2007) in their study examined the patterns of service utilization across the rural population of four districts of Orissa, with special reference to perceptions of the availability and quality of state services at the primary care level. Despite emphasis on strengthening local health care provision, concern remains regarding the rates of utilization of state provided households services, reported utilizing a wide range of health care providers; although hospitals constituted the most frequently and Primary Health care Centers (PHCs) the least frequently accessed services. Private practitioners (qualified and unqualified) represented a major sector of provision. This included high rates of access by scheduled tribes and castes (running at approximately twice the rate of access to both local and PHC provision).

Elizabeth and others (2007) stress Low Birth Weight (LBW) is a key determinant of neonatal mortality, morbidity, subsequent growth and development as well as early onset of adulthood diseases. Preterm and term LBW babies are born with significantly lower nutrient reserves at birth compared to term-normal babies. As this reserve may be further lowered by recurrent infections and inappropriate feeding habits, there is a need for special feeding and nutrient supplements in this group. Specialized nutritional surveillance and supplements are recommended for LBW babies to promote optimum growth and prevent sub-clinical nutrient deficiencies. Infant feeding practices should be strengthened and integrated with the existing health care programs to reach all the beneficiaries. Along with the existing special supplementation programmes like iron, folic acid, vitamin A, iodine etc., calcium supplementation should also be considered. It is also essential to concentrate on the girl child, the adolescent girl, prospective mother and prenatal mother to ensure optimum nutrition and nutrient transfer to future offspring.
Guha Mazumdar P. et al (2007) in their study shows that, for the majority of women's health problems biomedicine is regarded as the first choice, failure of which leads clients to seek treatment from Indian System of Medicine (ISM) as a final resort. Nevertheless, women showed a preference for ISM treatment for certain specific health problems, strongly backed by a belief in their efficacy. Of the predictors that positively influenced women's choice of ISM treatment, 'strong evidenced-based results' was found to be the most important. Women's preference for ISM is dependent on the availability of competent providers.

Johns and others (2007) in their study on “Estimated global resources needed to attain universal coverage of maternal and newborn health services” specify that an estimated 15 per cent of pregnant women in developing countries experience pregnancy related complications, 7 per cent of them require care at centers with surgical capacity (referral care) and 2-3 per cent require surgical care. Nearly 530000 women die annually from pregnancy related complications. Furthermore, each year an estimated 4 million babies die within the first 4 weeks of life and around three-quarters during the first week of life. Deaths among neonates account for almost 40 per cent of deaths occurring among children aged below 5 years and for more than half of all deaths are among infants. An additional 3.3 million babies are stillborn, a quarter of them dying during birth.

Susmita Bharati et al (2007) expressed in their study that the status of literacy of mothers and standard of living of the family are of prime importance in improving the obstetric health care practices. The study indicates that the educated women with high standards of living have an emphasized role in the practice of more maternal health care. The study shows that rural antenatal care is still mostly based on Indian traditional system. It is the women who need to be
educated and must be made aware about the importance of the health care for ensuring healthy pregnancy and safe delivery.

Dongre A.R. (2008) study found the gap between mothers' knowledge and their health seeking behavior for sick newborn and explored their deep perceptions, constraints and various traditional treatments. Most of the mothers of sick newborns knew that sick child should be immediately taken to the doctor and only around 50% of such sick newborns got treatment either from Government hospital or from private hospital and almost the 50% of sick babies received no treatment. The reasons for not taking actions even in presence of danger signs/symptoms were ignorance of parents, lack of money, faith in supernatural causes, non-availability of transport, home remedy, non-availability of doctor and absence of responsible person at home. For almost all the danger signs/symptoms supernatural causes were suspected and remedy was sought from Traditional Faith Healer (Vaidu) followed by Doctor of Primary Health Centre and private Doctor. Comprehensive intervention strategies are required to change the behaviour of caregivers along with improvement in capacity of Government health care services and National Health Programmes to ensure newborn survival in rural area.

Kayode Osungbade et al (2008) assessed the content of antenatal care and adequacy of maternal health care and concluded that the antenatal care service has reasonable capacity for intervention against pre-eclampsia and some foetal problems and it could contribute to delivery in a health facility and by a health worker. They also suggested that health care centers are to be equipped with the capacity to detect anemia and proteinuria in order to improve the antenatal care service. Furthermore, iron and foliate supplements in pregnancy should be intensified.
Dogba M. et al (2009) in their study concluded that (a) staff shortages are a major obstacle in providing good quality Emergency Obstetric Care (EmOC), (b) women are often dissatisfied with the care they receive during child birth and (c) the technical quality of EmOC has not been adequately studied.

Anwar et al (2009) concluded in their research that the human resource constraints are the major barrier for maternal health. Sanctioned posts for nurses are inadequate in rural areas of both the divisions; however, deployment and retention of trained human resources are more problematic in rural areas. To improve maternal healthcare, there is a need for a human resource plan that increases the number of posts in rural areas and ensures availability. According to them, all categories of maternal healthcare providers also need training on evidence based techniques.

Chersich and others (2009) assessed the health status of women. Throughout Kenya the first year after childbirth, women had high levels of morbidity. Interface with health workers at child health clinics should be used for treatment of anaemia, screening and treatment of reproductive tract infections, and provision of family planning counseling and contraception. Providing these services during visits to child health clinics, which have high coverage both early and late in the year after childbirth, could make an important contribution towards improving women's health.

Chowdhury Mahbub Elahi et al (2009) stated through their study that access to and use of comprehensive Emergency Obstetric Care (EmOC) services possibly is the major contributor to the reduction in maternal mortality. Policies that bring expansion of female education, later childbearing, better financial access to the
poor, and poverty alleviation are also essential to sustain the success achieved to date.

Jain and others (2009) explained that early and Exclusive Breast-Feeding (EBF) is important to reduce the childhood mortality and morbidity. Data revealed that only 23.4 per cent mothers in India start breast feeding within one hour of the birth. Reports from the developed countries also have shown that up to 25 per cent of mothers face the problems of starting the breast-feeding in first 7-10 day. However their perception of not enough milk is the single most common predictor of early termination of breast-feeding. Problems of lactation are more common in young age and first time mothers. Young age and first time mothers need more counseling on breast feeding and its related problems.

Kaveri Gill (2009) in his study concluded that the National Rural Health Mission is on the right track of addressing the rural health care with the institutional changes it has brought within the health system. But there are problems in implementation, so that delivery is far from what it ought to be with respect to physical infrastructure, medicines and funding. With respect to human resources and to the extent these impact on actual availability of services, structural issues of some complexity need careful resolving with a definite long term investment in the training and education of paramedical and medical staff.

Lawn J.E. et al (2009) explained in their study that even in high-performance settings, there is scope to improve intra-partum care and especially reduce impairment and disability. Addressing missed opportunities for births already occurring in facilities could avert 36% of intra-partum related deaths. Improved quality of care through drills and audit are promising strategies. However, the majority of deaths occur in poorly performing health systems. Therefore, it require
urgent strategic planning and investment to scale up effective care at birth, neonatal resuscitation, and community mobilization as well as to develop, adapt, and introduce tools, technologies, and task shifting to reach the poorest.

**Mrisho M. et al** (2009) found in their study that efforts to improve ante-natal and post-natal care should focus on addressing geographical and economic access while striving to make services more culturally sensitive. Ante-natal and post-natal care can offer important opportunities for linking the health system and the community by encouraging women to deliver with a skilled attendant. Addressing staff shortages through expanding training opportunities and incentives to health care providers and developing postnatal care guidelines are key steps to improve maternal and newborn health.

**Narahari and others** (2009) attempt to find the pediatric health in terms of feeding practices among ever married women, who have at least a child in their reproductive span. They belong to the Porja, a primitive tribal group of Visakhapatnam District in Andhra Pradesh. About 71 per cent of them squeezed out the ‘colostrum’ (milk) to start the feeding to the baby, thereby depriving of their babies from ‘colostrum’, a thick yellow liquid rich in protein that provides natural immunity. This may be due to illiteracy and lack of awareness about the nutritive and immunity value of the colostrum. It is found from the study that the tribal women are highly ignored about pediatric health care and breast feeding.

**Sadiqua et al** (2009) studied the medical and socio-economic causes of maternal deaths and found out that high risk groups are women with low socio-economic status, illiteracy, low-earnings jobs, parity and bad obstetric history. The sixty-nine percent of deaths occurred in the postpartum period, 51% took
place within 24 hours of delivery. Also the study identified the gaps in reporting of maternal deaths and the profile of the dead women and causes of death.

**Sharad D. Iyengar et al** (2009) study’s findings indicate several factors that contributed to maternal mortality. Lack of skilled attendance and immediate postpartum care were major factors contributing to deaths. Improved access to emergency obstetric care facilities in rural areas and steps to eliminate costs at public hospitals would be crucial to prevent pregnancy-related deaths. Although the high prevalence of health conditions and diseases, including TB and anemia, are identifiable as direct or indirect causes of death, important societal and health systems factors constrain women from accessing quality health services. If reduction in maternal mortality is to become a reality, women in rural regions will require more efficient access to high-quality delivery and emergency services at an affordable cost.

Further, they concluded that widespread irrational practices by a range of care providers can adversely affect women and newborns while inadequate observance of beneficial practices and high costs are likely to reduce the benefits of institutional delivery, especially for the poor. Government health agencies need to strengthen regulation of delivery care and, especially, monitor perinatal outcomes. Family preference for hastening delivery and early discharge also require educational efforts.

**Sharad D. Iyengar et al** (2009) stated in their study that there is a lack of doctors in the PHCs, especially in tribal Districts, and the availability of specialists at higher levels is even worse. Their review further shows that human-resource capacity, especially of specialists and skilled midwives, has been deficient, and referral arrangements continue to be weak. Non-residence on part of field staff,
such as ANMs, whose personal mobility, security, and family needs have not been met, seriously impedes access to round-the-clock services. Efforts, such as raising salaries or contracting private practitioners, have failed to boost the availability of specialists adequately. The reasons for lack of staff are multiple. The unreliable evidence points to the apparent perception of lack of safety, especially for female staff in some areas prevented specialists to Government service. Several specialists posted at the Community Health Centres (CHCs) manage to get themselves posted in peri-urban CHCs or on deputation in District hospitals. Given the unwillingness of specialists to provide services at rural CHCs, the Government should train and empower much greater numbers of graduate doctors to provide EmOC services.

Sharma M.P. et al (2009) found in their study on assessment of institutional deliveries under Janani SurakshaYojana (JSY) that the quality aspects of institutional deliveries are far from desired level mostly because of lack of resources, both manpower and materials; non achievement of Indian Public Health Standards etc. The service quality related to antenatal, intra natal and postnatal care need to be improved. The Janani SurakshaYojana is perceived as an effective scheme by the beneficiaries but gaps in resources and lack of quality in services needs to be adequately dealt with. It is found that the necessary drugs were in short supply and use of pantograph was absent in health facilities. Also the quality of Emergency Obstetric Care services (EmOC) was still poor due to the lack of blood storage units and anesthetists. Further, they found out that private accredited hospitals fared better as they had the manpower and managed more complicated cases as compared to Government facilities.

Prakasamma (2009) states that Andhra Pradesh, a large state in southern India, has a high maternal mortality ratio of 195 per 100,000 live births despite the
improvements in social, demographic and health indicators over the last two decades. This contrary situation has been analyzed by using findings of different studies on maternal mortality, and four factors have been presented for consistently high maternal mortality in the state. First, the disproportionately high focus on family planning towards population stabilization reduced the emphasis on maternal health in the peripheral hospitals, resulting in low use of these facilities for childbirths. Second, the growth of services in primary health centres was not given adequate emphasis, resulting in the weakening of the peripheral health system. Third, there was little emphasis on developing a cadre of midwives who would have primarily focused on maternal health. Lastly, the low status of women in the state has hampered timely referral and access to services.

**World Health Organization** (2009) in its study on increasing access to health workers in remote and rural health areas found the problems of geographical distribution rather than a lack of physicians. The movements of health workers in general, such as turnover rates, absenteeism, unemployment or dual employment has a correlation between the factors influencing the choices and decisions of health workers to practice in remote and rural areas and the categories of interventions that could respond to those factors. The deepest concerns of health workers when it comes to practicing in remote and rural areas are those related to the socio-economic environment, such as working and living conditions, access to education for children, availability of employment for spouses, insecurity, and work overload.

However, on the basis of various reviews they concluded that birth spacing, prevention of indoor air pollution, prevention of intimate partner violence before and during pregnancy, antenatal care during pregnancy, Doppler ultrasound

Further, their review demonstrates that Reproductive, Maternal and Newborn Health (RMNH) are inextricably linked, and that, therefore, health policies and programmes should link them together. Such potential integration of strategies would not only help to improve outcomes for millions of mothers and newborns but would also save scant resources. This would also allow for greater efficiency in training, monitoring, and supervision of health care workers and would also help families and communities to access and use services easily.

Anita Raj et al (2010) identified in their study that the infant and child malnutrition is significantly found more among the children born to mothers married as minors than in those born to women married as adults. The study also reveals that the infant and child mortality is the consequence of early motherhood, low maternal education, and other indicators of poor maternal health and socioeconomic status factors all significantly linked to early marriage of girls.

Bhatta Z.A. et al (2010) demonstrated in their review that opportunities for assessing outcomes for both mothers and newborns have been poorly realized and documented. Most of the interventions reviewed will require greater quality evidence before solid programmatic recommendations can be made.
Christiana R.T. et al (2010) found in their study that strategies to increase the accessibility and availability of health care services are important particularly for communities in rural areas. Financial support that enables mothers from poor households to use health services will be beneficial. Health promotion programmes targeting mothers with low education are vital to increase their awareness about the importance of antenatal services.

Magoma M. et al (2010) found in their research that increasing coverage of skilled delivery care depends upon improved training and monitoring of health care providers and greater family participation in antenatal care visits.

Sheela Saravanan (2010) while assessing the contribution of Traditional Birth Attendants (TBAs) in providing maternal and infant health care service at different stages of pregnancy and after delivery and birthing practices adopted in home births, found out that apart from TBAs, there are various other people in the community also involved in making decisions about the welfare and health of the birthing mother and new born baby. However, TBAs have no significant roles in delivery, postnatal and infant care in India. Certain traditional birthing practices such as bathing babies immediately after birth, not weighing babies after birth and not feeding with colostrum are adopted in home births as well as health institutions in India. Therefore, there is a thin precarious balance between the application of biomedical and traditional knowledge. Customary rituals and perceptions essentially affect practices in home and institutional births and hence training of TBAs need to be implemented in conjunction with community awareness programmes.

Ekabua J. et al (2011) found through their study that awareness of birth preparedness/complication readiness, by parturient, during antenatal care was
very low (21.5%). To reduce maternal deaths through antenatal care, it is critical to link antenatal care with detecting and treating causes of maternal mortality by a skilled attendant.

**Gabrysch S. et al** (2011) concluded from their review that there is ample evidence that higher maternal age, education and household wealth and lower parity increase the use of MCH services like urban residents. Facility use in the previous delivery and antenatal care use are also highly predictive of health facility use for the index delivery, though this may be due to confounding by service availability and other factors. They also have an opinion that Obstetric complications also increase the use of MCH services but are rarely studied. Quality of care is judged to be essential in qualitative studies but is not easily measured in surveys, or without linking facility records with women. According to them, distance to health facilities decreases the use of MCH services but is also difficult to determine. Further they suggested that studies of the determinants of skilled attendance should concentrate on socio-cultural and economic accessibility variables and neglect variables of perceived benefit/need and physical accessibility.

**Gross K. et al** (2011) found out in their study that efforts to improve antenatal care should address shortages of trained staff through expanding training opportunities, including health worker cadres with little pre-service training. They suggested that attention should be paid to the identification of informal practices resulting from individual coping strategies and “street-level bureaucracy” in order to tackle problems before they become part of the organizational culture.

**Meenakshi Gautham et al** (2011) in their study found that most rural persons seek first level of curative healthcare close to home, and pay for a composite
convenient service of consulting-cum-dispensing of medicines. Non-Degree Allopathic Practitioners (NDAPs) fill a huge demand for primary curative care where the public system does not satisfy and are *de facto* first level access in most cases.

**Nyamterna A.S. et al** (2011) study presents a list of evidenced-based packages of interventions for maternal health, their impacts and factors for change in resource limited countries. It indicates that no single magic bullet intervention exists for reduction of maternal mortality and that all interventional programmes should be integrated in order to bring significant changes. They stated that the State leaders and key actors in the health sectors in these countries and the international community are proposed to translate the lessons learnt into actions and intensify efforts in order to achieve the goals set for maternal health.

**Ray S.K. et al** (2011) found in their study that large number of patients did not avail any services when they fall sick especially in the tribal District where distance, poor knowledge about the availability of the services and non-availability of medicine in addition to the cost of treatment and transport exists. Utilization of Government health facilities was around 38% followed by unqualified Practitioners and Private Practitioners. Referral was mostly by self or by close relatives/families. Also attention is required with respect to the cleanliness of the premises, safe drinking water, face-lift of PHCs and SCs, clean toilet with privacy. They suggested that an attempt should be made to improve utilization by cordial behaviour, providing more time for patient care by the Doctor and staff, explain their prescription and report, reducing time for registration as well as waiting and finally cost of medicine they can afford.
Lewando Hundt et al (2012) found in their study that there are issues of accessibility in terms of distance, and of acceptability in relation to the lack of local and female staff, lack of cultural competencies and poor communication. Also they found that provision of accessible and acceptable health care in rural areas poses a challenge to health care providers and these providers of health care have a developing partnership that could potentially address the challenge of provision to this rural area.

Upadhyay R.P. et al (2012) in their study on “the role of prevalent culturally driven beliefs and practices in influencing the home based new born care”, found that significant portion of mothers have some beliefs/practices with respect to care of the cord, taking the baby out of the house for the first time. Also around 11% of the mothers did not prefer their baby to be weighed at frequent intervals because according to them, doing so could lead to slowing of the growth of the baby. Further the authors concluded that traditional knowledge and practices must be considered before developing neonatal health care intervention strategies.
2.2 STUDIES RELATED TO UTILIZATION AND NON-UTILIZATION OF MOTHER AND CHILD HEALTH

Several studies have been conducted on the utilization of existing health care services in India. A majority of the studies have revealed the very poor image that Government health centres have among the people. Some of these studies have indicated that only 10 to 20 percent of the villagers utilize the Government health services. Among the small proportion of villagers who used the facilities, a majority are dissatisfied with the services, mainly because of the non-availability of medicines and the impersonal behaviour of the health functionaries.

Clarke and Murdie (1978) in a study of the utilization of the emergency services in a hospital in Toronto focused on how distance from the facility affected the decision to visit the facility. The results of this study also confirmed the geographical theory of distance decay since the visits declined with distance from the hospital.

Annis (1981) in a study on rural Guatemala reported the relationship between physical access and utilization of health services. The results depicted that utilization declined steeply with distance. The problem of under-utilization of health posts was the result of understaffing and poor quality of services rather than distances as a hindrance.

Joseph and Bantock (1982) stressed on the importance of physical accessibility by citing the persistence of distance decay effects in utilization patterns of most health services. In rural health care delivery in Canada, the low density and high dispersion of population makes physical accessibility all the more important, especially quality of services playing a determining role. They emphasized the
need to measure potential physical accessibility in order to identify the most disadvantaged regions and take necessary action to correct it. Potential accessibility refers to locations of population, relative to that of physicians. This is similar to measuring catchment area of the physician/service.

Jena and Pati (1989) aimed to focus the problems of maternal and child health services, causes of under-utilization of services both from the demand side and the supply side and suggest measures for improvement of the same. Though the Crude Death Rate (CDR) (deaths per 1000 population) and Infant Mortality Rate (IMR) (infant deaths per 1000 live births) are declining in India, the rates are quite higher, when compared with many developing countries. Most of these premature deaths and sufferings of the innocent lives could be prevented by proper education, ante-natal care and immunization.

The main reasons for under-utilization of health services are ignorance, superstition and poverty. The medical infrastructure in the country is inadequate and it is not in a position to render the maximum services. The main reasons are inadequate staff, lack of regular supply of medicine and lack of proper and rational administration without reward and punishment. The remedies for improvement are: proper education not only for mothers but also of the elders in the family, nutrition supplementary, part-time doctors, proper incentives, expansion of sub-centres and mobile unit, decentralization of administration, involvement of voluntary organizations and private practitioners.

Kapil U., Bharel S.M., and Sood A.K., (1989) conducted a study on Utilization of Health Care Services by Mothers in an Urban Slum Community of Delhi was found that only 118 (55.38%) mothers utilized services from MCH centres while
rest availed from Registered Medical Practitioners (RMPs). The reasons for non-utilization of centers were:

- a) Prolonged waiting time (42.25%);
- b) Heavy load of work at home (23.35%);
- c) Long distance (15.49%); and
- d) About 3% mothers did not utilize centre services due to unsuited time.

No significant difference was found between literacy status of women and utilization of centres services. It was found that paramedical workers did not make domiciliary visits regularly.

Nougtara et al. (1989) had investigated the utilization of MCH services in a surveyed population. The result showed that access to PHCs did not imply utilization since the creation of a network of Community Health Workers (CHWs) had not significantly improved the utilization of MCH care by target groups. However, the availability of health centre within the village had significantly affected utilization of MCH services.

Bhardwaj N. et al (1990) find a wide gap between provision and utilization of maternal care services. They suggested that most of the deliveries are conducted at home by untrained traditional birth attendants, the people must be educated to utilize the services of trained personnel.

Bronstein and Morrisey (1990) in their study in rural Alabam, focused the factors influencing the distance travelled by women to obtain obstetrics care for two time periods - 1983 and 1988. They found that better quality of care was the consideration in the cases as larger hospitals with more specialized care
attracted more patients. The interesting finding was that most decisions to travel farther were voluntary, since they bypassed a closer facility providing similar care. Another interesting finding was that with increase in income in rural areas, distance travelled also increased considerably, in spite of availability of rural hospitals providing similar facilities located nearer to home. This shows that rural hospitals were perceived inferior in economic sense as compared to urban hospitals, which were the preferred sources.

Chatterjee (1990) argued that when permission and ability to interact with need, a demand for health services is generated. Actual utilization of health services occurs when this generated demand overlaps with availability. In the Indian context the situation is further complicated by women's perception of illness, which is affected by their cultural conditioning to tolerate suffering. Because of this tolerance of suffering the perceived need for health services can be small, even when the actual need is great.

His review of various studies has revealed that health care utilization, a long-standing concern for many developing countries, is sensitive to user perceptions of quality. For these reasons, patient perceptions of health services are now an important part of quality assessment in health care. The few studies on user perceptions conducted in developing countries have explained that patients are able to evaluate structural process and outcome in terms of measures of quality. Patient perceptions of quality have been a focus of research due to the increasing need to provide patient-centered care, with the expectation that such care would lead to better patient outcomes and continued use of care. Patient satisfaction was associated with provider responsiveness, assurance, communication, and discipline.
In developing countries, where quality is one of the major challenges to be met under the current health care reforms, the measurement of perceived quality is also justified by the powerful influence that these perceptions have on utilization of services. Several studies offer evidence on the growing interest in users’ perception or satisfaction in developing countries. Surprisingly, little research has been done on patient perceptions of quality in India. Health care services are not reaching their programme goals because of poor utilization. Provision and utilization can only be brought into balance if there is an understanding of people’s health seeking behaviour and the felt needs of communities.

Irudaya Rajan and Navaneetham (1994) assessed the impact of mother’s education on utilization of maternal and child health services in three Districts of Kerala. Educated mothers use better antenatal and post-natal care, which results in better health of the mother and child. The study proves that illiterate mothers who received tetanus injections during pregnancy were only 41 percent, whereas this was 82 percent among mothers who completed school education.

Sood A.K., and Nagla B.K., (1994) in their study conducted at Rohtak, Haryana in 1994 has revealed the pattern of utilization of various treatment sources by rural women for common maternal and child health problems. It is found from that nearly 61.8% of the women had contacted private practitioners, 50% had contacted Anganwadi centres, 21% to faith healers, 18.4% visited sub-centres, 19.7% to PHCs and 6.5% to Government hospitals in last six months for various treatment purposes.

Barlow and Diop (1995) in an exercise on measurement of cost effectiveness of health services using sample data from Burkina Faso and Niger, have used distance as an important input variable. Cost effectiveness is one of the most
popular methods of analysis in health economics and is a vital tool for evaluating efficiency of health care systems which have to provide the most optimum level of services within the given budget constraints. Distance, as measured by time taken to reach a facility has been used as a variable representing price of health care, along with user charge and child care costs. These price variables are expected to affect health-seeking behaviour of the women in the study area. Results of the multivariate analysis confirmed that longer travel time leads to less care, since there is greater reluctance on the part of women seeking prenatal care to travel longer distances.

Gupte R.K., and Kumar A., (1996) in a study conducted among Slum Dwellers of Delhi in 1996 found that among 1092 mothers of children under 2 years of age, 83% of mothers had presented for antenatal care, primarily to a Government facility and 77% of pregnant women received 2 tetanus toxoid injections, 46% of deliveries occurred at home, 34% deliveries were in Government hospitals or clinics and 15% occurred in private facilities. Doctors attended all deliveries at hospitals and 24% of those at health centres. In 36% of home deliveries, only family members were presented and assisted the deliveries.

Aggarwal O.P., et al (1997) in their article, “Utilization of Antenatal Care Services in Peri-urban area of East Delhi” has stated that 74.3% mothers got themselves registered at one of the medical care centres viz. MCH centers, Hospitals, Nursing Homes, Dispensary etc. and the rest did not avail such facility, and among them 10.8% did not receive tetanus toxoid vaccines, 26.4% did not pay even a single visit during antenatal period, though 23.2% paid 4 or more visits. About 70% of deliveries took place at home and rest of deliveries at one of the medical care institutions like MCH centre, Hospital, Nursing Home etc. Of all at the home deliveries 81.9% were conducted by village untrained Dai’s and the
rest by trained staff, that is, trained Dai’s, ANM etc. Nearly, half of the respondents received 25 or more tablets during the whole period of pregnancy, while 27.2% of them did not receive any iron and folic tablet.

Noorali, Luby and Rahbar (1999) in their research report stated the effect of distance on utilization of health services based on a survey of utilization of Government health centres in Thatta District of Pakistan. It was found that those living within less than 4 km from the facility were no more likely to use the facility than those living more than 4 km away. This shows that distance was not significantly influencing utilization. Proximity to private facility influenced the non-use of government facility, as in such cases people were less likely to visit the government facility; herein, the cost of treatment was another major reason. Only those who could not afford private treatment visited the government facility.

Acharya and Cleland (2000) raised questions about whether access or quality is more important in influencing utilization of MCH services in rural Nepal. Access was measured in terms of travel time to the nearest health post and coverage by outreach workers. Quality of services, measured by the overall Quality Index showed very strong relationship with utilization. In comparison, the effect of travel time was found to be modest. The authors concluded that qualitative improvement of the existing health centres were more important than increasing their numbers in order to improve coverage and utilization.

Ranjan D., et al (2001) in their article' “Utilization and Coverage of Services by Women of Jawan Block in Aligarh” has stated that only 57.2% of the antenatal cases were registered, 78% at the rural health training centre, 15% at the community health centre and the remaining 6.8% by private practitioners. Of all ANC registrations, 66.1% got themselves registered in second trimester, while
18.6% and 15.2% women were registered in third and first trimester respectively. The reasons for non-availing ANC services were lack of knowledge (11.4%), obstacles (36.4%) and socio-cultural taboos (52.3%). Nearly, 90% of the deliveries were domiciliary and out of which 3% were still births. Among the 92 home deliveries, 46.60% of the deliveries were attended by trained persons among whom 40.2% were Doctors and the remaining 6.40% by trained persons.

Dilip T.R., (2002) found from his study that the preference of public/private sector depends on nature of service in demand. The role of private providers in health care was found to be limited in the case of family planning services, but almost 50 per cent availed delivery care services from the private sector. A majority of women were found to prefer treatment from the private medical service providers if their children were suffering from fever or cough. Class differentials were severe, with the public sector being the major provider of Reproductive and Child Health care services for the poorer sections of society. People with a higher potential to pay preferred the private sector irrespective of the nature of service they required.

Navaneetham and Dharmalingam (2002) argued that the differential difficulties in access to healthcare facilities between rural-urban areas was an important factor for lower utilization of maternal healthcare services, particularly for institutional delivery and delivery assisted by health personnel in the rural areas of the three states. Although illiterate women were less likely to use maternal healthcare services; there was no difference among the educated. Results from the study indicate that health workers might play a pivotal role in providing antenatal care in the rural areas. The level of utilization of maternal healthcare services was found to be highest in Tamil Nadu, followed by Andhra Pradesh and
Karnataka. Part of the interstate differences in utilization was likely due to differences in availability and accessibility among the three south Indian States.

**Vibha** (2002) insists that in India the care provided to women through the health services has focused on ante-natal care, delivery, and contraception. In big city hospitals where antenatal and delivery services are utilized by many, there are very few women attending postnatal clinics. Post-natal morbidity is common among Indian women and complications like postpartum hemorrhage and puerperal sepsis are important causes of maternal deaths. As per the findings it is therefore imperative that health providers should take note of the situation and ensure that women receive information on the need and importance of post-natal care and also get accessible and acceptable post-natal care.

**Banerjee, B.,** (2003) in his paper on ‘A Qualitative Analysis of Maternal and Child Health Services of an Urban Health Centre, by Assessing Client Perception in terms of Awareness, Satisfaction and Service Utilization’ made an attempt to assess the perception of the clients in terms of knowledge, satisfaction and utilization regarding the MCH services rendered by the MCH centre and to analyze the demographic and socio-cultural barriers to higher levels of perception. Nearly two third of the sample perceived the services to be excellent or good. Regarding their awareness, convenience, utilization and satisfaction, 22.5% felt it was satisfactory and 16% thought it was poor or very poor. Maximum utilization was found in case of immunization, followed by investigations. Utilization was minimum in case of antenatal care. Of the total sample, 62.75% had availed all the services at this centre only. The MCH services rendered by the centre had succeeded in generating awareness regarding this service, achieving satisfaction and ensuring utilization among majority of the sample.
Chakraborty, N., et al (2003) conducted a study to find out the Determinants of the Use of Maternal Health Services in Rural Bangladesh. It has revealed that both the bivariate and multivariate analyses confirmed the importance of mother’s education in explaining the utilization of health care services. Female education retains a net effect on maternal health service use, independent of other women’s background characteristics, household socio-economic status and access to health care services. They also found the strong influence of mother’s education on the utilization of health care services with findings from other studies. Women whose husbands are involved in business/services also positively influenced the utilization of modern health care services.

Nisar, N., and White, F., (2003) study on ‘Factors Affecting Utilization of Antenatal Care among Reproductive Age Group Women (15-49 Years) in an Urban Squatter Settlement of Karachi’ is carried out to assess the utilization pattern of antenatal care among married women of reproductive age at Rehri Goth, an urban squatter settlement of Karachi. The findings will be helpful in policy making and in designing appropriate programmes and services for the urban population of Karachi. The reduction of maternal mortality requires early detection of high risk pregnancies through appropriate antenatal care at community level and the existence of a mechanism to ensure timely access to referral facilities. This requires that women should have adequate knowledge about pregnancy related care and should be able to recognize the importance of antenatal care and its utilization.

Rani M. et al (2003) use the data from the India National Family and Health Survey conducted in 1998-99 to investigate the level and correlation of care-seeking and choice of provider for gynecological symptoms among currently married women in rural India. Of the symptomatic women surveyed, Care-
seeking behavior and type of providers consulted varied significantly across different Indian states. Significant difference is found in care-seeking by age, caste, religion, education, household wealth, and women's autonomy and it reveals the existence of multiple cultural, economic, and demand-side barriers to care-seeking. Although socially disadvantaged women were less likely than better-off women to consult private providers, the majority of even the poorest, uneducated, and lower-caste women consulted private providers. Geographical access to public health facilities had no significant association with choice of provider, whereas access to private providers had only a moderately significant association with that choice. The predominance of use of private services for self-perceived gynecological morbidity warrants the inclusion of private providers in the national reproductive health strategy to enhance its effectiveness.

Sivagami M., and Kulkarni, P.M., (2003) in their article “Are Socially and Economically Weaker Sections Deprived of Maternal Health Care in Tamil Nadu, India?” examined whether women from socially, economically and educationally weaker sections of the society receive adequate maternal health care. Though most women in Tamil Nadu receive antenatal care, many do not get institutional and professional care at delivery. Logistic regression analysis shows that in both rural and urban areas only the economic factor and not the social and educational factors have a significant net effect on the ability to secure institutional delivery care.

Anson, O., (2004), conducted a study on “Utilization of Maternal Care in Rural HeBei Province, the People’s Republic of China: Individual and Structural Characteristics” has stated that 54.8% of the women had at least one pre-natal care visit, 27.5% gave birth in a health care facility and 18.1% had post-natal check-up. Utilization was inversely related to age and parity and positively to
education. Occupation was related to use of prenatal and postnatal services, but not to home birth. Per capita income and living arrangement are not related to utilization. MCH worker in the village promote prenatal and postnatal care but also home delivery. Village Doctors promote prenatal care and hospital delivery but do not promote postnatal check-up. Women tend to avoid the maternal services in the township health centres but some are ready to travel to city hospitals for delivery and postnatal care.

**Duong, D.V., et al** (2004) study on “Utilization of Delivery Services at the Primary Health Care Level in Rural Vietnam” is conducted with the aim to investigate factors that influence of utilization of delivery services at the primary health care level in rural Vietnam. A quantitative survey was conducted amongst 200 women who had given birth within the past 3 months. Focus group discussions and in-depth interviews were then undertaken by using the attitudes-social influence-self-efficacy model to obtain complementary information on the delivery decision. The results show that client-perceived quality of services and socio-cultural and economic factors rather than geographical access, can affect the utilization of delivery services. It is therefore important to improve the cost-efficiency of the health care network and delivery services should be provided in a client-oriented manner by considering economic, social and cultural factors.

**Majumdar A. et al** (2004) found in their study that doctors are technically more resourceful than any other supporting, Paramedical personnel. However, in rural India the people are more dependent on the latter which play a dominant role. If we consider the elasticity coefficients as a measure of productivity then in the rural health care system Paramedical Staff are more productive than the Doctors. Geographical factors, social structure, family characteristics, and quality of care also work as the main determinant of the utilization of health care services.
Education of the acceptors is also an important factor. The study reveals that as education increases people are likely to avoid public health facilities for reproductive health related services. This may be due to poor quality of services provided at the health centers.

**Thind A.,** (2004) article on, “Health Service use by Children in Rural Bihar” has stated that out of 2703 children under 3 years of age, 840 children had an episode of illness like diarrhea and respiratory illness in the preceding two weeks. A majority (69%) had utilized health care services for their illness. The results indicated that sex of the child, household standard of living; service availability and need are significant determinants of health service utilization.

**Harriott E.M. et al** (2005) found in their study that women’s satisfaction with delivery care was associated with aspects of quality of care, including courtesy and availability of staff, confidence in providers, being treated with respect, receiving information and physical comfort.

**Hossain J. et al** (2006) studied the impact of interventions on use of obstetric services in Government facilities. According to the study, the best results can be achieved through a combination of facility improvement, quality of care activities and targeted community mobilization activities.

**Ram F. et al** (2006) multilevel analysis explained that after controlling of other socio-economic and demographic factors, utilization of antenatal care services may lead to the utilization of other maternal health related services such as institutional delivery, delivery assisted by trained professionals, seeking advice for pregnancy complications, and seeking advice for post-delivery complications.
There is strong clustering of utilization of services within the primary sampling units, that is, villages and districts.

Senarath et al (2006) study on “Delivery Care” revealed the women’s satisfaction with the MCH. It was associated with their characteristics of parity, ethnic group and income level, as well as hospital type, immediate mother-newborn contact and receipt of information after examination.

Chakrabarti and Chaudhuri (2007) examined the role played by the various socio-economic and community level factors in determining the antenatal and maternal health care utilization pattern by using the data from the National Family Health Survey carried out in India during 1998-1999. Their analysis document that autonomy enjoyed by women and exposure to media has a significant impact on maternal health care utilization even after controlling other attributes, particularly their education and household economic status. Availability of a rural health facility in the village and other community level programme propagates the utilization of health care. Utilization of health services is a complex behavioural phenomenon affected by multitude of factors including availability, distance, cost and quality of care as well as personal attitudes and socio-economic characteristics.

Collin S.M. et al (2007) found in their study that the trend in professional attendance was entirely confounded by socio-economic and demographic changes, but education of the woman and her husband remained important determinants of utilization of obstetric services. Despite commendable progress in improving uptake of antenatal care, and in equipping health facilities to provide emergency obstetric care, the very low utilization of these facilities, especially by poor women, is a major impediment to meet MDG-5.
Margaret E.K. (2007) study explained that greater Government participation in health financing and higher levels of health spending are associated with increased utilization of two maternal health services: skilled birth attendants and Caesarean section. While government financing is associated with better access to some essential maternal health services, greater absolute levels of health spending will be required if developing countries are aimed to achieve the Millennium Development Goal on maternal mortality.

Sarma and Rempel (2007) used the data from the Government organization (India’s National Sample Survey). It is utilized to analyze the determinants of women's decisions to register for pre and postnatal healthcare, utilize maternal healthcare and select a place for childbirth. The data revealed that the level of schooling of mothers has a significant positive effect on decisions to register and utilize these healthcare services in rural and urban areas. In contrast, distance to a maternal health facility centre inhibits decisions to register for and utilize these services in rural India. The findings demonstrate that the health status of women and children in India can be improved significantly by strengthening IEC (information, education and communication) efforts on the demand side and reducing access barriers on the supply side.

Abdullah H.B. et al (2008) found in their study that NGO facilitation of Government programmes is a feasible strategy to improve equity of maternal and neonatal health programmes. Improvements in equity were most pronounced for household practices, and inequities were still apparent in health care utilization. The equity of programme coverage and antenatal and newborn care practices improved from baseline to end line in the intervention district while showing little change in the comparison district. Equity in health care utilization for mothers and newborns also showed some improvements in the intervention district, but
notable socio-economic differentials remained, with the poor demonstrating less ability to access health services.

**Manju Rani et al** (2008) discussed through their study on “Differentials in the Quality of Ante-natal Care” about the poor quality of ante-natal care. They stated that the poor quality of ante-natal care may reduce its utilization. Policy and programme interventions is required to improve the quality of care of ante-natal care, especially for the poor and other disadvantaged population groups.

**Simkhada B. et al** (2008) found in their study that the factors affecting antenatal care uptake: maternal education, husband's education, marital status, availability, cost, household income, women's employment, media exposure and having a history of obstetric complications. Cultural beliefs and ideas about pregnancy also had an influence on antenatal care use. Parity had statistically significant negative effect on adequate attendance. While women of higher parity tend to use antenatal care less, there is an association with women's age and religion.

**Amarit Singh et al** (2009) described that it is possible to develop large-scale partnerships with the private sector to provide skilled birth attendants and emergency obstetric care to poor women at a relatively small cost. Poor women will take up the benefit of skilled delivery care rapidly, if they do not have to pay for it.

**Eva S. Basant et al** (2009) find in their study that women’s satisfaction with delivery care was associated with greater provider empathy. Women delivering at private facilities in the settlement near the industrial area were more satisfied than women delivering at private facilities in the more distant and marginalized settlement. The association of women’s satisfaction and provider empathy was
stronger among women who experienced complications compared to those who did not. Maternal health programmes should focus on increasing provider empathy, especially for women who experience complications, in both private and Government health facilities.

**Mostafa** (2009) in his study examines the prevalence of and factors associated with maternal health care service utilization among married adolescents in Bangladesh by using the 2004 demographic and health survey data. Both cross-sectional and fixed effects binary logic models yielded quantitatively important and statistically significant socio-demographic factors for the service utilization which include: place of residence, birth order and region. Women's education and wealth index are the most important determinants in maternity care services utilization.

**Srivastava R.K. et al** (2009) study revealed that the utilization of RCH services in the Government hospitals was higher among the backward classes than the general category; and higher the level of education the lower was the utilization of the Government services. Also the users were not satisfied with the services provided by the Governmental health facilities especially with the behavior of medical officer and health workers and non-satisfaction was highest among Scheduled Caste category. Also the authors concluded that all the health facilities need to be made functional according to the Indian Public Health Standards (IPHS) of National Rural Health Mission (NRHM).

**Amanda Harris et al** (2010) showed that utilization of maternal health care services is associated with a range of social, economic, cultural and geographic factors as well as the policies of the state and the delivery of services. Utilization is not necessarily increased through easy access to a health facility and also
identified the potential for improving utilization through developing the role of village-based health care workers and expanding mobile ante-natal care clinics.

**Das P. et al** (2010) in their study of client satisfaction receiving some components of maternal and child health services at health centers and sub centers in a rural area, found that the degree of patient satisfaction was closely related to the services given, recipients' perception on care providers. The deficiency that remained might be overcome by generating awareness among the community by holding mothers' meetings and extensive IEC programme, inviting opinions and suggestions from the clients and encouraging enhanced community participation.

**Ravendra K. et al** (2010) in their study demonstrates that utilization of maternal and child health services are very poor among the tribes of central India. Clinically acceptable maternal and newborn care practices for delivery, cord cutting and care, bathing of mother and newborn and skin massage are uncommon. Therefore, newborns remain at high risk of hypothermia, sepsis and other infections. Pre-lacteals, supplementary feeding practices and delay in breastfeeding are very common, although colostrum is less frequently discarded. Malnutrition is a severe problem among tribes and many tribal children and women are severely malnourished as well as anemic.

**Singh M.K. et al** (2010) find in their study that educated Recently Delivered Women (RDW), those belonging to higher socio-economic class and those with low parity were more likely to utilize ASHA services for early registration, adequate ANC and postnatal check-up. On the other hand, contrary to previous studies, women from lower castes were more likely to avail antenatal and
postnatal care. The reason for discordance is better approach of ASHA and her ability to connect and convince the women belonging to lower caste.

**Chakrabarti, A., et al (2012)** enlisted major findings of their study as follows. First, a woman with greater educational qualification and autonomy in terms of her power to take decisions on her own, control over household resources and complete freedom to move beyond the confines of her household exerts a significant influence on the probability of seeking care. In addition to this, formal care is more likely to be sought for children whose mothers are more exposed to the media. Programmes devised to enhance utilization of formal health care for children should be targeted to catering for the needs of the vulnerable group, that is, female child, predominantly, residing in households belonging to Scheduled Tribe. In addition to this, children belonging to Muslim households are at higher risk of contracting the diseases but there is no significant difference in their health seeking behavior as compared to other religious groups.

**Tufeel Ahad Baba et al (2013)** in their study, “An Epidemiological Study to Access the Utilization of maternal and Child Health Care Services at sub-centre Level by the Target Population in Northern India” has coined to access the utilization maternal and child health services at sub-centre level by target population in a sub-centre area. They have collected a sample of 40 sub-centre by multi-stage sampling procedure.

The results of the study reveals that out of the 671 mothers studied 640 (94.4%) beneficiaries had received any ante-natal check-up while 4.6% had not received ante-natal check-up. Only 10.3% greater than 3 ante-natal check-up at the sub-centre while 5.4% had received 3 ante-natal check-up and 1.4% had less than ante-natal check-ups at the centres. Multi-purpose health workers (female) was
the service providers for the ante-natal care in only 3.1% of case while 80.4% of women preferred a doctor for ante-natal check-ups.

According to the study, the utilization of ante-natal service is very low, intra-natal is almost non-existent, post-natal maternal services are decimal, but child health services, and some components of family planning services are being utilized from sub-centres.

The above studies clearly explained several aspects of maternal and child health care. It is however noted that no serious attempt has been made to study the Availability, Accessibility and Utilization of Mother and Child health services especially in urban area from Sociological perspective. The researcher focused the appropriate objectives have been formulated for the purpose of the study. Therefore, an attempt has been made by the researcher by formulating an appropriate objective to study the “Availability, Accessibility and Utilization of Mother and Child Health Care Services in Chennai, Tamil Nadu".