Review of Literature
CHAPTER II
REVIEW OF LITERATURE

2.1. Introduction

It was well established that investment in health, particularly of women has been fundamental to improving human development, and economic growth as well as reducing poverty. Access to and utilization of antenatal, natal and post-natal care provided to the poor by the state and cost of treatment (private cost) were required to be critically looked into. During any of the three stages mentioned above a woman incurs private cost of treatment, also for taking care of the infant and her children she approaches private medical centers and incurs private cost of health care. The different indicators of status of women such as literacy level, income status, exposure to mass media, her involvement in decision-making, access to money affects her health during all the three stages of reproduction. Safe motherhood of ensuring that all women receive the care they need to be safe and healthy throughout pregnancy and childbirth was justified. Even small and affordable measures can significantly reduce the health risks that women face when they become pregnant. An analysis of the determinants of access to and utilization of maternal health care needs to be done. For this, an understanding of theoretical issues was also felt as necessary. A review of related studies carried out by other researchers, in the field of maternal health care, its access, utilization, cost of maternal health care, women empowerment and maternal health care would provide a wider perspective and the probable research gap. The presentation of review was done in two sections. Theoretical issues were briefly discussed and presented in section I and a review of relevant empirical studies brought under section II.
Section I

2.2 Theoretical Issues

Health has considered as a fundamental human right and a world wide social goal. It is essential to the satisfaction of basic human needs and to improve the quality of life. Improved health condition of the people helps the process of economic development in a positive way and its status is an important indicator of the welfare of the people. The health of the citizens of a country forms an important segment in the human resources development of the country (Dhulasi et. al., 2000). One of the fundamental rights enshrined in the constitution of the WHO is the enjoyment of the highest attainable standard of health by every human being without distinction of race, religion, political belief, economic or social condition. To achieve health for all, the natal care, postnatal care must be accessed and utilized. Maternal healthcare, cost, and quality of private and public health care facilities available determine the access and utilization of maternal healthcare services by women during pregnancy which varied with socio-economic environment of the population and programme (Regina Mary, 2004).

An individual considers spending on health care and services as productive investment. Therefore, he/she incur cost of health care treatment, both direct and indirect cost. When an individual incurs economic cost, that is, in the form of payments to various services of health care, called as direct cost. An individual's income lost, the number of inactive days are referred to as indirect cost.
2.2.1. The birth of Health Economics

Kenneth Arrow (1963) published "Uncertainty and the Welfare Economics of Medical Care", in The American Economic Review. This the article was cited to demonstrate that health care was not as exceptional as many people claim and that market mechanisms can play an effective role in the medical care industry in the same way as they do in other economic activities (including sectors with and effect on health, such as food and housing). In contrast, it was also cited to demonstrate that market failures in health care justify the creation or preservation of non-market institutions.

Arrow wrote that non-market institutions can (but not necessarily do) enhance the efficiency of the medical care system. In this respect, he cautioned against viewing all efforts by physicians to ration entry to medical schools or to require professional licensing as mere uses to raise their incomes. He goes further to conjecture that, in situations where markets fail, societies will create non-market institutions to correct the resulting inefficiencies. This conjecture has proved controversial, yet it provides fertile ground for developing theories on the formation of social institutions. To follow Arrow, such a theory would have to take an account of conditions under which different interest groups find ways to cobble together social institutions that are mutually beneficial, even when such institutions may require some degree of self-restraint or compromise on the part of those same groups.

Savedoff (2004) noted that spending on health services has increased dramatically in all of the world's high and middle-income countries, leading to
increased concerns about cost-containment, quality and responsiveness. Many of these countries, even if they have predominantly public systems, have introduced more market elements to relieve pressure on public services or to encourage greater productivity and allocative efficiency. No country today appears to be happy with its health system. Few health systems resemble those of the world Arrow wrote about in 1963. Instead, they now encompass to varying degrees, highly specialized, interrelated and costly services funded by complex financial and insurance mechanisms. Today's struggles over public policy for health services were really efforts to develop a new set of non-market institutions adequate to manage this rapidly changing industry. The resulting debates over the boundary between individual decisions in market settings (for example, choice of a physician or insurance plan) and collective decisions in non-market settings (for example, global budgets or mandatory insurance coverage) will continue to motivate polemics, movements and studies. Thus, the main message of Arrow's article and his approach to understanding the health service will remain relevant for a long time to come.

2.2.2. The valuation of human life

There were three approaches to the valuation of human life (McGuire A et al., 1988). Human Capital Approach, Behavioural Approach and Willingness to Pay. The human capital approach equates the value of life of an individual with the present value of future lost output (earnings and other labour costs).

A second approach was of public behavioural or socially implied values obtained from using revealed preferences for safety in mortality reducing
endeavors of the public sector. It was based on the idea that for life-saving programmes the marginal cost per life saved should be the same if technical efficiency was to be pursued assuming like lives but lives were not the same. The third approach was the most defensible approach to valuing life was that of the willingness to pay for reductions in mortality risk on the part of potential victims.

2.2.3. An overview of the Theory of Economic Growth

Wilhelmson and Gerdtham (2006) in their work used the Solow model to study issues in maternal-newborn health and poverty. The Solow model (Solow R M, 1956) used the theoretical benchmark for most studies of long-run growth of output (typically measured by growth of real gross domestic product (GDP); the value of all the goods and services produced in an economy during a year) and it explained how saving, investment and growth respond to population growth and technical change. The model was characterized by a production function that explained the level of output and included two input factors: labour and capital (physical and human capital). Economic growth was then, determined by the amount of available capital in the economy, the efficiency with which the capital was used and the degree of its employment. Population growth and increases in physical capital lead to growth if the new resources were employed in the production process of the country. Improvements in the productivity of the human capital and physical capital increase the capital stock, provided that the investments and growth were greater than the depreciation. Human capital investments consist of education attainment, training and better health. Since the
available resources of the economy were not employed at all times, the rate of employment was directly related to economic growth (Dornbusch R et. al., 1990).

The model predicted a stable steady-state output growth which was limited to population growth (in equilibrium), meaning that per capita output was constant over time. (Steady-state equilibrium is an equilibrium in which each variable is either constant or growing at a constant rate). Growth was also influenced, however, by rates of saving and technical change which explain growth in per capita output, i.e. technical changes of total factor productivity, determine changes in output growth with unchanged input of labour and capital. Population growth, savings and technical changes were exogenous variables (variables that are not determined in the model). The model also predicted “conditional convergence”, which stated that economies, with low initial values of per capita output (poor countries) grow faster than countries with higher initial per capita output (rich countries). These predictions follow from the basic assumptions of a constant-returns-to-scale production function with diminishing returns to capital and labour. This means that increases in, for example, the amount of capital (input of labour unchanged) lead successively to smaller increases in output – the lower the ratio of capital per capita, the higher the return to investing in capital. Using this model, Solow shows that the rates of saving and population growth determine the steady level of income per capita across countries but that countries reach different steady-state because of variations in the key factors that determine the level of steady-state.
Following Solow, a number of growth models have been developed on the issue of endogenous growth (i.e. what factors determine the steady-state income levels) in a variety of ways. In these models, technical change may be endogenous and the important issue was to explain the rise in productivity attributable to technical change. Mankiew et. al. (1992) contributed to the Solow model by including accumulation of human capital, typically in the form of educational attainment. Health has also long been accepted as an important determinant of human capital and hence factor productivity. A basic element of Grossman’s demand-for-health model was that health provides utility not only directly but also indirectly, since it was a key input into many production processes, and health was, therefore, both a consumption good and an investment good; health differs from other human capital in that it determines the total amount of healthy time available, whereas educational attainment affects the productivity of the time spent on market or non-market activities. Two aspects of the effect of health on productivity have been considered in the endogenous growth literature: the direct effect of health on the production process (e.g. better maternal health can increase productivity by reducing inability to work, disability, sick days, etc.) and the spillover effects (e.g. better maternal health can result in reduced informal care time required by family members and friends who may also be part of the labour force). Better maternal health can also lead to more money being available for children’s health care, education and food, which may lead to improvements in future productivity. Drawing on the theory above and cross-sectional international data, Knowles and Owen (1995) showed a strong
and robust relationship between health capital income and explained that the effect on income from human capital was greater from health capital than from educational human capital (Figure 1).

2.2.4. The Demand for Health – A Household Production Theory Approach

A major conceptual advance in the analysis of the demand for health care has been the recognition that the fundamental demand by the consumer was for health and not for health care. However, it may also be argued that, for certain purposes, the demand for health was also a derived demand. Health was demanded not just for its own sake but also to enable individuals, for example, to participate in the labour market. This small, but influential insight was utilized in an important study by Grossman (1972a, 1972b), which represented a direct application to the demand for health and health care of the new theories of consumer demand. These new theories were developed through the removal of the artificial separation of consumption and production, particularly in analyzing service commodities, necessary (conceptually) to allow price and income to enter as the major independent explanatory variables, in the household consumption function. Becker (1965), for example, suggested that consumers were simultaneously involved in production, as well as consumption activities. Thus, the household becomes the basic decision-making unit with regard to production as well as consumption (Grossman, 1972b).

Consumers produce (fundamental) commodities with inputs of market goods and their own time. Since (purchased) goods and services were inputs into the production of fundamental commodities, the demand for these goods and
Figure 1
Factors that may affect Economic Growth

Higher fertility and child mortality → Higher dependency ratio → Lower per capita income

Child illness → Child malnutrition → Less schooling and impaired cognitive capacity

Labour productivity reduced

Labour force reduced by mortality and early retirement

Adult illness and malnutrition → Reduced access to natural resources and global economy → Reduced investment in physical capital

Source: adapted from Ruger et al., 2003 (20).
services was a derived demand. In applying this approach to health and health care Grossman perceives health as a fundamental commodity. The model suggested that the demand for health care was a derived demand and focused on the primary demand- the demand for health. Consumers were held to demand health for two reasons: as a consumption commodity, health enters their utility function directly; and as an investment commodity, it determined the amount of time available for work, which allowed consumer to produce money earnings, and the amount of time available for leisure, with leisure time being combined with other commodities which, in turn, produce commodities which directly enter their consumption functions. Grossman has tended to concentrate upon the investment demand for health. This was the methodology background to the household production function model developed by Grossman (1972b).

Individual's stock of knowledge influences his/her market and non-market productivity, where as the stock of health actually determines the total amount of time he/she can spend producing money earnings and commodities.

2.2.5. The Household Production Model

The consumer was presumed to be a utility maximiser. This was represented through indifference curve analysis, such behaviour being constrained by income level, the price of health inputs, consumption activities, and the opportunities for transforming health inputs into health. The individual's objective was to attain the highest consumption possibility contour, subject to the conditions that he/she operates on both his/her budget constraint and his/her health production function. A number of assumptions underlie the household
production model. It assumed that the consumer was able to make comparisons between consumption activities and health levels in such a manner that he/she can decide on his/her preferred consumption patterns and health production to allow consistent preference orderings to be made. This necessitates the consumer having adequate information to allow rational decisions to be made. The individual's utility maximizing behaviour was analysed by using Wagstaff (1986b), four-quadrant diagram (Figure 2).

Quadrant II outlines the health production function which, as is shown, encompasses the law of diminishing marginal product. This function shows how much health can be obtained for a given quantity of health input, given technical knowledge. Quadrant III outlines the budget constraints upon the individual's utility maximizing behaviour. The slope of the curve reflects the relative costs and the consumer is assumed to have perfect knowledge over these costs. In Quadrant I, IC1 and IC2 curves outline part of the consumer's indifference map. The concave curve is the consumption possibility frontier. Equilibrium is given at point 'a'. The effect of changing income under this assumption is outlined in Figure 3. It is assumed that the individual's income falls resulting in a parallel movement towards the origin of the budget constraint. At a lower income, the number of feasible combinations of health input and consumption activities open to the individual are diminished. Equilibrium at 'a' is no longer possible, the individual's new equilibrium is at b, at which point he has a lower level of health and consumes less. His health stock is reduced because he has less to spend upon health inputs. A fall in income is predicted to result in a reduction of the
Figure 2. The Household Production of Health

Figure 3. The Effect of falling income on the Household Production of Health

Source: Wagstaff (1986b)
quantity of health inputs employed and a deterioration in the individual's health status.

2.2.6. The Grossman Model

In the Grossman model, health may be viewed either as a fundamental commodity giving direct utility, as in the consumption model, or as a commodity which combines with time to produce money earnings. The Grossman model gave rise to an investment motive in demanding health, because by increasing his stock of health an individual lowers the amount of time lost through ill health, which can be devoted to the production of market and non-market activities. Health, the durable capital stock, produces an output of healthy time per period, measured by healthy days. Grossman argued that this output differentiates the capital good health from other forms of human capital. For example, the individual's stock of knowledge influences his market and non-market productivity, whereas the stock of health actually determines the total amount of time he can spend producing money earnings and commodities.

The demand for health care, being one of the inputs in the health investment function, will increase as long as the price elasticity of the demand for health capital was less than one. That is, there will be a negative relationship between health and health care if the demand for health capital was inelastic. This predicts that people who were less healthy will increase their consumption of health care. The value of marginal product of health depends upon the wage rate. The higher an individual's wages then the higher will be the value to that individual, ceteris paribus, of an increase in healthy time. But the gross
investment function requires time and if more time was spent in the labour market then there was less time to devote to investing in health by consuming health care.

The Grossman model assumed that education acts, in a manner similar to technology, by shifting the production function. The education shifts the marginal efficiency of capital schedule (the demand curve for health) by increasing productivity. According to Grossman if the elasticity of the marginal efficiency of capital was less than one, the more educated will demand more health but less medical care (1972a).

2.2.7. The Health Belief Model – Influences on Service Use

The Health Belief Model provided a framework for understanding the potential influences on an individual's decision to make use of available health services (Becker et al. 1977). This model postulated that three sets of factors, individual perceptions, modifying factors, and likelihood of action, contribute to an individual's decision to seek health care. In the first set of factors, the individual's perceptions of his or her susceptibility to a disease and of the seriousness of the disease of act to provide the impetus to seek care. Second, a series of modifying factors influences the extent to which this impetus seek care was translated into action. Such modifying factors include demographic (for example, age and ethnicity), socioeconomic (for example, household income), and psychological (for example, individual personality) characteristics, which can act as the facilitators and as barriers in the health-care seeking process. Modifying factors may also include action generated by external stimuli (for example, mass media
campaigns or advice from friends and relatives) that may affect an individual's perception of a disease or condition and influence the decision to seek care. Finally, the likelihood of action was the product of the perceived benefits of seeking care minus the perceived barriers to doing so.

The Health Belief Model, thus, conceptualized the decision to seek health care as a rational balance between the perceived susceptibility, barriers, and benefits. Studies made by Basu (1990), Obermayer (1993), Bhatia and Cleland (1995a), and Goodburn et. al. (1995) have supported the fact that both, the demographic and socioeconomic determinants of the use of reproductive health services were mediated by cultural influences on health-care-seeking behavior that shape the way an individual perceived her health and the health services available (Basu, 1990; Obermeyer, 1993; Bhatia and Cleland, 1995b; Goodburn et al., 1995). Community beliefs and norms relating to health-care-seeking behaviors were reflected in individuals' decisions, which were based, to some degree, on how they think the community views their action (Rutenberg and Watkins, 1997). Community beliefs concerning childbearing preferences and sexual and reproductive health behavior were a strong influence on individuals attitudes toward family planning and fertility preferences (Greenwell, 1996).

Section II

2.3 Review of empirical studies

Studies available on maternal health care, its access, and cost and women and maternal health care were reviewed and the observations were presented briefly in this section.
2.3.1. Maternal Health Care at international level

According to Harrison (1995) the real ‘causes’ of poor maternal health were rooted deeply in social, cultural and economic barriers faced by females in the third world, throughout their lifetime. Malnutrition was far more prevalent among females than the males in the developing countries and the reasons had more to do with gender than with geography. George et. al.(1990) also found that gender discrimination in allocation of food – as well as in education and in health care – was widespread and well documented practice in much of South Asia. In condition of strong son-preference, girls were perceived as risky investment.

Campbell and Abu Sham (1995) studied the risk factor for maternal health and threat to safe motherhood experience based on Care International and the Ministry of Health in Sudan. They used interviews, group discussions and observations in their exploration of the attitudes of the women staff and traditional birth attendants towards motherhood, prenatal care and practices affecting the women’s health in the rural councils of Bara, Gerejikh and Taiyba. It was found that women did not want to spend more than thirty minutes reaching a health facility. If, however, the quality of a particular institution were considered good, and supplies and equipment were available, women would go far to reach that facility. It was found that women were unmotivated to seek prenatal care services because they do not understand that prenatal care existed to prevent morbidity and mortality, and village services also lacked the necessary equipment and properly trained staff. The need to secure a husband's approval, lack of transport, and the delayed recognition of risk conditions by health staff and traditional birth attenders (TBAs), all delay the provision of treatment for women referred for
delivery. Finally, postnatal care was inadequate, the women want to learn about birth spacing methods, and a completed traditional birth attenders training program was generally regarded as satisfactory by the women and health staff in the communities.

Martey et. al., (1994) carried out a community-based survey on maternal mortality in the Ejisu health district of Ghana in January and February 1990 and found that 59 per cent out of forty-five women who died in pregnancy were aged between 20 and 34 years. Eighty-two percent were married and sixty-six percent had at least primary education. Based on an average crude birth rate of 40 per 1000 population for the district over the period, the lowest maternal mortality rate occurred in 1988, 120 per 100,000 total births and the highest occurred a year later, 235 per 100,000 total births. Most of them died in a hospital, 2 per cent died at a Government Maternity Home and 7 per cent died during referral from health facilities in the district. Thirty-four percent of the women who died did not attend any antenatal clinic.

Dumont et. al., (2002), compared maternal morbidity and mortality between two populations with widely contrasting availability of health care in order to test the hypothesis that differences in maternal outcome mainly resulted from the qualification of health carers. Maternal mortality was higher in the Kaolack of Senegal area where women gave birth mainly in district health care centers, most often assisted by traditional birth attendants, than in Saint-Louis where women giving birth in health facilities were principally referred to the regional hospital and were generally assisted by midwives. Diagnosed maternal
morbidity, however, was higher in Saint-Louis than in the Kaolack area, especially for births in health facilities (9.50 and 4.84 episodes of obstetric complications per 100 live births). The authors concluded that one of the strongest weapons in the fight against maternal mortality was the employment of the most qualified personnel possible for monitoring labor.

Garner, Lai, and Baea (1994) explored village maternal deaths in an area of the East Sepik Province of Papua New Guinea where most women delivered at home. The study found that health centre attenders were a relatively privileged group. Some hospital users complained about staff attitudes. A poor reputation meant that women were less likely to use health services for delivery. They concluded that providers need to improve the acceptability of the care provided, and communities should be encouraged to help with transport for their women to go to a health facility when they were in labour.

Mamady Cham et al., (2005) reviewed the cases of 42 maternal deaths of women who actually tried to reach or have reached health care services in rural Gambia. The study revealed that underestimation of the severity of the complication, bad experience with the health care system, delay in reaching an appropriate medical facility, lack of transportation, prolonged transportation, seeking care at more than one medical facility and delay in receiving prompt and appropriate care after reaching the hospital were considered important. They concluded that women do seek access to care for obstetric emergencies, but because of a variety of problems encountered, appropriate care was often
delayed. Disorganized health care with lack of prompt response to emergencies was a major factor contributing to a continued high mortality rate.

Etard et al., (1999) identified a district of Bamako, Mali and estimated the maternal mortality ratio which came to 327 per 100,000 live births. Hypertensive disorders and haemorrhage were the main causes of death. Similarly Adetoro, and Okwerekwu (1988) determined the trend of maternal mortality at the University of Ilorin Teaching Hospital, Nigeria. They found that the majority of these deaths could have been prevented if delivery had occurred in a well equipped hospital where blood transfusion and surgical facilities were available, if sterile manipulations for pregnant women had been employed, if appropriate antenatal care was available, and if specialist anesthetist services were accessible.

Jane, Linda, and Randall (2003), tested the hypothesis about longer-lasting effects of childbearing on mortality. The Centre for Health and Population Research had carried out research in Matlab, a rural area 55 km southeast of the capital Dhaka, Bangladesh. It was found that survival was not directly related to cumulative effects of either the number of children they had borne in the past or the speed with which those children were produced. Reducing fertility reduced the lifetime exposure to the risk that a woman will die during a period of extended maternal risk, which alone reduced reproductive-age mortality of women in Matlab by approximately 25 per cent.
Choudhry (2005) studied the interventions implemented in Pakistan to improve quality of maternity care and methods to reduce maternal mortality by improving the quality of care. Statistics showed that among the women who died of pregnancy related causes, 25 per cent of the women died during pregnancy, 16 percent died during delivery and 61 percent after delivery, with most of these deaths occurring within one week. Hence in total about 75 per cent of all maternal deaths were those associated directly or indirectly with health care facility. Availability of quality of care was needed during delivery and the week after. Among the various tools discussed Criterion based Clinical Audit was considered to be the best strategy for quality improvement in a developing country like Pakistan.

Magadi et al., (2003) used Demographic and Health survey data collected from 23 countries in sub-Saharan Africa covering urban non-poor, urban poor and rural women. The indicators showed that the maternal health care of the urban poor tend to be even worse than that of rural residents. Other than cost being a significant barrier to the utilization of maternal health care services, the urban poor invested much of their time in the economic activities required to meet basic needs and they had too little time left to seek preventive health care from the public health facilities, where waiting time was often a problem.

Bogg et al., (2002) carried out a retrospective household survey (n = 5756) in six counties in three provinces of central China in 1995 and concluded that ante-natal service utilization continued to improve in 1990-95, but only in
relation to the number of visits, which were pre-paid if the woman was participating in a maternal pre-payment scheme or covered by another health insurance scheme. Significant decreases were found in the utilisation of skilled attendance at delivery and hospital delivery, as well as differences in adverse pregnancy outcomes (miscarriages and stillbirths) between women paying out of pocket and those covered by insurance. The study confirmed a strong association between utilisation of delivery services and financing variables of amount of savings in the bank, maternal pre-payment schemes and health insurance. It also indicated the critical importance of out-of-pocket, fee-for-service payments for maternity care as a barrier to the utilisation of these services.

2.3.2. Studies related to Health Care in India

Bhaita (1993) conducted a study in Ananthapur district of Andhra Pradesh state. Data were collected from 15 district hospitals, death certificate files with civil registration authorities, 22 primary health centres, fifty per cent of sub-centres (181 villages), and a variety of people who knew women who were known to have died and were reported to Primary Health Centres or sub-centres. The study indicated that there were 7.98 maternal deaths per 1,000 live births. Approximately one-half of the deaths occurred in the home or on the way to the hospital. Maternal deaths accounted for 36 per cent of mortality for women of reproductive age. Analysis revealed that many of these deaths were preventable and that significant differentials existed with regard to demographic, social, and behavioral factors between the cases of maternal deaths and the controls.
Mutharayappa (1999) in a study found that the equipment supplied under the Child Survival and Safe Motherhood Programme in Karnataka were adequate and were used. The study was conducted in four districts, Bangalore rural, Kolar, Hassan and Mandya. The beneficiaries of the CSSM programme were pregnant women, infants, children less than 5 years. Three types of drug and equipment kits were supplied to the health workers. To treat pregnancy and delivery complications at the taluk hospitals equipment kits had been provided to all First Referral Unit Hospitals. After the CSSM programmes were introduced the registration of pregnant women had gone up to 95 per cent and those who registered their pregnancy had received antenatal services. Similarly, the number of deliveries conducted at institutions had increased and the home deliveries had gradually reduced. The peri-natal mortality which contributed about 50 percent of the infant mortality among children steadily declined.

Sadhu et.al (2001) evaluated reproductive morbidity among women in weaker sections in Calcutta Metropolitan area. Although antenatal care was easily available, the availability of medical services for delivery and post partum care lagged behind. One out of five births were delivered at home. About 3 out of 4 home deliveries were attended by untrained persons either for cultural reasons or because health facilities were not easily accessible to them.

Prakasamma (2005) found the actual causes for maternal deaths was social causes among the dalits of Andhra Pradesh. However, unfortunately, these were not taken into account and addressed properly within the bio-medical
framework. Government interventions and programs focus on gynecological and obstetric causes than the social causes with little success.

The high IMR and lowering birth rate were considered as a matter of concern in the State of Orissa by Saraswathi Swain (2005). The policies were not promoting institutional deliveries as women were discharged from hospitals a day or two after delivery and 60 per cent of maternal deaths took place during the subsequent post-partum period that was the most risky one.

Krishnaji and James (2002) estimated the adult mortality for the two prime adult age groups (15-29) and (30-44) which, for women, covers the whole reproductive period for the years 1971, 1981, 1991 and 1997. For the age group 15-29 years death rates among urban males were lowest and rural females were the highest. It signified double disadvantage the rural women suffered from being women and residing in rural areas. The first arose from gender discrimination in matters of nutrition and health care especially in the case of pregnant women and nursing mothers and the second from the fact that rural India was grossly neglected in the provision of health services. The study estimated that for women in 15-29 years the odds of death were significantly higher in Kerala than in Andhra Pradesh by over 20 per cent in Madhya Pradesh and Uttar Pradesh, in Haryana, Karnataka, Maharashtra, Punjab, and West Bengal. They are 15 per cent lower in other states, namely Assam, Bihar, Gujarat, Orissa, Rajasthan and Tamilnadu. The odds in Kerala was half of AP. The total fertility rate, Safe Motherhood Index and Health care Supply Index were highly correlated.
Therefore, the study concluded that fertility decline brought out, over space and time, remarkable reductions in the death rates among women in the reproductive period.

2.3.3 Empirical evidences related to access to health care at international level

Schoen and Doty (2004) examined inequalities in access to health care and quality of care with income and revealed the fact that having private insurance in Australia, Canada, and New Zealand protected adults from cost-related access problems. In contrast, in UK having supplemental coverage made little significant difference for access measures. Being uninsured in US had significant negative consequences for access and quality ratings. If private insurance circumvented queues or waiting times, low income adults would be at higher risks for non-financial barriers since they were less likely to have supplemental coverage. It was also concluded that greater inequality in care experienced by income was associated with more divided public views of the need for system reform.

Ronsmans, and Etard (2003) examined the association between population indicators of access to obstetric care and levels of maternal mortality in urban and rural West Africa and found that in urban areas, the vast majority of births took place in a health facility (83%) or with a skilled provider (69%), while 80 per cent of the rural women gave birth at home without any skilled care. There was a relatively close link between levels of maternal mortality and the percentage of births with a skilled attendant, in hospital or with a caesarean
section, with marked clustering in urban and rural areas. The findings revealed that despite the limitations of this ecological study, that the huge rural-urban differences in maternal mortality were due to differential access to high quality maternity care.

A World Health Organisation (1998) survey in developing countries found that 65 per cent of women made at least one antenatal visit and 53 per cent give birth with a skilled attendant. But, only 30 per cent make at least one postpartum care visit with rates as low as 5 per cent in some regions of developing countries. In developed countries, 97 per cent of women make at least one antenatal visit; 99 per cent deliver with a skilled attendant; and 90 per cent make at least one postpartum care visit.

Improved access to quality maternal health services was in Sri Lanka studied by AbouZahr (1997). The proportion of pregnant women who had care during delivery was universally lower than those who receive antenatal care. During labour, delivery and the immediate postpartum period complications were most likely to arise and that care was most needed. Almost half of all postpartum deaths took place within one day of delivery, and 70 per cent within the first week.

Biego et al (1995) evaluated adult and childhood mortality in rural Tanzania and the results revealed that 84 percent of women who gave birth at home intended to deliver at a health facility, but did not deliver due to distance and lack of transportation. They found that 21 per cent of women delivered at home because of the rudeness of health staff even though they thought
delivering in a health facility was safer. Similarly, Lule and Ssembataya (1996) found that 90 per cent of women wanted to deliver in a health care facility, but only 25 per cent of them did in Malawi. The most important reason given by 53 per cent of the women was that by the time they realized that they were in labour, they did not have enough time to get to a health facility.

An unusual finding was made by Leslie and Gupta (1989). Saraguro Indians in Ecuador perceived hospital-based deliveries were as violation of privacy as many health providers were men, which was unacceptable culturally, and birth positions preferred by providers were not those preferred by women in labour. As a result, affordable and accessible maternal health services were under-utilized. Similarly, in Sudan, it was found that many women were ashamed of being poorly dressed in front of health workers who were generally of a higher socio-economic class, and were also afraid that the health workers would react negatively to their illiteracy, therefore it deterred many women from using formal maternal health services.
Odoi-Agyarko et al., (1993) examined the community based study of women who died of pregnancy-related complications in Ghana and found that 64 per cent of the women had sought help from an herbalist, soothsayer or other traditional provider before going to a health facility. Families cited cost and the belief that the woman's condition would improve or that the woman was not ill enough to justify the cost involved, which prevented the women from seeking health care from a hospital.

2.3.4. Studies pertaining to access to health care in India

Mavalankar (2003) described how policies restricted basic doctors from performing obstetric surgical procedures including caesarean section even in remote areas where there was no specialist obstetrician available. The Paramedical staff, such as the Auxiliary Nurse Midwives were also not allowed to manage or even stabilize obstetric emergencies in rural areas. The policy did not allow nurses or basic doctors to give anaesthesia. As there were limited number of anaesthetists in rural areas, which further reduced access to life saving emergency surgery. The study concluded that government, the donors, and academics need to focus action at policy level barriers that restrict access to care and adopt a public health approach and counter powerful lobbies of doctors and specialist in urban areas and in private practice, to ensure availability of appropriate and scientifically sound emergency care to the rural and remote populations, if maternal mortality reduction was to be achieved in India.

Griffiths and Stephenson (2001), studied the accessibility of facilities available in the local area, among two rural and urban populations of Pune and
Mumbai in Maharashtra. The socioeconomic status was not found to be a barrier to service use when women perceived the benefits of the service to outweigh the cost, and when the service was within reasonable distance of the respondent’s place of residence. A large number of women perceived private services to be superior to those provided by the government, although cost often meant they were unable to use them. The provision of services did not ensure that women used them; they had to first perceive them to be beneficial to their health and that of their unborn child. Respondents identified the poor quality of services offered at government institutions to be a motivating factor for delivering at home.

Nagdeve and Bharati (2003), in their study examined urban-rural differentials in MCH, and the factors influencing net change in MCH input, its utilisation and its output between the Indian National Family Health Survey (NFHS)-I and NFHS-II. It was found that among background characteristics of respondents, the educational level of the mother was consistently related to net change in the number of respondents whose children were fully immunised within 12-23 months, and in the number of respondents who had taken their children to a health facility for treatment of diarrhoea. As the level of maternal education increased, the percentage of net change in MCH indicators also increased. The study recommended that the Indian Government must take necessary steps to improve MCH programs, including the provision of information and education campaigns, and sending dedicated health personnel to remote and inaccessible rural areas in order to reduce child mortality.
Caldwell and others (1983) evaluated the social component of mortality decline in south India employing alternative methodologies. The study indicated that there were differences between educated mothers and uneducated mothers in treatment-seeking for their children. Panda and others (1993) in another study conducted in the Ludhiana slums in India observed that the relationship between education and poverty influenced the achievement of complete immunization.

Matthews et. al (2001) undertook a study on socio-economic determinants of antenatal care-seeking among rural women in rural Karnataka. The study was carried out in 11 villages surrounding a taluk headquarters town about 60 km from Bangalore. The qualitative interviews suggested that the women felt it was good to be checked early in pregnancy to know that rest of the pregnancy and delivery would be problem free. The Lambani tribal group was prone to late first antenatal contact. The level of delivery planning was minimal and very little advice was given to pregnant women about aspects of pregnancy.

Jejeebhoy (2001) reviewed maternal health and mortality in India. With regional variations, four large northern states of Bihar, Madhya Pradesh, Rajasthan and Uthar Pradesh experienced poor levels of care. At the antenatal stage NFHS confirmed that few women had access to care. In most cases even the services of a dai or traditional birth attendant (TBA) were not used until delivery. Less than two-thirds of all women (62 %) had received antenatal care. International Institute of Population Sciences (IIPS) (1995) in a study revealed that only 54 per cent were fully immunized against tetanus and 51 per cent had
received iron supplements. These proportions were just 36 per cent and 31 per cent, respectively, in the four large northern states, compared to 65 per cent and 66 per cent for the rest of India. Moreover, even if services were theoretically free, medicine, blood and even transportation costs delay access to a medical facility. The inadequacy of health system had also influenced rates of morbidity. Safe motherhood programmes had received far less attention than either family planning or child survival programmes. In addition, the quality of antenatal, natal, and post-partum services had generally been poor. Outreach had been limited especially among young women whose mobility was culturally constrained. There had been little coordination between village-level workers and trained health personnel, referral systems and facilities to deal with emergencies were rarely in place and the quality of care tends to be insensitive to women's needs.

Srinivasa et. al, (1997), found universal antenatal care (98 %) in Tamil Nadu. For over two in five women, visits were initiated in the first three months. Each woman made an average of three visits. While most women initiated these visits for routine check-ups, only 8 per cent visited because of a danger signal. In contrast were the findings from the slums of Delhi (Bhandhari and Mayank, 1999). While 91 per cent availed of antenatal care and an average of three visits were made, a large proportion of these visits were motivated by a health complication. Routine monitoring accounted for no more than one-third of all first and second visits, and the first contact was typically made in the fifth or sixth month of pregnancy. Only 75 per cent of the women who made antenatal visits reported that blood pressure was recorded; abdominal and vaginal examinations
were conducted among 56 per cent and 20 per cent, respectively; blood and urine were tested among 60 per cent; and weight and height were recorded among 61 per cent and 8 per cent, respectively. 43 per cent were given information on diet, 5 per cent on breast-feeding, 4 per cent on subsequent contraception and 28 per cent and 4 per cent on the importance of delivery in hospitals and of postnatal check-ups, respectively. Only 4 per cent were informed of the danger signals of pregnancy.

Bhatia (1993) stated that often women show symptoms of risk that go undetected. In Anantpur, 49 per cent of the women who had died suffered from anaemia, hepatitis or hypertension conditions that should have been identified but remained untreated in the absence of an effective referral system and monitoring mechanisms. Yet another study conducted by Bhatia (1998) in Anantpur found that 27 per cent of women who survived pregnancy had made at least one antenatal visit, compared to only 16 per cent of the women who died.

Kumar et.al (1989) in their research in rural north India found that 71 per cent of all maternal deaths occurred among women who had received no antenatal care or had sought antenatal care from untrained medical practitioners. Similarly, Ganantra, Coyaji and Rao, (1996) in a case control study in Maharashtra observed that women who received no antenatal care were twice as likely to die of maternal causes than women who had three or more antenatal contacts.
Chatterjee (1996) opined that financial and opportunity costs further limit women's access to healthcare. In general, families, including women themselves, spend less time, effort and money seeking healthcare for women and girls than for men. Ganatra and Hirve (1995) in another study revealed that women's illness ranks low among family priorities especially when the condition was perceived as non-threatening or self-limiting, delaying decision to seek care.

Gupta (1996) in a study found that in Haryana and Punjab, even where good health facilities exist, the efficacy of modern healthcare was recognized and vast amounts of money were spent on medical expenses for men, families were unwilling to incur the cost of hospital delivery for women.

Mony et. al., (2006) studied the demography, domestic environmental status, and maternal healthcare services in two slums of Vellore town in Tamil Nadu using cross-sectional data. The survey revealed that, reported rates of iron tablets consumption and tetanus toxoid acceptance were 87 per cent and 94 per cent among antenatal women respectively and 85 per cent had normal vaginal deliveries. They concluded that the two slums had comparably secure houses with reasonably good structures. Access to safe water supply, sanitation facilities, and garbage disposal was very low. A sizeable proportion had inadequate access to high-quality antenatal and obstetric care services.
2.3.5. Review of the utilization of healthcare at international level

Utilization of health services is a complex behavioral phenomenon. Empirical studies of preventive and curative services have often found that use of health services is related to the availability, quality and cost of services, as well as to social structure, health beliefs and personal characteristics of the users. A number of studies have examined the utilization pattern of healthcare services and its determinants. Some of these studies have also analysed the household expenditure data obtained through surveys and the studies related to utilisation of maternal healthcare are also reviewed.

With the onset of pregnancy, a household must add the health of the expectant mother and the unborn child to its overall objective. Matsumura and Gubhaju (2001) investigated factors influencing the under-utilization of maternal health services among Nepalese women. Particular focus was given to women’s status and household structure controlling accessibility factor. Women’s status was measured using indicators such as education, employment status and intra-household decision making power. Other indicators used for measurement were nuclear or extended family, family size, male- or female -headed household and economic status. The results revealed that education of women was the most important factor in determining increased utilization of maternal health services. Employment of women was negatively associated with the use of maternal health services due to the fact that most women in Nepal live in rural areas and work in the agricultural sector and women does not get any time away from work to seek care. In terms of household -level characteristics, household economic status
was significant in predicting utilization behaviour. The authors concluded that education was the key to improving women's status.

Lule et. al., (2000) analysed the determinants of antenatal attendance and place of delivery of women in Chilomoni health centre catchment area in Malawi. They conducted a cross-sectional household survey of women 15-49 years old who had delivered at least one child, and stayed in that area during the past five years. Out of 1108 women interviewed, 52 per cent reported for antenatal care at the health centre, but only eight per cent used it for delivery. Reasons for not using the health centre were mainly family refusal and poor facilities at the health centre (68%). Variables independently associated with non use of the health centre were lack of drugs, poor ambulance service, poor laboratory services, long waiting time and lack of privacy.

Uyirwoth et. al, (1996) conducted a cross sectional cluster survey in all 14 health wards of Lebowa, Northern Transvaal, South Africa in May 1992. Findings of the study helped to understand the utilization of maternal health care. Antenatal coverage was high at 93.5 per cent, the proportion of health facility deliveries was 74.6 per cent while 26.3 per cent of all births occurred at home. Inaccessibility of maternity services, lack of money, negative staff attitudes and postnatal coverage was 50.7 per cent with a 25.4 per cent rate of utilisation of a method of childspacing. The authors recommended that the proportion of births attended to by trained personnel needed to be increased.
Mwaniki and others (2002) analysed the determinants of the utilisation of antenatal and maternity services by mothers of Mbeere District in Kenya bringing their children to the child welfare clinic and found that the proportion of mothers who utilised health facilities for antenatal and maternity services was 97.5 per cent and 52 per cent, respectively. Utilisation of health facilities for maternity services was significantly influenced by number of children and distance to health facility in that, as number of children increased, utilisation of maternity services reduced. Mothers living less than 5 km to a health facility utilised the services better than those living 5 km and beyond.

Fatmi, and Avan (2002) studied the factors affecting utilisation of antenatal care by women of a rural area in Sindh, Pakistan. Among the study subjects, 65 (29.3%) of the women utilised antenatal care during the last (most recent) pregnancy and out of them 47 (72.3%) received it from the government health care provider. Presence of electricity in the house was strongly associated with the utilisation of antenatal care. Women, whose husbands were in white-collar occupation, were utilizing the antenatal care significantly more compared to women whose husbands were in blue-collar occupations.

Chakraborty and Islam (2003), on the basis of data from a survey of maternal mortality in Bangladesh conducted by the Bangladesh Institute of Research and Promotion of Essential and Reproductive Health and Technologies confirmed the importance of mother's education in explaining the utilization of health care services in Bangladesh.
A total of 2000 households containing 14,142 individuals were interviewed by Jan Falkingham (2003), using two stage random sampling units and stratified across urban and rural areas. The survey findings demonstrated a significant decline in the use of maternal health-care in Tajikistan since the country gained independence from the Soviet Union in 1991. The results indicated that women in the regions of Khatlon and Region of Republican Subordination had significantly lower consultation rates than elsewhere in the country.

2.3.6. Empirical studies related to utilization of health care in India

In a study on utilization of health services in Tumkur district of Karnataka, Ramachandran and Sastry (1983), observed that there was under-utilization of middle level hospitals in rural areas and small towns as people tended to bypass them and go to higher order medical centers in larger towns or cities in the hope of receiving high quality services.

A study by Duggal and Amin (1989) analysed the socio-economic-demographic determinants of utilization of facilities by 590 households in Jalgaon district of Maharashtra. For over three-fourths (77%) of the illness episodes, the patients chose private practitioners and hospitals. The patients utilized government run facilities in only 13 per cent of the episodes. Further, during 1986-87 the per capita private expenditure on health was Rs.182.49 a year as compared to Rs.13.83 per capita per annum in Maharashtra state on public expenditure in 1985-86. Health expenditure was 7.64 per cent of total...
consumption expenditure and 9.78 per cent of reported income; 7 to 9 per cent of annual consumption was spent on meeting health care expenditures.

Berman and Khan (1993), gave two reasons for the preference of private health care facilities. Firstly, government health facilities were on an average more dispersed (or at a greater distance) than private facilities. Secondly, if one manages to reach the government health institution then the waiting period was very long leading to loss of wages that keeps away or off the poor or even the middle classes from using government facilities.

Rao et. al., (1971) identified the factors associated with the use of curative health care by individuals. Morbidity surveys have shown the relationship between disease, poverty and low social status. Other socioeconomic factors such as literacy, income and accessibility also determined the extent to which people use health facilities. Shrivastava, (1985) observed that 90 per cent of the Scheduled Caste / Scheduled Tribe population of Madhya Pradesh lived below the poverty line. Also, most of the population was illiterate. The study area consisted of two tribal villages in Narayanganj block of Mandla district. One of these villages was near a PHC (7 kms) while the other was situated some distance from the PHC (17 kms). The dependency ratio of the population was very high (82 %). The index of aging was very low (about 12 %) indicating low longevity.

Reddy and Sekhar (1995) in their study conducted in Andhra Pradesh found that relatively more illiterates used government medical care facilities compared to educated households. Thus, higher levels of education and the
usage of private medical care facilities were positively related. Majority of households belonging to self-employed category and salaried / wage earners category utilized private medical facilities whereas majority of households belonging to casual labour category and others used government medical facilities. The data also showed that per capita expenditure and the usage of government medical facilities were inversely related in rural and urban sectors. Urban non-hospitalised households morbidity rate was higher in women than in men. About 53 per cent of ailing / injured were females both in rural and urban areas. Compared to 81 per cent of rural ailing or injured males treated only 71 per cent of females were treated. These percentages were 89 and 84 respectively of males and females in urban areas. This reflected the negligence of health of women in both rural and urban areas. About 71 per cent of rural households and 77 per cent of urban households utilized private hospitals/ doctor for treatment compared to 55 per cent and 47 per cent respectively for hospitalized households. The average expenditure incurred in private hospital was more than twice the amount spent in government hospitals.

Yesudian (1990a, 1990b) surveyed the utilization of health facilities by two slum communities – Deonar and Naigaum in Bombay. Both communities were found using more private sector than public facilities for short-term and minor ailments. It was only in acute cases of illnesses requiring hospitalization that they used public facilities. The study suggested that the reason for using public facilities for hospitalization cases primarily reflect cost rather than quality or other considerations.
Sundar and Sharma (2002) studied the pattern of morbidity and healthcare utilization by the urban poor living in slums and resettlement colonies in Delhi and Chennai based on the survey conducted by NCAER during April-July 2000. A sample of 2000 poor and low-income households living in the slum clusters and resettlement colonies (1000 households each in Delhi and Chennai) were selected for the study by using a stratified random sampling procedure. The study concluded that the residents of slum and resettlement colonies in Chennai were found to be better educated than their counterparts in Delhi. In Delhi (40 %) the main earners in sample households living in slums were wage earners who worked as construction labour, factory workers, porters, operated rickshaws and carts. A significant proportion (8 %) reported their main earner worked as a domestic servant (maids, cook, chowkidars) and 3.8 reported as sweepers. The overall morbidity rate of any illness was marginally higher for Delhi than Chennai. The findings of the survey indicated that people living in resettlement colonies had a better health status than the slum dwellers.

Data from the Government of India’s National Sample Survey Organization was used by Sarma and Rempel (2007). They analyzed the determinants of women’s decisions to register for pre- and postnatal healthcare, utilize maternal healthcare and select a place for childbirth. The data showed that the level of schooling the mothers have attained had a significant, positive effect on decisions to register and utilize these healthcare services in both rural and urban areas. In contrast, distance to a maternal health facility centre inhibited decisions to register for and utilize these services in rural India. The findings
demonstrated that the health status of women and children in India could be improved significantly by strengthening IEC (Information, Education and Communication) efforts on the demand side and reducing access barriers on the supply side.

Shariff and Singh, (2002) examined the determinants of maternal health care utilisation in India. Econometric analysis was applied to study what determined the use of maternity services amongst the 7635 women who had a child in the year before the survey. It used four measures of maternity care: blood pressure check ups, place of delivery, use of trained help at the time of delivery and postnatal care. The results indicated that the variables of education and information significantly increased the utilisation rates for prenatal, child delivery and postnatal health care. Economic factors such as wages and income were important for the utilisation of child delivery services but not for other maternity services.

Kumar and others (1997) assessed the impact of health care center (HCC) availability on the utilization of maternity care services and pregnancy outcomes in Ambala district, Haryana. The results of the study showed that except 17 women (2.8%), everyone knew at least one correct purpose of antenatal care (ANC) and 98.2 per cent women had contacted health staff for ANC. However, knowledge of the respondents about the components of ANC was found to be poor in study villages. Among respondents having better awareness about ANC components, preference and utilisation of modern delivery attendants was found to be higher. For maternity illnesses, consultation rate of
government functionaries was 67.9 per cent in PHC village, 52.2 per cent in Sub-center village and 55.8 per cent in villages without a HC. Perinatal mortality rate of 76.0/1000 births in villages without HC was not significantly different from the rate of 87.4/1000 in Sub-center village but rate of 38.9/1000 in the PHC village was significantly lower. Awareness and availability of modern maternity services were found to have significant influence on the health seeking behaviour and pregnancy outcome.

Kanitkar and Sinha (1989) reviewed the study conducted by International Institute for Population Sciences with other agencies in five states of India, namely Bihar, Rajasthan, Orissa, Maharashtra and Gujarat. The sampling design provided separate estimates for three strata namely Stratum I (comprising villages in which the Primary health center/Health Sub-centre / Minimum Needs Programme Health Centre were located); Stratum II (comprising of Villages in which no such health facility existed). The authors addressed the use of antenatal care during the last, recent pregnancy leading to live birth. A little more than one-fifth of the mothers in the rural areas of Maharashtra had taken the trouble to go for antenatal check-up whereas in the rural areas of Bihar and Rajasthan, the proportion of mothers who were motivated enough to go for antenatal check-up was less than 5 per cent. The conscious utilisation of antenatal care services by mothers was generally very low, and even in villages where health centers were located the extent of utilization was poor. In Orissa a little more than 50 per cent of the urban mothers had taken advantage of antenatal check-up facility. This percentage for Bihar was only 21 and for Rajasthan 31. Literacy and standard of
living index of the households were related to the use of antenatal care services. The proportion of mothers received antenatal check-up was invariably higher among literate than illiterate mothers. Similarly, the proportion of mothers registered for antenatal check-up had increased with increase in the standard of living index of the household. The findings revealed that most mothers were either ignorant of the existence of antenatal care or they did not perceive any need for it.

Lusome (2004-05) studied maternal care inequalities in North East India by using NFHS –II (1998-99). The economic Well Being Index (WBI) was used as the indicator of economic status of the household. Biprobit analyses considering 3+ANC and safe delivery as bivariate outcome was carried out and concentration curves were also used and indices were constructed. The probability that a pregnant woman will neither have ANC+3 nor safe delivery was highest in Assam (0.63), followed by Meghalaya (0.619), Nagaland (0.583), Arunachal Pradesh (0.533) and Sikkim (0.492). The probability of not having maternal care was lowest for Mizoram (0.134). The study concluded that the probability of pregnant women availing maternal care varied between different economic strata with the women of higher strata having significantly higher probability. Women who availed 3+ANC were three times more likely to go for safe delivery and these results suggested that inequalities in maternal care favour better-off.

Stephenson and Tsui (2002) examined the determinants of the use of four types of reproductive health-care services in Uttar Pradesh. The analysis
used a multilevel modeling strategy to assess the presence of household and community level variation in service use. Random-slope models were fitted to examine the influence of the determinants of service use in community. A significant positive random slope was found for education at the secondary level and above. The community effects for use of antenatal services vary more for a women who had attained a secondary or higher level of education than they do for women who had been educated only as the middle-school level. They found that likelihood of receiving antenatal care and delivering a child in a medical institution rise sharply with educational attainment. The results also highlighted strong community-level influences service use though the type of community effect varied by service type. The role of some individual and household factors were determined by a person's use of services was mediated by the characteristics of the community in which the individual lived.

Matthews et. al (2001) identified the socio-economic determinants of antenatal care-seeking among rural women in rural Karnataka. Initial contact was commendably early but only women with problems reported an adequate frequency of contact.

Majumder (2006) applied econometric tools in an interdisciplinary framework in Cooch, Behar and Jalpaiguri districts of North Bengal and found that the demographic factors like age, and family size determined the utilization of care. Probability of utilisation was seen higher in small families. As of 'normal out-of-poor trips" it had been found that those households whose leads made frequent trips, have a tendency to utilise care more.
Dabral and Malik (2005) in their study found that majority of Gujjar mothers received antenatal check-ups, though institutional deliveries were less common. The median number of check-ups for those who received at least one check-up was 3 visits. The median timing of the first antenatal check-up among Gujjar women of Delhi was 4 months i.e., during second trimester of pregnancy. The coverage of other two interventions, namely two tetanus toxoid injections and full course of iron and folic acid supplementation was also incomplete. Higher educated mothers had more likelihood for antenatal care and institutional deliveries. Majority of the deliveries in last four years of research had no complications. Immunization coverage among Gujjar children was incomplete. Proportion of 'fully' vaccinated children was low. Vitamin A supplementation below 5 years of age was not only incomplete, but also irregular. Diarrhoea was the most frequent cause of child morbidity among Gujjars. Treatment of the three childhood ailments under study was fairly high. The likelihood of using ORS increased with increase in the level of education of the mother. Breastfeeding was universal among Gujjars; however, supplementation begins relatively early. Slightly more than half of the children begin breastfeeding within 24 hours of birth. Majority of children among Gujjars had stopped breastfeeding by 24-29 months of age.

Navaneetham and Dharmalingam (2000) examined the patterns and determinants of maternal health care use across different social settings in south India: in the states of Andhra Pradesh, Karnataka and Tamil Nadu. They used data from the National Family Health Survey (NFHS) carried out during 1992-93.
across most states in India. The study indicated that determinants of maternal health care services were not same across states and for different maternal health care indicators. Although illiterate women were less likely to use maternal health care services; there was no difference among the educated. The level of utilization of maternal health care services was found to be highest in Tamil Nadu, followed by Andhra Pradesh and Karnataka. Part of the interstate differences in utilization was likely to be due to differences in availability and accessibility among the three south Indian states.

Nielsen et. al., (2001) examined the characteristics of antenatal care attenders in a rural population covering 30 randomly selected areas served by health sub-centers of rural parts of Salem district. A total of 1254 women (95%) had at least one antenatal care visit. The median number of visits were four. High utilisation of antenatal care facilities was associated with low parity and adverse obstetrical history, short distance to healthcare facilities and literacy. It was concluded that antenatal care coverage was high.

2.3.7. International studies related to Cost of Maternal Health Care and Health Care Financing

Abel Smith (1963) carried out the first systematic survey designed to obtain a relatively comprehensive accounting of all major sources of finance and expenditure on health services, including developing countries. The survey covered six countries, the developing ones being Sri Lanka and Chile. A second study was designed covering 29 countries surveyed, 21 were developing countries. Both these studies attempted to define the various constituent
components of the health services, to list the main sources of finance, and to lay down a standard classification of expenditures including avoidance of double counting. This approach was an important methodological departure from previous attempts which concentrated on the analysis of understanded existing data. There were five important results. First, it was not possible to make valid international comparisons of health services financing and expenditure. Secondly, a major impetus was given to repeat and extend such comparisons and to improve the methodology. Thirdly, the results were useful to define and classify health expenditures in the development of a uniform system of national accounts. Fourthly, developing countries were shown that health service expenditures involves many more sources and services than had been previously accounted for, and represented a markedly higher percentage of GDP. Fifthly, it was shown that such surveys could be done relatively quickly, with limited means, and should even be feasible in developing countries.

Cumper et. al., (1978) conducted a study assisted by WHO in Bangladesh as part of a country health programme effort. Four-fifths of the health expenditures received from private urban curative spending was spent on drugs. Overall average expenditure was about three times higher in urban than in rural areas, but the difference was 2:1 for private spending per capita whereas it was 14:1 for government spending. It also found that 57 per cent of total expenditures and 68 per cent of private expenditures went on disease groups such as gastrointestinal, skin, influenza, upper respiratory infections, peptic ulcers and related conditions, nutritional diseases and accidents.
From the viewpoint of Moneskosso (1980) one of the striking features of the financing of health services in developing countries was the fact that families spent considerable sums of their own money in promoting health and seeking curative treatment. In Thailand, of total expenditure on health and health-related activities, private household expenditure was reliably estimated to account for 65.5 per cent and government expenditure was 32.9 per cent. The contribution of voluntary agencies (0.3 %), private industry (0.4 %), foreign aid (0.9 %) was very small. The priority was given to curative medicine and in particular to payments for doctors, hospital care and drugs (88.9 %).

Prata N et. al (2004) examined the costs of maternal health care in Tanzania. The study revealed that households spent between 3 and 5 per cent of their total expenditures on maternal health care. The poor spent a larger proportion of their household income on maternal health care than the rich. Results showed that in order to pay for WHO's standard level of care, at the full price, the poorest households would spend more than 90 per cent of their total income. Without subsidies, most of the households would have to allocate more than half of their annual consumption to maternal health care. Even a 75 per cent subsidy would take away more than 20 per cent of total annual assets of the very poor.

Borghi et. al (2006) measured costs and willingness-to-pay for delivery care services in 8 districts of Nepal and the results revealed that the average cost to a household of a home delivery ranged from Rs.410 ($5.43) (with a friend or relative attending) to Rs.879 ($11.63) (with a health worker). At a facility the
average fee for a normal delivery was Rs.678 ($8.97). When additional charges, opportunity and transport costs were added, the total amount paid exceeded Rs.5300 ($70). For a caesarean section the total household cost was more than Rs.11400 ($150). The study recommended that the mechanisms to direct funding to women in need must be improved, pricing needs to be more transparent, and payment exemptions in public facilities must be better financed to overcome both supply and demand-side barriers to care seeking.

Nahar and Costello (1998) found in their study in Bangladesh that majority of the respondents were willing to pay a government-levied user charge, though this was less popular among low-income families. 'Free' maternity care in Bangladesh involved considerable hidden costs which may be considered as a major contributor to low utilization of maternity services, especially among low-income groups.

In Argentina Borghi and Bastus (2003) found that direct costs were minimal compared to indirect costs of travel and waiting time. Khan (2005) in an investigation done at Bangladesh found that C-section and hysterectomy cases had the highest median expenditure. A third of the families studied reported selling jewellery, land or household items to moneylenders. To meet the medical expenditures the rural patients reported more difficulty in paying for care than the urban patients.

Hotchkiss and Gordillo (1999) investigated the level and distribution of household health care expenditures in Morocco, and the results indicated that government health care providers were considered as an important source of
modern health care not only for poor households, but for better-off households as well. While individuals who used private health care providers incurred substantially higher costs than those who used public providers, an unexpected finding of the study was the degree to which public clients paid for health care services, despite the fact that public care was nominally priced in Morocco.

2.3.8. Empirical evidences relating to financing and expenditure of health care and cost of health care in India

Nitcher (1980) surveyed the household health expenditure of 82 poor rural families in the South Kanara district of Karnataka. The findings of the study revealed that the household expenditure on health was about 7 per cent of average family income. This amounted to about Rs.270 per family a year, of which 60 per cent was spent on allopathic consultations and drugs.

The National Council of Applied Economic Research (NCAER 1991a) survey revealed remarkable sex differentials in the prevalence rate of medically treated illness and in the cost of treatment. In almost all states of India, the reported prevalence rate of illness was lower for the female adults and the female children up to the age of 14 years. Similarly, the survey found evidence of disparities in the morbidity rate, type of treatment of illnesses and in the cost of treatment among households belonging to different income classes. Some differences were also observed between rural and urban households, especially in the distance travelled to seek medical aid for the diseases. Another study conducted by the same organization (NCAER 1991b) in the villages under the command area of Indira Nahar Project also reported lower prevalence rate of
illness for the female children. Nearly 70 to 75 per cent of their illness episodes in high income households were treated by the private doctors. With the increase in the income levels of the households, the dependence on government doctors came down in both rural and urban areas of the country. And the fees and medicine category accounted for nearly two-thirds of the total household expenditure for treatment of illnesses. The bribes and tips accounted for 1.9 and 1.5 per cent of the total expenses, respectively in the case of urban and rural households. The NCAER launched a second round of the survey in 1993, collected data on morbidity, health care utilization and health expenditure. For the country as a whole, the reported prevalence rate of illness for the May-June 1993 worked out to 106.7 and 103 per thousand population for rural and urban areas respectively. The prevalence rate of treated illness was 94 per thousand population for both rural and urban areas of the country. In the rural areas, the morbidity rate was 215 and 192 per thousand population whereas for urban areas it was 220 and 216 for the male and female population respectively. It indicated that with an ageing population, the disease burden on the society and state increased.

Ministry of Health and Family Welfare (1993) GOI undertook a study in six districts, two each from Madhya Pradesh, Uttar Pradesh and Rajasthan. Within each state one better-off district and one worse-off district were selected to compare the performance of the health care infrastructure and needs in the worse-off district with a better-off one. The results revealed that, in general, monthly prevalence rate of illness was high in the worse-off districts. Nearly one-
seventh of the total prevalence was accounted for by chronic diseases. Anemia was very high in districts of Uttar Pradesh and Rajasthan. Respiratory and arthritic in Gwalior and Dalia in Madhya Pradesh and Mathura in Uttar Pradesh.

In over 85 per cent of the cases of illness, medical treatment had been sought. The average cost per episode varied between Rs.97 in Hardoi and Rs.186 in Alwar. Fees and Medicines accounted for a major part of the direct cost of treatment. The average cost of treatment in private allopathic clinics was substantially more in Mathura and Hardoi in Uttar Pradesh and Tonk in Rajasthan. However, the utilization of public facilities was very poor in the districts of Uttar Pradesh while it was the highest in Tonk. Public health facility was largely utilized in the districts of Madhya Pradesh and Rajasthan for immunization of children as it costs the user a meager amount as against an average amount of Rs.35 per vaccine under a private facility. The level of immunization was highly related to the education level of the woman of the household.

Sharma et. al., (2005) studied formal and informal reproductive healthcare user fees in Uttaranchal, India. Poor women who paid for reproductive health care in the public and/or private sector spent on average $1.91 on ANC, $4.54 on home delivery, and as high as $66.98 on facility deliveries. Women who used public services for sterilization paid much more ($89.18) than women using public services (0.47). Because of inadequate exemption mechanisms; the non-availability of medicines, lab services, and transportation to facilities; and the practice of unofficial payments, poor women incurred these expenses.
Balaji, Dilip, and Duggal (2003) explored the link between uses of institutional facility for delivery care and cost of delivery care on women's health in Nashik district of Maharashtra. Results showed a very high out-of-pocket expenditure on institutional delivery. The average pocket expenditure on delivery care, which included expenditure on doctor, fees, medicines and beds spent during the time of delivery. The average expenditure incurred per delivery in this population was Rs.512. The expenditure varied from Rs.193 if it was a home delivery to Rs.423 and Rs.2 613 if the delivery had taken place in public and private institutions respectively. It was concluded that the wide differential in costs was definitely a critical factor influencing the decision on source of delivery care sought.

Muraleedharan and Saradha (1999) conducted a household-level survey in the slum areas in Dindugal town of TamilNadu. Results of the study showed that the mean expenditures per delivery at home and Municipal Maternity Hospital (MMH) were Rs.295.00, and Rs.238.00, respectively. But the difference in mean expenditure per normal delivery between General Hospital (GH) (Rs.485) and MMH (Rs.238) was substantial. Even a slum women spent Rs.1895 for a normal delivery, compared to Rs.8774 for a C-section delivery in a private hospital. Whereas in GH, it worked out to Rs.485 and Rs.2410, respectively, for normal and C-section delivery. Most women who had C-section deliveries in private hospitals were from households with low poverty-risk index. Few women had spent more than Rs.10000 per C-section delivery. Although the mean expenses in GH are Rs.2410, several women had spent more than Rs.4000 for
C-section delivery, such expenses were not uniformly borne by all sections of the population. For example, out of pocket expenses per normal delivery in Municipal Maternity Home varied from Rs.45 to Rs.2000. The financial burden seems to fall to a greater extent on the poorest groups than on others. Also, in the case of C-sections in government hospitals, variations in out of pocket expenses per delivery was quite large. Many women from poorer groups spend more than Rs.4000 per C-section delivery. A considerable number of women from high poverty-risk groups had chosen private facilities for deliveries and had spent as much as Rs.15000 per C-section.

Muraleedharan (1997) studied the experience of women who had delivered a child either in public hospitals or in private hospitals through two different surveys. The first survey covered 377 women (285 from Madras city, and 92 from Chidambaram/Cuddalore region) who had delivered a baby either in government or private hospitals. The second survey was done to collect information from 30 hospitals (22 from Madras city and 8 from Chidambaram/Cuddalore region), to throw light on facilities available. It was found that, on an average, a sum of Rs.12,965 was spent for a caesarean delivery in private hospitals in Madras city, while in Chidambaram/Cuddalore region, the corresponding amount was Rs.6985. Considerable variation in expenditure existed across private hospitals. For example, in Madras city, it ranged from Rs.3000 to Rs.30,000. A noteworthy point was that 75 of 129 caesarean cases surveyed in private hospitals in Madras city had spent equal to or more than Rs.10,000 rupees. Of these 75, twelve belonged to the poorest
income groups (less than Rs.20,000 per annum per family). A large majority of women in public hospitals (61% in Madras city and 96% in Chidambaram / Cuddalore region) had paid speed money to the providers. In the case of private hospitals, 16 per cent in Madras and 88 per cent in Chidambaram / Cuddalore had paid for services that were not billed.

2.3.9 Studies related to Women Empowerment and Health Care

Women's empowerment, or autonomy in the words of Roy and Niranjan (2004) is a multifaceted concept. In a patriarchal society, as exists in large parts of India, men are placed in a more advantageous position than women. The family lineage and living arrangements were centred on men, and inheritance and succession practices tend to neglect women as well. The state of male supremacy is reflected in the child rearing and caring practices. It has been stated that the celebrations for the birth of a male child, and the differential treatment meted out to boys bear sample evidence of this. Further, access to nutrition, child care and education all favour boys over girls. From a very early age, a girl is socialized to give priority to the needs of the male members in the family. Women's empowerment is essentially an effort to rectify this imbalance and attain gender equity.

Nauriyal (2003) reviewed the gender inequality as the cardinal issue. Women assumed a disproportionate responsibility for contraception in comparison to men. Not only do women have an undue burden of responsibility in fertility regulation, but the methods available to women for use were those associated with potential health hazards. The family planning programmes had
focused primarily on women through maternal and child health programmes which generally neglected male methods of contraception. It even deterred contraceptive use by women, particularly in cultures where men dominate reproductive decision-making. The study concluded that the ways in which gender inequalities limit women’s access to health care posed a challenge to reproductive health services to overcome such injustices.

Jeejebhoy (1998), in a study found that at the family/household level, gender inequity manifested itself in a weaker role for women in decision-making, lesser control over resources and restrictions in physical movement. While women’s autonomy was indeed multidimensional, at least three dimensions – decision-making, mobility and access to economic resources – were closely related in all settings, irrespective of region or religion.

Yesudian, (2004) studied the impact of some selected women’s empowerment factors, decision making autonomy and attitude, on the utilization of maternal health care. The nationwide data of National Family Health Survey (NFHS-2) collected during 1998-99 was used for the study. The survey covered a representative sample of 90,303 ever married women in the age group of 15-49 years from 27 states in India. The results of the study revealed that, first antenatal check-up in the first trimester was very low among illiterate mothers, and only one fourth of them had undergone the recommended three antenatal check-ups. Little more than three-fourth of the mothers (76.1%) with higher education had delivered in a health facility, whereas only one sixth of the illiterate mothers (17.6%) had delivered in a health facility. It was worth noting that nearly
three-fourth (74%) of illiterate mothers had delivered at home without any professional assistance. Mothers with high school and above education used the postnatal care much better than the mothers with some education and illiterate mothers.

Becker S, et. al (2006) assessed husband and wife reports of decision-making on four matters (whether or not to buy household items; what to do if a child becomes ill; whether or not to buy medicine for a family member who is ill; what to do if a pregnant women becomes very ill) and the relationship of these reports to three health behaviors (having an emergency plan during pregnancy; delivering in a health facility; having a postpartum checkup within 4 weeks). Information was collected from women respondents and their husbands separately on the respondent’s knowledge, attitudes and behaviors regarding maternal health. The results showed that relative to their husbands’ report, wives tend to under-report their household decision-making power. In couples with both partners educated and in couples in which women work for pay, both partners were significantly more likely to report that both of them participate in the final decisions than was the case of couples without education or in which the wife did not work for pay. Decision-making power of women, as measured in the study was significantly related to the household having a plan for what to do in case of a maternal emergency, but was not associated with place of childbirth or with having a postpartum checkup.

For each type of decision explored in the survey, one or both spouses in the majority of couples (59 to 65%) said that the wife was involved in the final
decision. In roughly half of these cases (29–34% of couples overall), both members of the couple reported that they made the decision jointly. Sole decision making by the wife was rarely reported by either spouse, but for each situation, about one-third of couples agreed that the husband made the decision alone. In three of the four specified situations, the proportion of couples in which both spouses reported that the wife participated in decision making increased with the woman’s level of education and was higher if both partners were educated than if only one had been to school, it was greater among couples in which the wife was employed than among those in which she did not work outside the home.

Jejeebhoy (2002), with data from couples in Tamil Nadu and Uttar Pradesh, found that husbands and wives quite often had discrepant reports of the woman’s level of empowerment as measured by questions on her mobility, her access to economic resources and her economic decision-making power. Four outcome variables considered were current contraceptive use, interspousal discussion of family planning, unmet need for contraception and childbearing in the past five years. In Tamil Nadu, the coefficients of husbands’ reports of her decision-making power were not significant. However, in Uttar Pradesh, the coefficients of husbands’ reports of empowerment were significant in several instances while the coefficients for the variable for wives’ reports were not. Uttar Pradesh is known to be a more gender conservative context, while Tamil Nadu is more egalitarian providing a possible explanation of the greater influence of women’s reports of their own empowerment in the latter.
Ghuman et. al., (2004) studied the relationship of the husband and wife reports of empowerment with experience of child death and found effects in opposite directions—women’s reports of their empowerment (on a scale from low to high empowerment) were negatively associated with mortality but husbands’ reports of the same were positively associated with mortality and significantly so in India for one indicator of empowerment—whether it is the wife who decides on discipline for the children or not.]

2.3.10 Studies related to women and health care in India

Roy and Niranjan (2004) in a comparative study found that women in Tamil Nadu had greater autonomy in making decisions regarding their own health care, freedom of movement and access to money. However, empowerment being a multidimensional concept, the results showed some interesting variations. Women in Uttar Pradesh were found to have greater self-esteem in the sense that they were more critical about wife beating. A much higher proportion of women in Uttar Pradesh denied that a husband was justified in which turns out to be an important indicator of the evidence of empowerment. Beating his wife under any of the six circumstances on which data were collected, compared to women in Tamil Nadu.

Among the indirect measures of autonomy, education in particular was important and played a positive role in enhancing different dimensions of autonomy. There were sociocultural variations in the level of empowerment. The type of family in which a woman lived had a strong association with the three direct measures of autonomy. Women staying in families with in-laws shown a far
lower level of autonomy than do women who lived in other types of families. Of the three direct measures of autonomy, like involvement in decision-making, freedom of movement and access to money, women, particularly in Uttar Pradesh, had the least autonomy in terms of freedom of movement. Further, women with education, particularly secondary education, and working women showed greater self-esteem, had a favourable attitude towards girls' education and used contraceptives across cultures. Urban women, as compared to rural women, were found more favourable towards girls' education and towards family planning methods. This divide indicated that there were two different societies that existed in India, a rural culture and an urban culture. In rural areas, the lifestyle was oriented more towards the community than towards the family, while in urban areas, life was more individualistic and family-oriented. The degree of such adherence to societal norms and practices in rural areas was much stronger in Uttar Pradesh than in Tamil Nadu. Among the three selected direct indicators of empowerment, complete freedom of movement determined greater self-esteem and a more favourable attitude for girls' education to a great extent in both cultures.

Singh et al., (2002) studied the relationship between education, woman autonomy and some other socio-cultural factors and their effects on fertility. Information was collected from various items from about 150 households belonging to each religion/caste group from rural and semi-urban areas of Varnasi district in eastern Uttar Pradesh of India. Information was collected from each household using quota—sampling procedure from 1,214 households with at
least one couple from each household. It was observed that better educated
women possessed higher level of autonomy within and outside home. Highly
educated, compared to uneducated were more likely had greater domestic and
child related decision-making autonomy. They found that fertility, to some extent,
was unaffected even among the women possessing high level of autonomy and it
was also found that autonomy increased with age.

Mishra and Singh (2002) developed an index of female empowerment
and observed state-wise differentials in it. They also studied determinants of
female empowerment and reproduction and observed direct and indirect inter­
linkages between the two, based on NFHS-2 reports. The study revealed that
there was wide disparity in the factors of female empowerment across the states
in India, being largest with regard to availability of medical facilities. Women in
Bihar, Up, Madhya Pradesh and Rajasthan were found as less empowered in
general and also in relation to men in particular. Physical harassment of women
was common feature of all regions and of the people of every socio-economic
group. Involvement of women in decision making was an influential factor in
determining reproduction.

To sum up, the review of available literature
both at the national and international levels,
on various health issues, reveal that
micro level, focused studies are required to
find out the ground reality so as to
ensure access and better utilisation of
healthcare services in rural areas of countries
like India.