CHAPTER: 2  REVIEW OF LITERATURE

2.1  INTRODUCTION

2.2  REVIEW OF LITERATURE
2.1 INTRODUCTION

Health is one of the most important assets a human being has. It permits us to fully develop our capacities. If this asset erodes or it is not developed completely, it can cause physical and emotional weakening, causing obstacles in the lives of people. The previous connection can be seen as the relationship between income and health. Life cycle models have explained how one’s health status can determine future income, wealth and consumption (Lilliard and Weiss 1997; Smith 1998; Smith 1999). Nowadays, it is possible to say every person could expect to live a long and healthy life. We could say its economic value is huge and health gains had the economic consequences of widespread economic growth and an escape of ill-health traps in poverty (World Health Organization, 1999). But also, health problems could be reflected as reductions and obstacles for economic progress. Ainsworth and Over (1994) have studied the impact of AIDS on African economic development, stating the disease is prevalent among young workers, affecting productivity and domestic savings rates. Therefore, there has been a growing interest to extend the relationship between health and economic growth, catalyzed in considerable extent by a 1993 World Bank report on health (see World Bank 1993). Barro (1996) comments health is a capital productive asset and an engine of economic growth. Using this argument, we can consider health as a determinant of human capital. Likewise, Mushkin (1962) indicates human capital formation, with the help of health services, and education are based on the argument that people develop themselves when they invest in these assets and will earn a future return with them. Grossman (1972), Bloom and Canning (2000) explain healthy individuals are more efficient at assimilating knowledge and, in consequence, obtain higher productivity levels. Hamoudi and Sachs (1999) argue there is a cycle of simultaneous impact between health and wealth. In an early empirical review of the impact of health on economic development, Sorkin (1977) concluded that health, seen through reductions in mortality, had an important impact on economic growth during the early twentieth century. However, he comments increases in the health status of the population of developed nations will have little impact on economic growth, but the impact could be different for
developing nations. For this matter, he points out several ways how health programs could have an impact on economic development on developing nations. The first way is through productivity gains and increasing man-hours of work. Jack (1999) explains productivity of labor depends on factors like physical and mental capabilities, investments in human capital and efficiency of labor organization and management, and emphasizes changes in health could affect labor productivity through the previous channels. Also, labor productivity could also be reduced by the need to care for sick relatives or by reducing years of schooling if parents are chronically ill. On the other hand, improvements in health could positively affect the experience level of the workforce by increasing their life expectancy and good health status condition. The second way is making feasible the development of previously unsettled regions. Sorkin (1977) mentions a major health program could initiate the development of areas where economic activity was deterred by unfavorable health matters. Bryant (1969) indicates health and health services can improve or retard economic development and social and economic changes within a region. The third way is improving innovation and entrepreneurship by changing the attitudes of people. Malenbaum (1970) used a step wide regression equation with macroeconomic data of 22 poor countries, using agricultural output as the independent variable, with several social, economic and health data as dependent variables. With this, he showed how the influence of health factors on output seems to be larger compared with other economic and social variables. As a conclusion, Malenbaum (1970) suggests health programs could change the happenings of the lives of the poor by taking their own decisions and to have the feeling to influence the events on their everyday activities, which often accept them as pre-ordered. In a theoretical basis, Mankiw et al. (1992), Barro (1996) and Grossman (1972) have developed models that include health capital as a significant variable for economic growth. Nevertheless, life expectancy is the most used variable to represent it. This variable is defined by the United Nations as the average number of life years since birth according to the expected rate of mortality by age. Jacobs and Rapaport (2002) show analysts prefer to focus on a survival time indicator, such life expectancy, because it emphasizes the duration of health status and places implicit importance on a person’s well-being. However, under the classification of the European Commission of Public Health, there are four determinants
of health: genetics, lifestyles, environment and socioeconomics. It is not clear the
definition of life expectancy is the best definition for health capital. Bhargava et al.
(2001) mention life expectancy does not reflect the productivity of the labor force accurately and capital formation and innovation need the labor force to be active and healthy during most of its working life. Also Evans et al. (1994) mention death and health factors could not be related. Thus, it is unsure whether life expectancy completely measures the impact of health on economic growth. The problem is if the health variable is not well specified, it can lead to measurement errors or omitted variable bias that produce biased and inconsistent estimators, failing to have a true estimation and validity of the impact produced by health, and not demonstrating in detail the theoretical background developed in the past. This paper presents an empirical study of the impact of health capital on economic growth, extending its definition to include the four determinants of health in order to find a more concise evidence of its impact. Furthermore, it takes into account the different determinants of health in the estimation and the possibility of analyzing separately the impact of each determinant, being this is distinctive contribution and what sets it apart from previous studies.

2.2 LITERATURE REVIEW

In 1992, Mankiw et al. extended the Solow model of growth by adding human capital, specifying this variable has a significant impact on economic growth. Later, other authors developed models that included human capital, specifically health capital. Barro (1996), following a Ramsey scheme, develops a growth model including physical capital inputs, level of education, health capital, and the quantity of hours worked. By obtaining first order conditions, he finds an increase in health indicators raises the incentives to invest in education and a raise in health capital lowers the rate of depreciation of health, adding there are diminishing marginal returns to investment in health (Gallego 2000). Grossman (1972) develops a model that allows health capital formation, seen as a capital good, to be able to work, to earn money, and to produce domestic goods. He shows an increase in the quantity of health capital reduces the time lost of being sick. The model assumes people are born with initial endowments of health, which depreciate with age and grow.
with investment in health. Among their principal findings, it can be mentioned the productive nature of health is produced when a good state of health allows a more effective performance in the job and study. Grossman also finds that the principal determinants of health capital accumulation and demand for medical services are wages, age and level of education. In an empirical analysis, Bloom et al. (2001) follows the Solow model with human capital. Although they find that health capital is a significant variable for economic growth under the two-stage least squares method, key variables such as capital and schooling are not significant; therefore, the results are questionable. For Latin America, there is a series of technical research documents of public health developed by the Pan-American Health Organization, which find a strong correlation between economic growth and the regional health, estimating regressions similar to Barro’s (1996) where health is much more robust than schooling (Mayer et al. 2000). Nevertheless, the study of human capital has been focused on the schooling factor. Despite the studies of Bloom et al., it has been assumed that schooling is a matter of great relevance. Recently, this concept has been extended to the variable of interest in this study, health. In this case, health differs from schooling in the sense that it varies through the course of life and is the result of elections based on behavior, primarily during childhood and older adulthood (Strauss and Thomas 1998). Likewise, Gallego (2000) mentions a theoretical solid structure integrating health and economic growth has not been developed. He attributes this to the lack of interaction between the contributions of health economics and economic growth theory, and the bias towards a major importance of schooling as a primary determinant, due to the difficulty to disaggregate the impact of the two variables on the product.

In addition, the relationship between health and labor has been deeply studied. Bloom and Canning (2000) describe how healthy populations tend to have higher productivity due to their greater physical energy and mental clearness. Likewise, Strauss and Thomas (1998) review the empirical evidence of the relationship between health and productivity, establishing correlations between physical productivity and some health indicators. They focus particularly on those related with nutrition or specific diseases. In the field of health economics, the endogenous causality between health and income has been the topic of
several studies whose purpose is to establish the direction of the causality. Luft (1978) gives an informal explanation of this causality. He says that a lot of people who otherwise wouldn’t be poor, are simply being so because they are sick. However, a few people who otherwise would be healthy are sick because they are poor. In order to explain the direction of the causality of the impact of health over income, Smith (1999) uses life cycles models, which link health condition with future income, consumption and welfare. According to this, Bloom and Canning (2000) explain this direction of the causality with education, indicating healthy people live more and have higher incentives to invest in their abilities since the present value of the human capital formation is higher. The higher education creates higher productivity and, consequently, higher income.

Similarly, some empirical and historical studies have analyzed the relationship between health and economic growth. They establish an endogenous relationship between them and, at the same time, argue there are exogenous factors, which determine the health conditions of a person (Hamoudi and Sachs 1999). One major problem in the empirical studies of the impact of health on economic growth consist in their use of life expectancy as a proxy variable of health. For example, Bloom and Canning (2000) point out recent economic analysis shows the significance of health conditions as a determinant of subsequent economic growth. However, they measure health as life expectancy, which does not consider all the dimensions of health. Health, if its true value wants to be assessed, should be measured in all its dimensions: mortality, morbidity, disability and discomfort. Life expectancy takes into account mortality, but it is not perfectly correlated with the rest of the health dimensions (Evans et al. 1994). Moreover, life expectancy reveals only the lifetime of the stock of human capital, saying nothing about the time in the labor force of this capital or the problems caused by the population aging. This is a problem because, even though there is a solid connection between health, productivity and economic growth, health capital depreciates over time (Grossman 1972) and at one point the relationship stops being binding. As a response to these problems, the purpose of this study is to extend the definition of health capital in the empirical analysis of the Solow growth model with human capital, using a variable that includes the four determinants of health defined by the European Commission of Public Health: health
services, socioeconomic conditions, lifestyles, and environment. This will more accurately define the impact of health capital on economic growth.

Aggrawal. O.P et.al (1997), in their study related to the utilisation of the antenatal services in the peri-urban areas of east Delhi revealed that 74.3 per cent of mothers had been registered at one of the medical care centers. Of them, 10.8 per cent did not receive tetanus toxoid vaccines, 26.4 per cent did not pay even a single visit during the antenatal period, whereas 23.2 per cent paid five or more visits. Seventy per cent of the deliveries took place at home, of which 81.9 per cent were conducted by untrained village dais. Of all mothers, 27.2 per cent did not receive any iron/folic acid tablets. Mothers who did not registered themselves were mostly illiterate, belonged to the poorer strata, were generally below 25 years of age and had three or more children. Amongst the unregistered mothers, 95.8 per cent delivered at home and had not received iron tablets or TT immunization. The study recommends that an attempt be made to register all the antenatal mothers so that they come under the umbrella of the MCH care package for ensuring safe motherhood and better survival of children

Chabbra.s. et. al (1997), In their study on why reproductive health care seekers sought admission to tertiary level health care facilities in rural central India Chhabra and Saraf (1997) find that the obvious reasons for seeking treatment at the tertiary level - irrespective of the nature of the case, locality, age etc.- were economic, referrals, and the fame of the health facility and expert doctors. The other common reasons were availability of expertise, insurance benefits and appropriate health care. Poor people and illiterates preferred to go to tertiary health care institutions because of economic reasons while the better-off women went because they were referred. This shows that patients come here not by choice but for reasons beyond their direct control.

Chilmulay P(1997), Inability to move and work and loss of appetite or interest in the surroundings were considered indicators some of the indicators of sickness by Chilmulay P B (1997). This perception of 'health' influenced the people's choice of provider and there. Treatment-seeking behavior. The perceived quality of services was an important determinant of the pattern of utilisation. Private practitioners were perceived to be
providing better services because they included injections as part of every treatment and were willing to make home visits which were convenient, especially where transportation was inadequate. The government health services were not popular because of the longer waiting period involved, the arrogant attitude and behavior of all the staff and non-availability of medicines. No gender-related differences were noted in the morbidity prevalence and pattern of treatment-seeking. Levels of education in the family, caste, affordability (asset-holding) and culture were the factors which determined the utilisation pattern. In general, those with better levels of education, those belonging to dominant and higher castes, and those with more assets preferred private practitioners. However, in traditional and cultural strongholds, relatively uniform behaviour was observed across caste and economic group.

Devi. D.R. et al (1992-93), With regards to the understanding the unmet family planning needs Rastogi and Rutherford (1992-93) conducted the study on NFHS by interviewing a representative sample of 11,014 currently married women of reproductive age in Uttar Pradesh. Results showed that nearly half of currently married women in UP had a need for family planning, either met or unmet, for Family Planning. The proportion of unmet needs was highest amongst those who live in rural areas, amongst the illiterate, amongst Muslims, amongst scheduled tribes and amongst those who had either a small or large number of children. Family planning needs were subdivided into 'need for limiting' and 'need for spacing'. Fifty-five per cent of women in UP with unmet family planning needs had an unmet need for limiting while 89 per cent had unmet needs for spacing. The proportion of need for spacing that was unmet was especially high among women living in rural areas with less education, whether they were Hindus, Muslims or scheduled tribes. The proportion of needs for limiting varied sharply by economic status: it was high among women who lived in rural areas, were illiterate, were Muslims or have at least five living children. The study points out that the Family Welfare Programme has ample scope for reducing the proportion of unmet needs. It also recommends greater emphasis on spacing methods such as pills and condoms, which would be helpful in improving maternal and child health. As some women prefer to use spacing methods rather than
sterilization to limit their family size, intensified promotion of spacing methods may have the added benefit of reducing the unmet need for limiting.

**Duggal and Sucheta (1989)** through the household survey in one taluka of Jalgaon district. It was a longitudinal study conducted in three rounds during January to June 1987. Each round covered a recall period of one month in each of the three seasons: winter, summer and monsoon. The results of the study are as follows. The morbidity prevalence rate for males was 145 per 1,000 and for females 153 per 1,000 males and females, respectively. Morbidity was highest among the youngest and oldest age groups. It was higher in rural areas than in urban areas. Within urban areas, the slum population had a higher morbidity. Within rural areas, those in remote villages had the highest morbidity. The poorest class reported the lowest morbidity prevalence rate, and the richest class reported the highest. Rich classes reported a greater proportion of acute, minor illnesses.

**George A.,(1994)** In their study of household expenditure in Madhya Pradesh Nandraj (1994) analysed the relationship between household health expenditure and socio-economic variables. In the process, data on the incidence and prevalence of morbidity and utilisation of health care were also collected. The study was conducted in 770 households in two districts. The households were selected on the basis of the Centre for Monitoring the Indian Economy (CMIE) district-level indicators of economic development. Sagar is one of the better-development district of Madhya Pradesh while Morena is under-developed. The prevalence rate of morbidity during the monsoon was 365 and 256 during winter. The incidence rate was 195 in the monsoon and 108 in winter. Urban areas registered a marginally higher prevalence rate than rural areas, especially for acute diseases. In rural areas, prevalence was lowest in places that were further away from health facilities. Prevalence was lowest in the two lower classes, and highest in the two upper classes. Higher classes reported greater prevalence of ailments of the nervous and cardiovascular system. Except for the age group 25-44, in all other age groups, male morbidity was higher than female. The utilisation of the private sector for health care was 69.5 per cent. Only in 15.7 per cent of the episodes did public health care was sought. Injections were rampantly given. Nearly three-fourths of the expenditure per episode was
on doctor’s fees and medicines. The cost per episode was slightly higher in rural areas than in urban areas. Among infants, the expenditure per episode was higher for females than males. Once again, in the age group 25-44, the expenditure per episode was higher for females than for males. In all other age groups, it was higher for males.

Kakabol P.N. (1984-87) Use of traditional medical practitioners to deliver family planning services in Uttar Pradesh was studied by Kakabol et. Al (1994) for the period between 1984-87. They selected one PHC block in each intervention and non-intervention area was selected. The two blocks selected were matched with respect to a few key variables, such as number of villages, population size, number of households, eligible couples, traditional medical practitioners, family planning performance of primary health centres and proximity to district headquarters. The sample size consisted of 37 villages and 22 traditional practitioners. The baseline and follow-up (cross-sectional) survey enrolled about 1850 women in both areas. The intervention consisted of training 22 practitioners for 11 days. The training emphasized motivational and counseling skills and the use of the cafeteria approach. A comparison of the pre- and post-training questionnaires revealed a substantial improvement in the knowledge of the trainees. Practitioners received a monthly honorarium of Rs 50. There was no formal mechanism for supervising the intervention. However, the informal monthly meetings between the concerned PHC and district health officials, the practitioners and the project investigators, provided a forum for interaction and discussion, replenishing of stocks and monitoring of records. The meetings also provided opportunities for continuous education.

Kannan K.P., et.al (1991) With regards to health and development in rural Kerala Kannan et. al (1991) conducted a health survey. The survey was conducted in two parts. One was a household survey conducted in all the villages of the state in July 1987. A random sample was drawn from the villages under each Panchayat. The recall period used was two weeks. The second part of the survey involved a census of health care institutions in all the panchayats and municipal areas of Kerala during the latter half of July 1987. Only 68 per cent of the total area could be covered in this census.
Morbidity prevalence rate for acute illnesses was 206.3 and for chronic illnesses 138.1. The study showed that the morbidity rate in Kerala (as measured by the KSSP study) was higher than the all-India average (as seen in the NSS surveys). The authors suggest that the remarkable decrease in Kerala’s mortality statistics has been a result of medical interventions preventing death, rather than effective prevention of disease. Poverty had not decreased, nor had sanitation or drinking water facilities improved. Thus, communicable diseases continue to prevail. On the other hand, there had been a shift in Kerala's demographic structure, with a higher proportion of adults and aged than the all-India average. These groups are more susceptible to chronic degenerative diseases, and thus Kerala's morbidity statistics were high on this count as well. Thus, Kerala had a high prevalence of communicable diseases such as fever and diarrhea, as well as chronic disease such as none and joint ailments, hypertension.

**Kavitha N. et al (1997)** To explore some of the determinants of utilisation of selected MCH care services, such as antenatal (antenatal check-up and iron and folic acid tablets), natal (place of delivery) and postnatal (check-up) health care services in rural areas of Tamil Nadu. Kavitha and Audinarayana (1997) conducted a survey of the sample consisting of 134 currently married women with at least one living child less than four years of age from two villages/district. Information was gathered on 172 live-born and currently living children. Data on still births and children who died before the date of the survey were not collected, so that women did not get emotional and affect the quality of the response and also the overall response rate.

Woman’s educational level had a positive influence on the utilisation of antenatal and natal services. Women from higher castes were also more likely to avail of antenatal and postnatal care. Women belonging to non-SC communities and of lower parity utilised the postnatal check-up services more than women of scheduled castes and higher parity. Monthly family income had a positive influence on postnatal care. Use of antenatal services had a positive effect on the place of delivery. Interestingly, working women (mostly engaged in agriculture and weaving) were less likely to utilised antenatal services than non-working women. In conclusion it was suggested that education in general and female education in particular must be encouraged in rural areas. Adult education and
social education could be used as vehicles for this purpose. Village-level meetings to interact with women, educate them and clarify issues related to MCH care were recommended.

**Khan A.G., et.al (1997)**, To understand the reproductive health services in rural Maharashtra, Khan et.al (1997) conducted a two-stage stratified random sampling of villages with and without health facility was done. Two hundred and thirty-five women with at least one child between one to two years of age were interviewed.

Only 13 per cent of illiterate women had utilized the overall reproductive health services. This increased with the educational status of women. The husband's educational status was more likely to influence the woman's utilisation of reproductive health services. Variables like the economic status of the family, type of family and caste did not influence utilisation patterns. Neither age nor loss of child influenced utilisation patterns that, however were associated with increasing parity. The study finds that utilisation of services was not influenced by village development factors like population size, proximity to a town, literacy levels etc. Programme-related factors like the health worker's visits to the village also did not influence utilisation of services. However, the family's views on the programme did favorably influence utilisation of services.

**Madhiwalla N., et.al (2000)**. To assess patterns in morbidity as reported with and without probing, utilisation of health facilities and expenditure on health care among women in rural and urban Nasik district Madhiwala et.al (2000) found that the morbidity among the women was higher than reported in the earlier household surveys.

The morbidity rate for females was found to be 812 per 1,000 and for males it was 307 per 1,000. The morbidity rate for females was so high, mainly because of the probing. The important categories of illness for women were fevers and respiratory illnesses, followed by reproductive illnesses and aches and pains. General aches, pains and weakness were also a significant category. The pattern of morbidity among women showed links to their living environment (air, water, food), work, childbearing and contraception.
Nandraj S et al. (1998) With regards to study of morbidity, utilisation and expenditure on health care in the households Nandraj et al (1998) conducted a study in the in the “L” ward of Greater Mumbai city, a congested pocket with residential units as well as small-scale factories and commercial establishments, poor sanitation, insufficient water supply, acute noise and air pollution. The majority of the population consisted of migrant labourers and entrepreneurs. The survey was conducted in five clusters - two slums, two chawls and one apartment block. The selection of the clusters was on the basis of their 'class character'. The predetermined sample size was 425. House listings were done in the identified clusters. Households were identified for survey through systematic sampling. In all, 430 households were covered in the study.

The monthly prevalence rate for males was 169 per 1,000 as compared to 571 per 1,000 for females after probing. Reproductive illness accounted for 28.2 per cent of all episodes among females, the majority of them being related to menstruation and child-bearing. The findings point to a strong relationship between women's work lives and their health. After probing, women had a higher morbidity rate than men across all age-groups. Slum-dwellers suffered higher morbidity than non-slum-dwellers in each age-group, gender group and occupation group. Of the total illness episodes, 32.5 per cent were not treated. For 85 per cent of the illness episodes, private facilities were used. With regard to deliveries the public sector accounted for only 30 per cent, as compared to the private sector which accounted for 31.7 per cent. All the three abortions reported utilised private facilities. Only 38 per cent of the total contraception users utilised public facilities.

Rajeshwari (1996) In their assessment of gender bias in the utilisation of health care facilities in rural areas of Haryana, Rajeshwari (1996) conducted a survey of two districts in the state, one with a public health care facility and the other 5-10 kms away from such a facility. Thus there were four villages with PHCs and the other four with no PHCs. In all, 389 households spread over eight villages were studied. Utilisation was considered with reference to preventive (infant's immunisation, antenatal care, care during childbirth) and curative care (level of medical intervention in case of ailment). Availability of public health care facilities, occupational category as proxy of economic status of the household
and educational status of the head of the household were examined as determinants of health care utilization.

**Ramamani.S (1995),** In the household survey of the health care utilisation and expenditure conducted by Ramamani (1995) on behalf of NCAER it was reported that the prevalence rate of illness for the reference period was 106.7 and 103.0 per 1,000 population for the rural and urban areas respectively. The prevalence rate of treated illness was 94 per 1,000 population. The survey results did not indicate any significant sex differentials in the overall prevalence of illnesses at the all-India level, although some states did exhibit such differentials. The prevalence rate of illness by different age-groups reveals a very high morbidity rate for the 60+ age-group, for both rural and urban areas. There were wide variations in the reported prevalence rates of illness across different states, with Kerala having the highest reported morbidity.

**Sood.A.K et.al (1994),** With regards to studying the pattern of utilisation of various treatment sources by Rural women for common maternal and child health problems in the block Beri of Rohtak district in Haryana Sood et.al (1994) observe that nearly 61.8 per cent of the women had contacted private practitioners, 50.0 per cent had contacted anganwadi centres, 21.0 per cent faith-healers, 18.4 per cent sub-centres, 19.7 per cent PHCs and 6.5 per cent government hospitals in the last six months. During the analysis of the data the socio-demographic characteristics of the respondents were taken into account. Some of These factors directly affected and some indirectly affected medical and health care utilization.

Some more studies on which the utilisation of health services related the same to high absenteeism, low quality in clinical care, low satisfaction, slum populations, different cohorts, and economic status among many. These can be as follows.

Recent analysis shows that high absenteeism, low quality in clinical care, low satisfaction levels with care (Clinical and with regards to courtesy and amenities) and rampant corruption plague the system. [Chaudhury et.al 2006; Das and Hammer 2007]. This has led to mistrust of the system, a rapid increase in the use of the private sector and its
attendant problems, high out of pocket expenditures that take a serious toll on families\(^1\) and the quality of care that is highly variable. Utilisation of health services is a complex phenomenon which, on one hand is influenced by the factors like level of education, economic status caste, on the other hand it is based on the availability, accessibility and organizational aspects of health services system. Such information is also important in planning and organizing health care services to the community. Only a few studies are reviewed in the following paragraphs due to space constraint. These are exclusively related to studies on the different types of services for different cohorts.

**Anita K et.al (2003)** in their community based cross-sectional study conducted during the period 2000-2002 in the slum populations in Delhi to assess the health care service utilization for diarrhoeal diseases and RTIs/STIs found that the male and female (Comprising 32.9 percent) in equal number preferred government allopathic health facility for the treatment of RTI/STI problems. In contrast a significantly higher percentage (82.9 percent) reported for treatment for diarrhoeal diseases. The main reason for preferring a government health facility was the low cost of treatment followed by easy availability of services. Quality of treatment and satisfactory behaviour of the health care personnel were up to expectations in 80.3 percent and 75.9 percent of the subjects respectively.

With regards to utilization of Maternal and Child Health services in the women of age cohort 15-45 years, Sumitra, S et.al(2006) find in their study carried out in the Ernakulam District of Kerala that the Antenatal Practices were very good and the women having visited the doctor at least three times during the pregnancy and that most housewives used government services as compared to working women and found them convenient and satisfying. In the study related to reproductive health in slum population in India and presenting the evidences from NFHS 3, Hazarika (2010) finds that the probability of ANC visits depended significantly on the levels of education and economic status. Among the slum women, the proportion of deliveries conducted by skilled attendants was low and the percentage of home deliveries was high. The use of skilled attendants was low and the percentage of home deliveries was high. The use of skilled attendants was low and the percentage of home deliveries was high.

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\(^1\) Vide NRHM 2005.
delivery care was found to be significantly associated with age, level of education, economic status and prior antenatal visits. The study finds that women from slum areas depended on the government facilities for RCH services. Further, significant differences in the reproductive health outcomes exist among women from slum and non-slum communities. Garg and Singh (1985) in their study on Belief about causation of diseases and preference of utilization of health agencies by elderly persons in urban community reveal that 82.8 percent aged believed in rational causation and 85.0 percent used modern medicine as their initial source of treatment. They also find through their study that 6.0 percent aged though disease causation as deistic/demonist and 0.9 percent tried to treat sickness by religious offerings, which necessitated the need of health education for the aged. Metgud C.S et.al (2009) in their study show early and widespread use of antenatal care., but it also reveals that the antenatal visits occur late in pregnancy. Few women did not take antenatal care, the main reason being that they believed that pregnancy being a natural phenomenon did not need any special care. The impression about antenatal care provider was that the private sources is considered far superior to that from government services. The level of compliance with iron supplementation among the anemic pregnant women was low. The literacy of women has a significant bearing on antenatal care of pregnant women. The conclude that measures should be adopted for improving female literacy.

Based on the NSS survey (1986-87) and NCAER Survey(1993) a study was conducted on the characteristic and utilisation patterns of health care facilities in rural and urban sector by Purohit and Siddiqui (1994). It was observed that majority of the outpatient services are provided by private doctors (both in rural and urban areas) but the inpatient case is mostly provided by the public hospitals. The private sector possesses less than half the number of beds than that available with the public sector. For outpatient treatment or consultations, the distance traveled by rural population is about 5.9 kms at an average while in urban area it is about 2.2 Kms. A large number of private clinics are concentrated in urban areas hence outpatient medical treatment is easily available which possibly explains the less distance traveled by urban population. The study also finds
that inpatients typically face trade off: Public sector hospitals are inexpensive while private sector hospitals provide skilled and reputed clinicians.

**D. Radha Devi, et.al (1996).** The study on knowing the unmet need for family planning in Uttar Pradesh by Radha et.al (1996) find that the need for spacing is unmet, and 43 percent of contraceptive need for limiting is unmet. The main policy implication is that family planning services, especially the provision of temporary methods, need to be expanded and improved. The research findings strongly suggest that improved services could result in substantial increases in the use of contraception for both limiting and spacing. Because many women prefer to use temporary methods rather than sterilization to limit their family size, intensified promotion of temporary methods would reduce not only unmet need for spacing but also unmet need for limiting.

**Pavalavalli Govindasamy et.al (1997)** The study on relationship between maternal schooling and factors known to reduce risks of maternal and child mortality, namely health-care practices, for selected northern and southern states in India., was taken up by Govindswamy and Ramesh (1997). They hypothesized that the practices of educated women are quite different from those of uneducated women with regard to pregnancy, childbirth, immunization, and management of childhood diseases such as diarrhoea and acute respiratory infection (ARI). However, there exist a number of potentially confounding factors, including various aspects of socioeconomic status, that are associated with maternal education, so that it is necessary to statistically control for these other factors. The findings indicate that a higher level of maternal education results in improved child survival because health services that effectively prevent fatal childhood diseases are used to a greater extent by mothers with more education than by those with little or no education. These effects of maternal education persist when the other socioeconomic factors are statistically controlled.

**Literature related to Gujarat and Surat:**

**Shariff(1993)** in their study on identifying the factors affecting the child health show that mothers education plays an important role in the aspects related to child health. Post
natal health of the child – like those of breast feeding, preventive immunisation – depend on the mother’s education. According to them, however, there are certain social beliefs which, despite being educated do not make much difference.

Duggal et.al (2005) in their study related to the health status in Maharashtra analysed the possible social, economic, demographic and other similar factors. According to him the urban health services are more organized than in rural areas.

Srinivasan R et.al (2007) headed a committee to assess the outcomes of NRHM in different states. One of the part of the study was assessing the performance of the same in Gujarat state. The committee studied all the 25 districts of Gujarat. The concluded that there is a lot of deficiency in the health services provided in the rural areas of Gujarat. The committee suggested that the deficit in the human resources be filled by contract methods. In case of 24 x 7 PHCs it also suggested that they recruit nurses on a large scale to fill up the vacancies. According the them as long as the problem of the recruitments of nurses are concerned, unless it is solved, the problems of ANC shall continue to haunt the state government. The committee took note of the various state government programmes like ‘Chiranjeevi Yojana’, ‘Janani Suraksha Yojana’ and ‘Rogi Kalyan Samittee’.

Venkatasubramaniam K(2004) in his report puts forth that to meet the rising needs of health, the need for filling up the posts of skilled workers plays an important role. These staff should be relocated as per the needs of the state. The report further says that there is need for coordinating the various programmes to make the goals of various programmes more effective.

IIPS –International Institute for Population Studies (2005) studied the availability of health facilities in the various health centers. They found that Manipur did not have any laboratory facility, whereas operation theater was available at all district level hospitals. Infection free labour room was available at only 45 percent of the health centers. Compared to this more than 71 percent of the places had this facility in Gujarat.
IIPS (2007-8) finds that women taking tetanus injections and other similar immunization facilities was less than 50 percent in the districts of Surendranagar, and Banaskantha, whereas institutional deliveries accounted for less than 50 percent in districts of Surendranagar, Amreli, Narmada and Dangs. Complete immunization was less than 50 percent in the districts of Kutch, Banaskantha, Surendranagar, Sabarkantha, Dahod, Panchmahal, Amreli, Valsad and Dangs.

Kumar (2003) while reviewing the policy of target free approach for family welfare in Gujarat suggested that in the initial stage, there was some confusion among the middle and lower level programme managers and field workers about the philosophy, content and monitoring procedure of the new approach. And that this was reflected in the sharp fall in the family planning service statistics in the year following the Target Free approach. According to them several positive changes have occurred in the implementation of the new approach.

Kumar (2004) in his exercise on finding the evidence on utilisation, mismatches and wastages related to primary health care in Gujarat finds that in the rural areas the PHC programme had failed to ensure presence of a doctor and health workers, resulting in the inadequate availability of the primary health care and RCH services. About eighty percent of the PHC and SC staff did not stay at the headquarters. Since most of the PHC doctors are inadequately trained in PHC management and administration, the paper suggested that there is a need to restructure the Doctor at PHC to concentrate on the provision of the curative care, while the health promotion and preventive activities can be shifted at the taluka level by putting a senior doctor in its charge. Lack of autonomy and very limited financial powers given to hospital/CHC/PHC in charge also caused delay in efficient management and maintenance of the health infrastructure and equipments. The paper strongly recommends the review of manpower, machinery and equipments at the regular intervals both at the CHC and PHC levels and more investments in the expansion of primary health care in rural areas and small and medium towns.

Ratnawali (2009) in providing insights about rural health services in Gujarat indicated that relatively poor health status among the rural population. The study finds significant
incidence of morbidity among the households. According to the study public health facilities appeared to be inadequate to provide reasonable health care and because of it reliance is more on private health services. Cost of treatment was perceived to high by the people and high debt was incurred by the people towards meeting the health expenses. The paper finally suggests that there is an urgent need to reorient the state’s priorities towards health with better manpower, infrastructure.

Visaria and Gumber (1992) studied the utilisation of primary health care in western India during the years 1980-81 to 1986-87. The paper examined the differentials prevailing in the utilisation of health services during the 1980s in the western India. The utilisation patterns were studied for the Maharashtra and Gujarat states. They found that the level of immunization against major vaccine preventable diseases had shown a notable increase during the reference period. They found that the level of immunization was lowest among the STs, intermediate among the SCs and the highest among the non-scheduled communities. While the registration for the pediatric care in the rural areas was 8.0 percent in rural areas, it was 16-28 percent in urban areas between 16-18 percent in urban areas. This proportion had risen substantially in the year 1986-87 particularly in the urban areas. During the similar reference period the hospital births was only 12-15 percent in rural areas but 50-66 percent in urban areas.

Study by Operations Research Group ( ) with reference to utilisation of family planning and other related health services in the various districts of Gujarat, found that most of the people were unaware of the services. This was visible in the case of services related to immunization services. Another feature of the study that was observed was that there was no arrangement existing for providing proper guidance to the people and that there was a visible lack of practical experience among the health workers. It was also observed that there was a lack of basic facilities like water and sanitation in many of the areas that were covered during the research.

CORT (2002) in their report give details about the RCH project in Surat District. The report also presents the socio-economic and demographic aspects of the women and fertility related issues in Surat District.
According to Action Plan on Surat District brought out by Gujarat, Government of (2008-09) it was found that most of the CHCs, PHCs., and SCs were falling short of infrastructural facilities. There is a need for decentralization of services, and also a dire need for the local bodies to be involved in the delivery of health services. The maternity and child health services were found to fall short of the expectation. The study also observed that there is a need to improve upon the health information system for better coordination of the health programmes.

**Population Research Center – PRC (2009)** in their rapid appraisal of the National Rural Health Mission Implementation in Surat district found that major laboratory testing facilities were not observed in the CHCs of Surat District, and that many specialist posts were lying vacant. Similar problem was observed in the case of PHCs and SCs. However, an important aspect that was observed was that after the introduction of the ‘108’ service by the state the percentage of the institutional deliveries had gone up substantially in the district