Chapter – II

REVIEW OF LITERATURE
Review of literature is a key step in Research process. It refers to an extensive, exhaustive and systematic examination of publications relevant to the research topic. Review of the literature will help the researcher to determine the extent of the existing knowledge related to the study topic, to develop a theoretical or conceptual framework for a study, plan study method and instrument may be discovered that can be used to measure the study variable.

Safe motherhood is affected by broader context of people's lives—their education, employment, economic condition, living conditions, family environment social, and gender relationship, traditional and legal structures within which they live. It involves a greater awareness of health by individuals so that they can promote and protect their own reproductive health. It implies the involvement of other sector, notably in education, finance and planning.

Women health in India is largely influenced by socio-cultural factors on the one hand and programme interventions on the other hand. Socio-cultural factors which impinge reproductive health include women's lack of awareness of health practices, strong seclusion norms which inhibit health, seeking, adolescent marriage, large family size norms which encourage frequent and closely spaced pregnancies and a general devaluation of women which makes them to obtain food or health care at last.

Therefore, a brief review of literature relating to four pillars of safe motherhood. Marriage, Pregnancy, labour, Postnatal, and Family planning. The review of literature has been organized into reviews related to marriage, antenatal care,
labour, postnatal care, newborn care and review related to safe motherhood, maternal mortality and morbidity.

1. Studies Related to Marriage

Audinarayana (1985)\(^1\) observed a negative relationship between age at marriage of females and fertility among the different Hindu castes in Andhra Pradesh. The mean number of live births for the caste Hindus and the Scheduled Caste women in Hindu religion who married below 14 years of age were 3.7 and 3.8 respectively which were reduced to 2.8 and 2.4 when their marriage ages were raised to 18 years and above.

Nair and Koteswar (1987)\(^2\) in their study on age at marriage in rural northern Karnataka stated that the median age at marriage was 16 years. Further, two-thirds of the girls were married before 18 years and nearly one-fourth of the marriages were happened even pre-puberty. This was due to the various socio-cultural, socio-psychological and economic reasons for the perpetuation of very early marriages in the study area inspite of the child marriage restraint act was in force.

Shawky S, Milaat W. (2000)\(^3\) has conducted study on the relationship between marriage before 16 years and pregnancy outcome throughout the childbearing period was examined. Participants included all married women with at least one infant. The study results showed that early teenage marriage was found among 27.2 per cent of women. Majority of these were illiterates (57.1%), housewives (92.4%) and grand multiparae (66.7%). They were twice at the risk of spontaneous abortions, four times the risk of combined fetal death and infant mortality, and twice the risk of losing
pregnancies any time during their childbearing years. They remained at high risk of poor pregnancy outcome throughout their reproductive lives. Despite tradition, marriage should be discouraged before 16 years of age for female.

The age at marriage is generally on the rise, each marriage—marriage of children and adolescents below the age of 18 is still widely practiced. UNICEF/Report (2001)⁴.

Saad FA, Jauniaux E. (2002.)⁵ Conducted a study on the possible relationship between recurrent miscarriage and consanguinity in the Qatari population. The study showed that the prevalence of first cousin marriage is 47 per cent. The maternal of three or more early pregnancy losses were compared with those of 92 non-consanguineous women from the same population and with the same obstetrical history, matched for maternal age. The retrospective investigation showed no difference in the rate of previous pregnancy loss and maternal disorders, including diabetes, thyroid dysfunction. There is no evidence of familial clustering of recurrent miscarriage in both groups. The prospective study showed no difference in the rate of subsequent pregnancy loss and the median gestational age and fetal weight at delivery in ongoing pregnancies.

Choe MK, and others (2005)⁶ has conducted a study on 200 adolescent and Young Adults (NAYA). Both unmarried and married male and female youths (age 14 – 22 years) were included in the survey. The results showed that early marriage and early motherhood are quite common among Nepale women, especially in rural areas. Early marriage is much less common among men. Delayed consummation of marriage
is common among very young brides, especially in rural areas. The main covariates associated with early marriage and early motherhood along with respondent’s education, region, residence and ethnicity. The main covariates of delayed consummation of marriage are age at first marriage, region, residence and ethnicity. The study highlights the need to focus on less educated female youths in the Terai region in order to reduce the reproductive and child health risks associated with early marriage and early child bearing.

Rahman MM and Kabir M. (2005)\textsuperscript{7} Conducted a study in Bangladesh to investigate the factors influencing attitudes of the adolescents towards the early marriage among the married and unmarried female adolescents. The analysis revealed that more than one fourth (25.9\%) of the adolescents were in favor of early marriage. A number of societal factors influenced them to go for early marriages, despite the fact that adolescents are aware about the consequences of maternal and child health. They showed that the current marital status, years of schooling, work status and pre-martial decision are important predictors of early marriage. The study concluded that female education would be an important determinant of adolescent marriage. Therefore, opportunities and scope of higher secondary education would help to bring change in the attitude towards early marriage.

Chung W and others. (2006)\textsuperscript{8} In their study the married women (N=5,648) were analyzed for the factors that determined the first birth interval. The study findings showed that the woman whose age at marriage was 30 years or more was likely to delay the birth of her first baby than were the other women who married earlier. Further, a women’s age at marriage, residence before marriage, her husband’s
religion, her husband’s level of education and the difference in age between the women and her husband significantly influenced first-birth interval in contrast, for a married women, her age, level of education, current residence and religion were not significant predictors of her first-birth interval. The study concluded that the women who married at the age of 30 years are more tend to postpone their first-birth. It is observed among most of the women of this category in Korea.

More than one-quarter (27%) of Indian women age 20-49 married before age 15; over half (58%) married before the legal minimum marriage age of 18, and three-quarters (74%) married before reaching age 20 (NFHS-3, 2007)⁹

Shaila and Ahmed (2007)¹⁰ conducted a cross sectional descriptive study at rural Bangladesh to find out the age at marriage and fertility pattern among the adolescent married women. The study showed that (97.2%) were in the age group of 15-19 years being married by 15.5 years and 57.5 per cent had a secondary level education 97 per cent were found to be housewives. Regarding fertility pattern 19 per cent of the adolescent women were found to be pregnant. The total fertility rate among the women of this age group was estimated to be 2.6 per cent. To help for the improvement of the situation awareness on the negative consequences of early marriage and consequent child bearing needs to be created not only among the young adolescent girls-but should also be targeted towards their parents too.

Ibrahima Cisse and Others (2008)¹¹ were conducted a study on “early marriage and reproductive health challenges and their consequences in Geographical distribution on Timbukti region of Goa and Mopti. The study sample include the
components of age distribution (74%) of girls age was 18 years, (15%) 9-14 years, (11.1%) 15-17 years but they have very little or no formal education. Types of marriage monogamous marriage (78%), polygamous (22%). Married women (59%), Single women (25%), widows (12%) divorce (4%). 97 percent of marriage by parents, 3 percent based on girls choice. Those women gives birth to an average of 7 children, 3 of whom survive and 3 of whom dies at an early age but every women experience the death of one child at birth. The findings showed that 58% of women surveyed got married before 18 years, at 29% married I 15-17 years old (13%) before 15 years because of ethnic background, marital status and endogamy are the factors of early marriage.

Ann.M.Moore (2009) conducted a research study founded 45 per cent of young women in India marry before age of 18 years. Reflecting the countries diversity few women (12%) marry before the age of 18 years in Goa and Himachal Pradesh nearly three fifths (57% to 61%) do so in Rajasthan, Jharkhand and Bihar. Difference by area of residence is also considered. Twenty eight per cent in urban areas vs. 53 per cent in rural areas.

Bangladesh. Bureau of statistics (2009) indicated that the average age at first marriage for female in Bangladesh was 18.7 years.

Ravi Prakash (2010) examines the effects of early marriage on the reproductive health status of women and on well-being of their children. The results showed that early age at marriage had detrimental effects on the reproductive health status of women married at an early age were exposed to frequent childbearing,
unplanned motherhood and abortions which negatively affected their nutritional status. Children born to mothers with poor reproductive health and lower chances of survival and a higher likelihood of anthropometric failure (stunting, wasting and under weight).

2. STUDY RELATED TO ANTENATAL CARE

H.M. Swami, others (1982) conducted a study on “Anemia among pregnant mothers registered at an urban health centre of Shimla. The magnitude of anemia problem and influence of various factors were studied among 345 pregnant women belonging to urban area of Shimla. The overall anemia prevalence was 36.8 per cent. The period of gestation, number of pregnancies and age of pregnant women had no influence on anemia prevalence. Literacy status and per capita income had significant association with prevalence of anemia in pregnancy.

Meera Shekar et al (1984) studied the health practices in relation to child birth and infant care in Ranjit Nagar of Delhi and found that, 50 per cent of the sample respondents visited an antenatal clinic for check up during third trimester of pregnancy, only 35 per cent of them had received Tetanus Toxoid.

Talwar and Bhatia (1985) in their study conducted in rural Rajasthan found that only 6 per cent got registered for antenatal care. Only 41 per cent of women visited by health personnel at home and only 8 per cent received Iron and Folic acid supplementation of which only 2 per cent consumed the prescribed dose of Iron and Folic acid tablets.

Srinivas, M.N. (1986) revealed that, in Bihar only 25 per cent of 496 pregnant women got registered and only 16 per cent of them registered in the first
trimester followed by 21 per cent in the second trimester and 33 per cent in the third trimester. Only 6 per cent of women were visited at home by the health workers.

Hema Nalini, B.E.,(1989)\textsuperscript{19} found in her research study conducted in Andhra Pradesh found that 94 per cent of pregnant women were immunized for Tetanus.

Ratna Dhar (1989)\textsuperscript{20} in Delhi assessed the antenatal services provided in two hospitals. In one hospital out of 144 women, 61 per cent women made 1-3 visits, in another hospital 135 women interviewed, 35 per cent made 3-7 visits. In both the hospitals general examination was done for all cases. Urine examination was carried out for all cases and blood examination for 91 per cent cases. 7.7 per cent cases in first hospital, 10 per cent cases in second hospital got registered in the first trimester and a majority of the cases got registered in the second trimester. About 55 per cent in first hospital and 27 per cent in second hospital did not receive Tetanus Toxoid.

Talwar et.al in Madhya Pradesh (1990)\textsuperscript{21} assessed the antenatal service utilized by rural women. Only seven per cent mothers reported about their registration and received Iron and Folic acid tablets and Tetanus Toxoid. Four per cent of women were visited by health staff during pregnancy.

Usha et.al (1990)\textsuperscript{22} in rural area of Pune district identified the absence of antenatal care. Self delivery was associated with high rates of mortality both among mothers and new babies.

Satish Kurmar et.al (1990)\textsuperscript{23} conducted a study in Varanasi and noted that 21 per cent of the cases were registered in the second and third trimester. Registration
during first trimester was poor. A low level of deterioration of maternal and child health services were observed over a period time.

National Family Health Survey in India (1991)\textsuperscript{24} found that antenatal care was provided at home by a health worker for only 21 per cent of births during the last 4 years. In case of 40 per cent of births the mother went outside her home and received antenatal care from an allopathic doctors. Antenatal care was provided by nurses / midwives, ayurvedic or homeopathic doctors for 9 per cent of the births. Antenatal care through home visits is found to be much more common in rural areas (covering 25 \% of births) than in urban areas covering 10 per cent of births. Urban women received antenatal care more (70\%) from allopathic doctor than rural women (31\%).

Swain P et.al, (1992)\textsuperscript{25} studied some aspects of referral system in maternal and child health care in rural Varanasi. Forty five per cent were detected to be high risk cases, 49 per cent referred to primary health centers and 34 per cent to district hospital. However only nine per cent of the cases availed the referral services.

Shah and Shah, (1992)\textsuperscript{26} in Calcutta found that mothers who failed to avail the antenatal care, delivered low weight babies as compared to those who had more antenatal care.

Neeraja, K.P. (1992)\textsuperscript{27}, found in her study 36 per cent of respondents received antenatal services, of which only 19 per cent received these services from government agencies and the remaining 17 per cent obtained from private agency, only 15 per cent were examined by health personnel for lab investigations like urine for albumin, sugar and haemoglobin. Only nine per cent received health education regarding diet, child
care and immunisation 36 per cent of antenatal women received Tetanus vaccination and Iron and Folic acid tablets but only 18 per cent consumed Iron and Folic acid tablets.

Raju, K.N.M. (1994)\(^2\) has conducted study in rural Karnataka found that 58 per cent of the pregnant women had been examined by health care professionals and 69 per cent of the women were protected against Tetanus.

Vijayalakshmi Groover (1994)\(^2\) in her study observed that 80 per cent of the mothers never visited a maternal and child health centre during the antenatal period. 10 per cent had visited regularly and 10 per cent visited when they had some problem.

Rajesware and Hasalkar (1994)\(^3\) stated that, the number of antenatal visits and place of antenatal care are important for the health of the mothers and outside or at home in their pregnancies. Thirty-one per cent had A.N check-ups more times. Forty five per cent received the services from private institutions and the rest of them received from government hospital (16%) and sub centre (7%).

Sharma, et.al (1995)\(^4\) in a semi-urban community of Pondicherry observed the trend of mothers in utilizing the maternal care services. The study findings revealed that 26 per cent of women sought antenatal care in the first trimester and 40 per cent did so during their subsequent pregnancies. Primiparous had the highest average clinic visits.

Jayalakshmi (1996)\(^5\) in her empirical analysis to assess the reproductive health status of rural women found that, 48 per cent of women received antenatal services, 28
per cent are visited by health personnel. Among them ANMs visited 18 per cent cases in home, where as 10 per cent of women are visited by trained dais.

Radhakumari, I, (1997)\textsuperscript{33} in her study found that, 79 per cent of pregnant women received tetanus vaccine. Only 6 per cent of women reported that they received Iron and Folic acid tablets total cycles. About 29 per cent of women modified their diet during pregnancy.

Sreenivasa Reddy, K. (1997)\textsuperscript{34} in his study founded the registration of antenatal mothers has increased to 100 per cent during the Reproductive and Child Health project period from the previous 70 per cent. The mothers receiving Tetanus Toxiod almost reached 100 per cent in 55 per cent registered antenatal cases. The early registration of antenatal cases were possible due to accessibility, availability of MPHA (F) in the village, regular home visits and the quality of antenatal services available.

Audinarayana, N. and Jayasheela (1998)\textsuperscript{35} observed that, in Andhra Pradesh, 87 per cent of antenatal mothers received health care during pregnancy, 33 per cent delivered in institutions and 50 per cent sought assistance of health professionals and remaining followed crude methods.

Ekele BA and Audu LR (1998)\textsuperscript{36} conducted a study to determine the gestational age at which women book for antenatal care. The average gestational age at first antenatal attendance for the 2,304 women in the survey group was 23.5 +/- 6.0 weeks. The difference between the gestational age at first attendance for the literate subgroup (24.2 +/- 6.1 weeks) was not statistically significant. The gestational age at booking among the grand multiparous women was significantly higher than that of the
primigravida (25.30 +/- 5.9 versus 23.1 +/- 6.1 weeks; P < 0.05). About 71 per cent of cases there was no specific reason for electing the time for antenatal booking.

Yadav RJ and Padam Singh. (1998)\textsuperscript{37} conducted a study in rural and urban areas of Bihar on 375 mothers. The study revealed that, overall immunization coverage was 42 per cent among the pregnant mothers. Coverage was high (60\%) in urban areas compared to rural areas (40\%). Coverage was low among females of SC/ST category. Similar trend was observed for antenatal care and intake of iron and folic acid tablets. Lack of awareness and lack of motivation are main reasons for non immunization among SC/ST mothers as compared to the others. Lack of awareness was also found as a common factor for non immunization among illiterate mothers.

Gharoro EP and Igbafe AA. (2000)\textsuperscript{38} conducted a study in Nigeria on 378 pregnant women and the study results revealed that half of them (52.1\%) were from middle class. While (87.5\%) studied secondary or intermediate education. The mean age of the mothers was 29.7 years and a mean parity of 1.3 primigravidae constituted 32 per cent of the patients. The mean gestational age at booking was 23.7 weeks. The sixth month pregnancy was the peak period for the initiation of antenatal care. The decision to attend for antenatal care was taken by the husband alone in 52 per cent of the cases. Late booking was because of the ignorance and a financial constraint was observed among 41.5 per cent of woman. They concluded that initiation of antenatal care was late due to ignorance and financial constraints. Male dominance influences patient's adequate utilization of antenatal services.
Agrawal O.P and Rakesh Kumar (2005) assessed the utilization of antenatal care services in periurban area of Delhi on 276 women. The study results demonstrated that mothers who did not registered were mostly illiterates and were below 25 years of age. Most of these mothers did not receive iron and folic acid tablets, tetanus toxoid immunization. The study further suggested that an attempt should be made to register all antenatal mothers so that they come under the umbrella of MCH care package for ensuring safe motherhood and better survival of the children.

Nuraini E and parker E (2005) conducted a study on 60 pregnant women in Indonesia. The results of the study showed that the improvement of knowledge in the intervention group is significant particularly in the knowledge about healthy pregnancy, pregnancy complications and safe birth and taking care of the new born. The improvement of knowledge was significantly influenced by the respondents educational back ground and socio-economic status.

Alam AY, et.al (2005) conducted a study in Islamabad, Pakistan. The study included 200 women in the age range of 15 to 49 years. The results revealed that pallor was significantly lower among women utilizing antenatal care (57 %) as compared to those who were not (77.6%). Tetanus toxoid coverage was higher among utilizing antenatal care (92 %) compared to those who were not (52.2%). Knowledge about danger signals in pregnancy and realization of the importance of nutritional diet during pregnancy was significantly higher among women utilizing antenatal care. They concluded that lesser prevalence of anemia and better tetanus toxoid coverage was seen among women attending antenatal care facilities. Identification of danger
signals in pregnancy and recognition of nutritional demands of pregnancy are better understood by women utilizing antenatal care facilities.

Khan M, et al, (2005) conducted a study in USA. On 206 women at first antenatal visit. The study results explored that about 75 per cent of women believed antenatal care should start before the end of the fourth month, as recommended by WHO but only 22 per cent were present at that time. The important barriers were Gravidity financial (37%) and lack of knowledge about appropriate timing (35%). Gravidity was associated with gestational age at first visit. Average gestational age at first visit was 4.7 months in primigravidae and 5.9 months in women with 1 or 2 previous pregnancies. Most women in Kinshasa begin antenatal care later than recommended by W.H.O. Educating women on the importance of timely antenatal care and improving the financial accessibility should be priorities for maternal and child health programs in the Democratic Republic of Congo.

Afridi NK, et.al (2005) in their study found that overall 65 per cent of significantly females were vaccinated. For all females the variables that were significantly associated with vaccination status were; marital status, source; of information regarding tetanus toxoid vaccination, knowledge regarding TT vaccination, visits of lady health worker to a household and restriction on TT vaccination and an interaction between knowledge regarding TT vaccination and antenatal care visits. The study recommended that maternal and neonatal tetanus vaccination campaigns should include lady health workers at implementation stage.
Paredes I, et.al, (2005) conducted a survey on 1016 pregnant women in Latin America. The study findings revealed that prenatal care was considered adequate in 24.5 per cent and 75.5 percent inadequate, respectively knowledge regarding the importance of adequate prenatal care and the effects of poor prenatal care was lower among women who had received inadequate prenatal care. The women those were considered to have adequate prenatal care had at least one visit and they were more often cared by a specialist than women who considered having inadequate prenatal care. The three most important reasons associated with inadequate prenatal care in this series (n=769) were; economic difficulties, having to care for a small child, transportation difficulties. Women with undesired pregnancies who resided in rural areas and were Para 5 or higher had an increased risk of inadequate prenatal care. On the other hand, an adverse outcome to a prior pregnancy (abortion, intrauterine fetal demise or ectopic pregnancy) decreased this risk.

Bener A. et.al, (2006) conducted a study on Qatari women. The information collected from 1480 women (18-45 yrs) with regard to knowledge, attitude and practices on folic acid intake was assessed. The findings showed that 53.7 per cent reported that they heard about folate. Nearly half of the respondents knew that the subject of folate was something important. Overall, 20.3 per cent of the respondents took folic acid. The most common information sources on folate were physicians, (63.4%) news paper (21.7%) and magazine/books (14.9). From those who heard of folate (53.7%) only 14 per cent knew that it can prevent birth defects. Among the subjects 40.6 per cent who heard of folate were aware that green leafy vegetables were fortified with folic acid. In univariate analysis, awareness of folic acid was
significantly associated with education of mother. Again, higher educated women (41.3%) knew more about folic acid and used it more often in the periconceptional and first trimester period. The study concluded that awareness use of folic acid was less prevalent among Qatari women. Educated women were aware of the importance of the intake of folic acid and suggested to increase awareness program on intake of folic acid.

(DLHS-2002-04, 2006) About 34 per cent of the women experienced at least one pregnancy related problem. The proportion was slightly lower among rural women (34 per cent) than among urban women (36 per cent). The major problems reported were ‘swelling of hand and feet’ (20 per cent), ‘paleness’ (13 per cent) and ‘visual disturbance’ (8 per cent). Only two per cent reported ‘abnormal position of foetus, and ‘vaginal bleeding’. About four per cent of the women reported ‘convulsions’ and three per cent reported ‘weak or no movement of foetus’.

(NFHS-3, 2007) The pregnancy-related health problems most commonly reported are excessive fatigue (48 per cent) and swelling of the legs, body, or face (25 per cent). Ten percent of mothers had convulsions that were not from fever and nine per cent reported night blindness. Only four per cent had any vaginal bleeding. The reported prevalence of both kinds of vision problems, convulsions that were not from fever, and excessive fatigue is higher in rural than in urban areas. In contrast, swelling of the legs, body, or face is more prevalent in urban areas.

Neelima Thakur and Arun kumar (2012) conducted a study on 160 lactating mothers More than half (53.75%) of mothers were less than 20 year of age. Majority
(61.25\%) of the families were nuclear type. Sizeable proportion of the mothers had been found educated up to Primary (41.25\%) and Middle school levels (36.25\%). Only 8.12 per cent of them have studied up to high school. More than half (61.25\%) of mothers were live in nuclear family. 77.50\% of families were residing in kutcha houses. Majority of the families had annual income of less than Rs. 24,000. Majority (77.5\%) of the mothers had gone for ANC checkups during delivery. All most all (98.38\%) of them got checkup form Doctors/ Nurse. Majority (75.80\%) of mothers received ANC checkups from private medical institutes. 41.93\% of mothers had got at least 3-4 recommended ANC checkup. Three-fourth of mothers (76.27\%) received two doses of Tetanus Toxoid injections. Very few (29.03\%) were completed the prescribed course of IFA tablets. Reasons cited by mothers for not consuming appropriated number of IFA tablets were foul smell, tablets was hot and lead to diarrhea, feeling nausea after eating tablets.

3. Studies Related to Labour

Meera Shekar et al (1984)\textsuperscript{49} in their study found 40 per cent of the pregnant women preferred to have home delivery and 60 per cent of lactating mothers delivered at home, 56 per cent of deliveries were conducted by untrained personnel, mostly elders within the family.

Srinivas, M.N. (1986)\textsuperscript{50} In his study found 8 per cent births in rural area and 28 per cent in urban area were attended by trained personnel.

Chuttani and Naik (1986)\textsuperscript{51} in their study found that 17 per cent of the births were attended by the health centre staff and 83 per cent by untrained dais. Only 2
deliveries were conducted at Primary Health Centers. Among the deliveries conducted at home by staff while only 5 out of 136 were attended by doctor followed by one lady health visitor, 40 by MPHA (F) and 90 trained Dai.

Sharma and Bali. (1989)\textsuperscript{52} In 1984-85 study of traditional birth attendants in slums in Delhi reveals that, among intranatal practices, as many as 80 per cent did not wash their hands before delivery and two-third used an unsterilized (but fresh) blade to cut the cord.

A study conducted by Talwar et al (1990)\textsuperscript{53} in Madhya Pradesh showed that about 3.5 per cent women had delivery in the institution and only 5 per cent deliveries were attended by trained staff and the remaining 91.5 per cent were conducted by untrained dais.

Okafor, CB. (1991)\textsuperscript{54} in this study noted that 38 per cent of the respondents delivered in a supervised service, 30 per cent delivered at maternity centre, 30 per cent delivered at home, 2 per cent at prayer house. The traditional birth attendants' services were utilized for delivery. Reasons given for use of home delivery were: lack of transport to the maternity centre, cost of service, maternal education, previous physician contact, Maternal occupation and distance from service centre etc., necessitate an increased service to the pregnant women.

Neeraja, K.P. (1992)\textsuperscript{55} in her study found that 25 per cent of deliveries were conducted in home by untrained personnel while 50 per cent were conducted by trained dai and the remaining (25\%) deliveries were conducted at institutions.
Ramanarao, G.V. and Ch. Sitarama Rao, (1994) narrated in their study that, 77 per cent of deliveries have been conducted at home. Out of them 69 per cent were conducted by untrained Dais. Again out of 71 institutional deliveries, 52 per cent were private hospital deliveries.

A study conducted by Ashok Kumar (1994) in Lucknow found that, 90 per cent of deliveries took place in home, while only 8 per cent in hospital and only 18 per cent of deliveries were handled by trained personnel. Out of them nearly half were by trained dais. Among the deliveries conducted by untrained dais 61 per cent were performed by elderly women of the family. These are more acceptable to muslim families. The reason given for delivery at home were: convenience (63%), earlier bad experience in hospital (16%), inaccessibility of health facilities (18%) and fear of hospital (3%).

National Tuberculosis survey conducted by Govt of India(1994) found that, two thirds of the deliveries were conducted at home, out of the an institutional deliveries 27 per cent were attended by trained dais, 27 per cent by doctor and just 4 per cent by female multipurpose health assistants.

Nandan D, Mishra SK (1996) conducted a study to identify healthy and unhealthy delivery practices in rural Uttar Pradesh. A total of 120 women were interviewed who delivered at home. About 78 per cent of the deliveries occurred in the household living room, remaining 22 per cent were conducted elsewhere in the home. Only 3.1 per cent of deliveries in the floor were properly washed. The cord cutting instrument was not sterilized in 43 per cent of deliveries, and mustard oil and deshi
ghee were used as first cord applicants in approximately 65 per cent of deliveries. Hygienic delivery practice and setting are not commonly used. Trained birth attendants were no better aware of cleanliness in delivery practices than untrained birth attendants.

A study conducted by Sreenivasa Reddy, K. (1997)\(^{60}\) showed that 17 per cent of deliveries conducted were institutional. It is interesting to note that MPHA (F) conducted only 18 per cent deliveries followed by 52 per cent by trained birth attendants and the remaining 30 per cent by untrained personnel. However the situation has changed remarkably during the implementation of Reproductive Child Health Project where 81 per cent of deliveries were conducted by MPHA (F) alone and the remaining 19 per cent by trained birth attendants. This signifies a change in the attitude and behavior of mothers. There was no occasion for untrained dais to attend the deliveries.

Osrin D. Tumbahanghe KM. (2002)\(^{61}\) has conducted a study on 5411 married women aged 15 to 49 years who had given birth to a live baby in the past year. About 4893 (90%) women gave birth at home. Attendance at delivery by skilled government health workers was low (6%) as was attendance by traditional birth attendants (5%). Only 461 (8%) women had used a clean home delivery kit and about half of attendants had washed their hands.

Fariyal F. Fikree and others (2004)\(^{62}\) have conducted a study on 525 just delivered women. The study conducted in Karachi, Pakistan revealed that half of the women delivered at home with the help of traditional birth attendants.
Sengupta B and others (2005)\textsuperscript{63} conducted a study in West Bengal to assess the delivery practices and compare between two localities on the sample of 3073 deliveries. 89.36 per cent of woman had home deliveries. Home deliveries were higher in the riverine blocks (95.07 \%) compared to non-riverine blocks (81.64\%) deliveries conducted by 'Dai' were 58.36 per cent out of them 90.62 per cent were home deliveries in riverine and non-riverine blocks respectively. Only 18.4 per cent of the 'Dais' was trained.

Dasgupta S et.al (2006)\textsuperscript{64} have Conducted a study on 320 mothers who delivered at home, assistance during conduction of delivery and intranatal care practices in West Bengal. The study revealed that 37.8 per cent deliveries were conducted at home and 25 per cent deliveries were conducted by untrained birth attendants, unqualified practitioners or relatives and friends. About 68.6 per cent home deliveries were conducted on the floor without any clean covering sheet. Though a clean instrument was used to cut the cord in 86.78 per cent home deliveries, a clean cord tie was used only for 24.89 per cent cases. The study concluded that high proportion of deliveries assisted by untrained persons and high magnitude of faulty intranatal care practices observed in the study required urgent appropriate intervention.

The District Level House Hold Survey (DLHS-3)\textsuperscript{65} 2007-2008 estimates that 52.7 per cent of women had safe deliveries, that is, deliveries either in institutions or at homes with assistance of trained personnel. As many as 43.3 per cent of rural deliveries and 75.6 per cent of urban deliveries could be termed safe, pointing to the low access to health care in rural India. Almost all women (100\%) in Kerala and Pondicherry have safe deliveries While Goa, Tamil Nadu and Lakshadweep recorded
more than 90 per cent safe deliveries. However, in 11 states less than 50 per cent, of the deliveries that took place could be termed “Safe Deliveries”. The worst performing states, where less than one third of mothers had safe deliveries are Bihar, Uttar Pradesh, Meghalaya, Chattisgarh, and Jharkhand. In Jharkhand and Chhattisgarh more than 80 percent of deliveries were at home with 7.2 per cent and 11.6 per cent of these home deliveries assisted by skilled personnel. Interestingly Manipur and Punjab stand out as states with the highest rate of home deliveries conducted with the help of trained personnel 14.3 per cent and 13.8 per cent respectively.

Birth Order is found to be associated with caste and education differentials. The proportion of births of orders four or higher is particularly high for births to women with no education (41 per cent) and Scheduled Tribe women (35 per cent). The proportion births or order four or higher is only 3 per cent for women with 12 or more year of education (NFHS-3, 2007). The occurrence of births of the third order and above is more among women from Scheduled Tribe (49 per cent) than among women from Scheduled Caste (46 per cent). (DLHS 2002-04, 2006).66

Neelima Thakur and Arun Kumar (2012)67 were conducted a cross sectional study on 160 mothers about delivery in urban slums of Ganda community of Raipur city, Chhattisgarh. Majority of deliveries took place at home (80.62%) only one fifth of deliveries (19.37%) were found to be taken place at medical institutes. Majority of home deliveries were assisted by senior ladies (91.47%), close relatives and neighbors. Only 2.32% of deliveries were assisted by the trained midwife and remaining (6.20%) were assisted by medical professional. More than half (53.48%) of the delivery place were not clean in advance or no advance preparation before delivery. Majority
mothers said birth attendants who assist delivery at home hadn't washed their hand (78.5%). High awareness of using sterilized instrument was observed in the surveyed area. All of them (100%) were found using new blade for cutting placenta. Majority (73.75%) of the mothers were applied paste of mustered oil and turmeric power on stump considering it prevents infection for drying up the wounds like turmeric powder and mustered oils. Modern antiseptic was also reported by the mothers (26.25%).

4. Studies Related to Postnatal Care

Chuttani and Naik in her study funded that (1986)\textsuperscript{68} conducted a study on quantitative and qualitative services utilized by mother and children at a primary centre. The survey included a sample of 945 mothers. About 20 per cent of mothers received postnatal care by the health centre staff. Among them 71 per cent were seen by MPHA (F) followed by female health visitor (33%) and none by the doctor. 43 per cent of postnatal mothers were visited only once. 156 (20%) of the neonates were visited by health personnel. Among them 28 per cent were visited once, 27 per cent twice and 45 per cent thrice during the first week of birth. The quality of care provided in all areas was poor physical examination was not done; the services were inadequate in utilization and quality coverage.

Hema Nalini, B.E. (1989)\textsuperscript{69} in her study found that two thirds of the sample was visited by health personnel in their postnatal period, among them 30 per cent mother had one visit by the health personnel and received IFA supplementation indicating that there should be greater awareness among mothers for maximum utilization of health services during postnatal period. Majority of postnatal mothers had no health problem (96%). Fifty seven per cent mothers were doing normal
household work after one week and 20 per cent did household work after 4 days. 43 per cent were going for work after one month; nobody was aware of postnatal exercises. 44 per cent of mothers took rest during postnatal period. 27 per cent wanted to be hale and healthy. About 33 per cent took bath after 3 days, followed by 20 per cent after 9 days and 3 per cent on the same day. These aspects indicate lack of knowledge on the importance of hygiene.

Neeraja, K.P. (1992)\(^70\) in her study found that about 11 per cent of mothers obtained postnatal services by the health personnel. The practices of mothers during postnatal period were also observed, 94 per cent of mothers had taken bath on the third day of delivery, the remaining 6 per cent took on 7th day. Twenty six per cent of sample took perennial care, 29 per cent of mothers modified their diet during postnatal period to improve their health status and to increase the production of the breast milk. 49 per cent of mothers performed normal activities after 15 days of delivery, nearly two third of mothers had resumed outside work after 3 months (61%).

A study conducted by Sudha, C. Patel (1993)\(^71\) in Gujarat found that, 70 per cent of mothers did not utilize postnatal services but only births were registered by health personnel. The level of satisfaction among mothers seemed to be low.

Laila M. Abu – El - Haija [1995]\(^72\) was conducted a study at Jordan on 260 women to investigate the pattern and determinants of postnatal care utilization. Study results showed that about 15 per cent of the delivered women had received routine postnatal care; whereas 19 per cent used the health facilities during puerperium because they had some health problems. The remaining 66 per cent did not seek any
kind of postnatal care. The study results showed that utilization of postnatal care was positively related to home delivery, delivery by a traditional birth attendant, advice to the women by the provider to seek postnatal care and presence of postnatal health problems.

Radhakumari, I, in her study found that (1997)\textsuperscript{73} half of the respondents were visited by health personnel in their postnatal period, 10 mothers received medical care, health personnel given nutritional education, information regarding hygienic care for 30 per cent of mothers. While 50 per cent of mothers expressed dissatisfaction towards health personnel in provision of services.

Vikram Patel, and others (2004)\textsuperscript{74} conducted study at Goa, India. The study results revealed that depressive disorder was detected in 59 (23\%) of the mothers at 6 – 8 weeks after child birth; 78 per cent of these patients had clinically substantial psychological morbidity during the antenatal period. More than one half of the patients remained ill at 6 months after delivery. Economic deprivation and poor marital relationships were important risk factors for the occurrence and chronicity of depression. The gender of the infant was determinant of postnatal depression. It modified the effect of other risk factors such as marital violence and hunger. Depressed mothers were more disabled and were more likely to use health services than non-depressed mothers.

Kaewsarn P, and others (2007)\textsuperscript{75} conducted a study on traditional postpartum practices among 500 Thai women living in Thailand. The results showed that the majority of Thai women adhered to traditional postpartum practices related to the
notion of regaining ‘heat’. These included ‘lying by fire’, food restrictions, taking hot baths and consuming hot drinks other activities involved not exposing the body to heat loss by keeping covered, not shampooing the hair, avoiding the wind and sexual abstinence. Younger, less educated, Primiparous women were more likely to report traditional practices. The study concluded that traditional postpartum practices were still dominant is contemporary Thai culture and are perpetuated by close female family relatives. Health professionals need to be brought under the fold of aware of client’s culture and consider the extent to which professional care complements the mother’s traditional beliefs. Health staff needs to educate women about the benefits of contemporary postpartum care and to provide strategies to help them to integrate their beliefs and the practices recommended in contemporary health care practice.

Enas Dhaher, et.al (2008) have studied 264 Palestinian women regarding postnatal care. The study result showed that the majority of women considered postnatal care is necessary [66.1%], only 36.6 per cent of women obtained postnatal care. About 85 per cent women did not taken postnatal care because they did not feel sick to obtain postnatal care. Use of postnatal care was higher among women who had experienced problems due to delivery, a cesarean section or had an instrumental vaginal delivery than among women who had a spontaneous vaginal delivery. Use of postnatal care also higher among women who delivered in a private hospital as compared to those who delivered in a public hospital. The study concluded that the higher use of postnatal care among high risk women is appropriate, but some clinically dangerous conditions can also occur along low risk women. Efforts should be focussed on providing postnatal care to a larger number of low risk women.
Geckil E, Sahin T, Ege E (2009)\textsuperscript{77} have conducted a study on 273 postnatal mothers and their traditional postpartum practices of women and infants at Turkey. The findings showed that more than half of the 273 women (55.7\%) were aged between 25 and 32 years. A total of 22.3 per cent of women were illiterates and most of them were unemployed. The most popular practices among postnatal mothers were: eating a kind of dessert, called 'Bulamac' (82.8\%) A number of women (69.6\%) drank a mixture of a grape molasses and butter, 64.5\% had their abdomen tightly wrapped, 62.6\% were not left alone at home and more than half of the women (57.9\%) avoided sexual intercourse for 40 days after giving birth. The study concluded that postpartum care of women and their babies are important cultural practices. Some of these practices may have harmful effects on women and their babies. The study implicates that the midwives and nurses should discuss these findings and their implications when they educate new mothers and their families about contemporary methods of postnatal maternal and infant care.

Manju Chawla (2009)\textsuperscript{78} assessed the common problems and their severity among postnatal mothers after delivery. The study revealed that eighty per cent of postnatal mothers had constipation and lower abdominal pain after normal delivery and 85 per cent of mothers had breast engorgement. All postnatal mothers complained fatigue and backache.

5. Studies Related to Breast Feeding

Chuttani and Naik (1986)\textsuperscript{79} stated that 156 of the neonates (20\%) were visited by health personnel. Among them 28 per cent were visited once, 27 per cent twice and 45 per cent thrice during the first week of birth. The quality of care provided in all
areas was poor physical examination was not done. The services were inadequate in
utilization and quality coverage.

Osrin D. Tumbahanghe KM. (2002)\textsuperscript{80} has conducted a study on 5411 married
women aged 15 to 49 years who had given birth to a live baby in the past year. Only
3482 (92\%) had been bathed within the first hour. 99\% (5362) of babies were breast
fed, 91\% (4939) within six hours of birth. Practices with respect to colostrum and
prelacteals were not a cause for anxiety.

Fariyal F. Fikree and Tazeen S. (2004)\textsuperscript{81} were conducted a study on newborn
care practices in 525 recently delivered women in low socioeconomic settlements of
Karachi, Pakistan. About 78.6 per cent reported receiving counseling on breast feeding
by their health care provider. A significant proportion of women 44.8 per cent reported
giving lacteals; colostrum (41.7\%) or animal/formula milk (3.1\%), as the first feed.
Newborns were bathed immediately (82.1\%) after delivery as thick vernix was
considered "dirty looking" (78.5\%) and it was felt it should be removed. To foster
muscle relaxation (80.2\%) and strengthen the bones (43\%), daily massage was
universally practiced, mustard oil (75.9\%) being the most frequently used lubricant.
Risky feeding practices such as giving prelacteals [55.0\%] or supplementary feeds
[71.3\%] or delaying first feed [30.9\%] were common. During the neonatal period,
breast milk was the preferred feed [98.6\%], however, honey [28.7\%] ghatti [27.8\%]
and water [11.8\%] were also given in order to 'reduce colic' or act as a 'laxative'
which were perceived health benefits mentioned by mothers and traditional birth
attendants. Ethnicity and birth attendant at delivery were strong predictors for women
who gave prelacteals (after adjusting for education, socioeconomic status and facility.
delivery). Although administration of colostrum as the first feed was relatively common in this setting, the predominance of other risky traditional newborn care practices stresses the need for promoting health education programs on improving newborn care practices.

Fikree FF and Ali TS, (2005) have conducted a study in Karachi, Pakistan. About 78.6% mothers reported receiving counseling on breastfeeding by their healthcare provider. A significant proportion of women (44.8%) reported giving lacteals. Colostrum (41.7%) or animal/formula milk (3.1%), as the first feed. Risky feeding practices such as giving prelacteals (55%) or supplementary feeds (71.3%) or delaying first feed (30.9%) were common. During the neonatal period, breast milk was the preferred feed (98.6%) however, honey (28.7%), ghutti (27.8%) and water (11.8%) were also given in order to ‘reduce colic’ or ‘act as a laxative’ which were perceived health benefits mentioned mothers and traditional birth attendants.

K. Madhu and Sriram Chowdary. (2008) conducted a descriptive, cross sectional study on Breast feeding practices in rural areas, PHC Kengeri, rural Bangalore, Karnataka. The study results showed that 97 per cent of the mothers initiated breast feeding, 19 per cent used prelacteal feeds, 90 per cent had hospital deliveries and 10 per cent had home deliveries. The study concluded that the need for breast feeding intervention programs especially for the mother during antenatal and postnatal checkups and practices like discarding the colostrum and early/late weaning are still widely prevalent and need to be addressed.
Neelima Thakur and Arun Kumar (2012)\textsuperscript{84} were reported that more than half (61.87\% ) of mothers initiated the breastfeed within 2 hrs after birth, 28.12\% initiated breastfeed within 2-24 hrs and only 10.0 \% mothers were delayed beyond 3 days for initiation of breast milk. Majority (82.50\%) of mothers given colostrum to newborn as a first feed as a perception that colostrum might be prevent the child from illness and child become healthy. Very few (17.50 \%) did not give it because they thought it is harmful for the baby / prohibited by the elder of the family member in home. Remaining 85\% and 15\% mothers were given honey and cow milk as a first feed to the child.

6. Studies Related To Safe Motherhood

Jagadish C Bhatia (1984)\textsuperscript{85} conducted a study to investigate the degree and causes of maternal mortality in Anantapur district, Andhra Pradesh, India. Out of 284 maternal deaths for which detailed information was collected, About two-third of the deaths were due to direct obstetric causes, the remaining indirect causes; The major clinical causes of maternal mortality were sepsis (36\%), are haemorrhage (12\%), eclampsia (99\%) retention of placenta (7\%) and infective hepatitis (10\%). Nearly 80 per cent of deaths could have been prevented by early antenatal care, treatment of predisposing health conditions and timely medical care or hospitalization.

Sumathi (1987)\textsuperscript{86} says that a nurse by having knowledge of mental health can help the pregnant women to alleviate the fear and develop a positive mental health. The safe motherhood programme should include improvement of maternal nutrition, better birth spacing, proper antenatal care and immunization programmes.
Wong VC. (1992)\textsuperscript{87} stated that there were still many maternal deaths in the world. More than 98 per cent maternal deaths are in developing countries. A program of safe motherhood is needed to make sure that every woman has the right of basic maternity care.

\textit{Verma M.} (1994)\textsuperscript{88} assessed 2500 college girl's knowledge and attitudes regarding sex, pregnancy and child rearing. Only 16.3 per cent of the respondents knew the normal route of delivery and the duration of normal pregnancy was known to 87.7 per cent of the sample respondents. The girls were aware of the ideal timing of abortion (67.5\%) but the safe method and legally were poorly known facts. Only 5 per cent of the girls believed in pre-marital sex. More than half (54.9\%) of the girls knew about some form of contraceptive, copper-T being the best known. Nearly one fifth of the girls were either undecided or wished family members to decide about antenatal check-ups. The need for better diet and injections during pregnancy was well known although few (15.2\%) were aware of the injections like tetanus toxoid. Only about 10 per cent wanted a home delivery but one fourth felt that a Dai or a relative was suitable for conducting the delivery. An overwhelming majority of the students stated that knowledge about above facts was important and they would like to learn about them preferably during college education. It is recommended that 'Family life education' be provided during pre-adolescent and adolescent years to ensure a safe motherhood and a healthy child.

The result of the study conducted by Shanth Kumari K, (1996)\textsuperscript{89} showed that primigravidae who received health education had developed adequate knowledge on
safe motherhood. The study concluded that health education was required for pregnant women to reduce maternal mortality and prevent complications.

*Maimolwa M, et.al; (2003)*[^90] conducted a study on 229 healthy pregnant women in Zambia. The women’s mean age was 20.7 years and 41 per cent were adolescents. The adolescent group had significantly less years of education. Out of in total 229 women 78 per cent had never used any contraceptive method. The main source of information on sexual issues was through friends and the mass media. Only 2 per cent of the women had received information on sexual and reproductive health matters from health staff. Nearly half of the respondents did not want the pregnancy. Sixty three per cent of the women had made their first antenatal visit during the second trimester. There had been no antenatal preparation of the women for parturition and their parenting role. Eighty five percent of the pregnant women had felt that they need social support by way of personal attendant to assist them during pregnancy and after childbirth. The results suggested that preparation for parenthood had a low priority as part of the antenatal care.

R.R. Venkatesh, A.G. Umakantha, and others (2005)[^91] have studied the extent of utilization of health services by the mothers in the antenatal, intranatal and postnatal period. The study results showed that the majority (57.2%) of the mothers in the study were in the 18-23 years age group followed by 34.9 per cent in the 24-29 years age group, and illiterate were 51.6 per cent and only 4.5 per cent of the mothers had collegiate education. Majority (88%) of the women were housewives and only 12 per cent of the women were working in the unorganized sector as daily wage laborers, maid servants or beedi rolling workers at home. Only 35.9 per cent of the women had
utilized the health care services completely during antenatal, intranatal and postnatal period. A women who received a minimum of three antenatal visits, had her delivery conducted by a trained personnel had received at least one postnatal visit is said to have utilized antenatal, intranatal and postnatal services. The percentage of deliveries conducted by the trained attendants was 70.4 per cent and majority of the women had received at least one postnatal visit.

*Islam MA, Chowdary RI, et.al, (2006)* said that in Bangladesh most of the deliveries have taken place in the women’s own or her mother’s homes. Home deliveries are mostly assisted either by an untrained birth attendant or by relatives or others. The secondary or higher level of educated women is going for regular visits for antenatal care. Delivery at a mother’s home appears to be positively associated with higher economic status, desired pregnancy, gainful employment and visits for antenatal care.

*Ray S.K, Biswas R, et.al (2006)* were conducted a study on migrated rural people in city of Calcutta. The reproductive behaviour of street dwelling women was characterised by early marriage, teenage pregnancies, and scarce use of contraceptives (32%) as well as frequent abortions (2.8%) very few pregnant women received adequate antenatal care (3.8%) coverage of tetanus toxoid immunization (68.5%) and proper iron & folic acid supplementation (16.7%) were also reported as poor. Whereas, antenatal care was received mostly from government health institutions (71%), home delivery (I.e., on street) was a common practice and conducted mostly by untrained birth attendants (51.8%).
C.S. Veeramatha (2006) conducted a study on safe motherhood programme in Karnataka state. The study showed that twenty-eight per cent of the women in the study had adopted the safe motherhood programme, ante-natal, natal and post-natal. Non-institutional deliveries constituted almost 62 per cent of the deliveries. Institutional deliveries were more in the case of first-order pregnancies and substantially reduced from the second order of pregnancy. Since 45 per cent of them were married below 15 years of age, there was a need for providing more orientation regarding age at marriage and consequences of early child bearing to the women. Overall, it was revealed that natal and post-natal services needed to be strengthened in the programme.

Madhu Gupata (2012) found that about 215 pregnant women die per lakh live births every year in India and most of these deaths are preventable. Bleeding after delivery is the most common cause of maternal deaths, hence all deliveries should be conducted in hospitals, adding that vaginal bleeding, convulsions with very high fever and severe anaemia are the danger signs during pregnancy and should be immediately reported to a hospital.

7. Studies Related to Maternal Mortality

Maternal health is vital during the antenatal, intranatal and post-natal period. As the mother passes through the risk period more attention to be paid. But the studies shows that the maternal health is the most neglected special aspect in the rural areas where the maternal mortality rate is high. The different factors that contribute for maternal mortality have been discussed here.
Mira Shiva (1992)\textsuperscript{96} reports that more maternal deaths occur in India in one week than in all of Europe in one year. In a single day in India, the total number of causalities due to pregnancy and child birth related complications is more than that recorded in one month in the entire world. State wise estimates of maternal mortality for 2004-2006 showed that Kerala was the only state with less than 100 deaths for 100,000 live births. The three worst performing states with a high maternal mortality states were Assam (480), Uttar Pradesh including Uttarkhand (440) and Rajasthan (388).

Misra PK, Thakur.(1993)\textsuperscript{97} conducted a study on perinatal mortality with special reference to high risk pregnancies at Lucknow, India. The study show that twenty per cent of the women were identified with high risk factors. Inadequate or no antenatal care, bad obstetric history, and prolonged labour attributed to 13, 20, and 27 per cent of the risk respectively.

The findings of the study conducted by Abdulghani N. (1994)\textsuperscript{98} disclosed that only 1/5 had received prenatal care. The inaccessibility of health services, the poor quality of care and facilities, and a lack of faith in a system that humiliates women were given as reasons for failure to seek medical care. Inadequate prenatal care restricted in post natal death. Causes of death in order of frequency were hepatitis, hemorrhage, infection, and toxemia. ¾ of the women died postpartum. 1/5 of the babies were stillbirths. 1/5 of the mothers had a history of maternal complications. 1/5 had chronic disease. 2/3 of the women had begun their pregnancies within 1 year of their last childbirth. Half of the sample women had symptoms ranging from vomiting and fatigue to jaundice and vaginal bleeding.
Abdul Salaam and colleagues (1998) have studied on maternal mortality and morbidity pattern in Al-Ameen Medical College, Bijapur, Karnataka. The study shows that 44 maternal deaths occurred in a government civil hospital, Bijapur. The maternal mortality rate was 6.51 per 1000 live births during the period of five years. 18.2 per cent maternal deaths took place due to eclampsia and hemorrhage. 45.5 per cent belonged to primipara.

Mahapatra and others in (2000) listed abortion and sepsis are two major causes of 52,158 deaths of women aged 15-44 years. Hemorrhage continues to contribute a large proportion of maternal deaths. About one-fifth of the women die due to haemorrhage.

Bhattacharyya, Pronab Chatterjee, et al. (2003) have conducted a study on perinatal mortality in employed women. The result shows that still birth occurred more often after joining service than before and more in working women than in general. Perinatal mortality also occurred mainly in first 3-4 orders of birth after joining in service. Still birth rate in the control group was higher with birth spacing <2 years than with spacing >2 years, but in the study group it was lower in case of the former than the latter. Early neonatal death was more in pregnancies with spacing <2 years in both the groups and it was concluded that there is some risk of perinatal loss, especially still birth, existing in the working women.

Padma (2006) estimated that nearly 75 per cent of maternal deaths are due to five causes namely hemorrhage. Sepsis or infection toxemia, obstructed labor and complications of unsafe abortions. The remaining 25 per cent of deaths are due to
indirect causes such as communicable diseases cultural restrictions on mobility of women limit her access to health care.

It is quite clear that the above studies touched on various aspects of safe motherhood, related marriage, pregnancy, labour and postnatal problems of women but did not touch the knowledge and practices of the women in specific categories of people. i.e. the Scheduled Caste, Scheduled Tribe, Backward Caste and Forward Caste.
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