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INTRODUCTION
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Reproductive Health status in a way, population and Reproductive Health problems is conceptualized. There has been a clearer articulation and definition of Reproductive Health as a concept as well as the thinking on ways in which reproductive health problems should be addressed.

Reproductive Health (RH) refers to mortality, morbidity and quality of life attributable to the reproductive system, process and events experienced by men and women at all ages. Conceptually, the term should include reproduction related mortality, morbidity and quality of life issues of both men and women. But discussion about women’s health problems usually gets larger attention in the context of pregnancy and child birth related morbidity and mortality.

The Reproductive Health is a new conceptual reality, i.e. a shift from the rhetoric to reality that enshrined the International Conference on Population Development (ICPD) Cairo Programme of Action for developing countries faced with population problem on the one hand and reproductive health and gender related issues on the other. With its broad base and wide scope, the focus of Reproductive Health services is confined not only to women and men but extends to the children and special population of adolescents, menopausal women and older people. The concept eludes gender (male/female) inequity and class differentiation.

Where the Reproductive Health concept articulates human rights into reproductive rights, particularly reproductive rights of the woman, i.e. right to information, choice of contraception, have children, when and how many, right on her own body, and safe sex, it also stresses the constellation of women centered services, easily available and accessible to them.

1.1. REPRODUCTIVE HEALTH

The definition of Reproductive Health reflects the WHO definition of health but it encompasses much more diversified areas establishing linkages and necessity for sustainable development through human policy and programme approach, instead of demographic targets or population stabilization. Accordingly, the
population issue could be tackled within the ambit of more comprehensive strategy of health care and socio-economic development; thereby gender equity, empowerment and status of women become crucial and male responsibility critical. This refers to desired world-wide shift in the attitude to recognize reproductive rights as human rights, women and adolescents' needs and provision of service delivery.

The World Health Organisation (WHO, 1998) defines Reproductive Health as "a state of physical, mental and social well-being in all matters relating to the reproductive system at all stages of life." The term reproductive age group refers to the active reproductive years in women starting with menarche around 12-14 years and ending with menopause around 45-49 years. For demographic purposes, reproductive age group is usually defined as 15-49 years or 12-49 years. Reproductive Health may at times be, confusedly, restricted to problems of women in the reproductive age group. The "... at all ages of life" part in the WHO definition is to remind us about the reproductive tract related mortality and morbidity experienced beyond the reproductive age group. For example, carcinoma of cervix, prolapsed uterus, etc.

The definition of Reproductive Health contained in the Programme of Action of the International Conference on Population Development (ICPD), Cairo is an improved version of the WHO technical definition, which was accepted by the United Nations General Assembly. It is being followed now for all practical purposes by governments and voluntary agencies world over. The definition is as under: "Reproductive Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes. Reproductive Health therefore implies that people are able to have a satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when, and how often to do so. implicit in this last condition are the right of men and women to be informed and have access to safe, effective, affordable and acceptable method of family planning of their choice, as well as other methods of their choice for regulation of fertility which are not against the law, and the right of access to appropriate health care services that will enable women to go safely through pregnancy and child birth and provide couples with the best chance of having a
healthy infant . . . . It also includes sexual health, the purpose of which is the enhancement of life and personal relations, and not merely counselling and care related to reproduction and sexually transmitted diseases”.

1.1.1 Objectives of Reproductive Health

The Reproductive Health aims to provide need based, client centered, demand driven and high quality services to people. The Government of India’s Reproductive Child Health (RCH) programme aims to contribute to population stabilization, sustainable development, and meeting the reproductive health needs of women, children and adolescents within the framework of reproductive rights, gender equity and human dignity, thereby making it a composite programme.

In order to create conducive climate so as to achieve these objectives, the Government’s efforts are to use its own existing resources and wherever necessary supplement them with the support committed and received by external donors, like World Bank and European Commission.

The Government’s Reproductive Child Health (RCH) programme aims that the "people have the ability to reproduce and regulate their fertility, women are able to go through pregnancy and child birth safely, the outcome of pregnancies is successful in terms of maternal and infant survival and well being and couples are able to have sexual relations free of fear of pregnancy and of contacting diseases".

The United States Agency for International Development (USAID) adheres to the following objectives (also as principles) of Reproductive Health.

- Promoting the rights of couples and individuals to determine freely and responsibly the number and spacing of their children;
- Improving individual health, with special attention to the Reproductive Health needs of women and adolescents and the general health needs of infants and children;
- Reducing population growth rates to levels consistent with sustainable development; and
- Making programmes responsible and accountable to the end-users.
1.1.2. Indicators of Reproductive Health

The World Health Organisation indicators for monitoring progress towards Health for All (WHO, 1981) included a few broad indicators of reproductive health, such as; (a) Fertility rates, (b) maternal mortality rate, (c) ages at which mothers have children, and (d) birth intervals. In 1996 the working group on Reproductive Health of the Administrative Committee on Coordination (ACC) task force on Basic Social Services for All (BSSA) held a meeting to facilitate interagency dialogue and co-operation on the issue of reproductive health indicators.

The data in table-1 shows that the list of outcome and process indicators recommended by the ACC task force on basic social services for all. Process indicators list does not include age at marriage, which affects biological, social, and personal health status of the married. Marriage is an important marker of the beginning of reproductive phase of life in India. Although, reproduction is feasible and does take place to some extent, outside of marriage, marital fertility is the major contributor to the fertility. Pre-puberty marriage is dysfunctional not only for the individual but also for the family and the society. It affects the health of the mother, for at an early age a woman is not fully prepared for the great physical and mental strains of maternity. The comparative immaturity of mother interim affects the health of her children too. Since by marrying at an early age, the period available for begetting children is large, size of the family also becomes large which makes it difficult to maintain minimum living standards. In some cases child marriage creates maladjustment's in the family, ultimately leading to family disorganization. Hence, average age of marriage, particularly of women gives useful insights about Reproductive Health status of a population. Late marriage has also certain complications and increases reproductive risks. However, early marriage is the contemporary problem. Hence, rise in average age at marriage from the very low levels as of now, will be an indicator or progress towards better and hence similarly, the average age of mothers at the time of first birth is another important indicator of reproductive health. It reflects the average age at marriage, and the average time from marriage to first birth. From the Reproductive Health point of view, mother’s average age at first child birth is a more valid indicator.
**Table 1: Reproductive Health indicators**

<table>
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<tr>
<th>REPRODUCTIVE HEALTH INDICATORS</th>
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<tr>
<td><strong>Outcome Indicators of Reproductive Health</strong></td>
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<tr>
<td>Total Fertility Rate (TFR)</td>
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<td>Maternal Mortality Rate (MMR)</td>
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<td>Perinatal Mortality Rate (PMR)</td>
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<td>Low birth weight prevalence</td>
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<td>Syphilis prevalence in pregnancy</td>
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<td>Anaemia prevalence in pregnancy</td>
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<td>Infertility prevalence in women</td>
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<tr>
<td>Urethritis incidence in men</td>
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<td>Prevalence of female genital mutilation</td>
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<td>HIV prevalence in pregnant women aged 15-24</td>
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<tr>
<td>Contraceptive Prevalence Rate (CPR)</td>
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<td>Ante-natal care coverage</td>
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<tr>
<td>Births attended by skilled health personnel</td>
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<tr>
<td>Availability of basic essential obstetric care</td>
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<td>Availability of comprehensive essential obstetric care</td>
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<td>Percentage of obstetric and gynaecological admissions owing to abortion</td>
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Fertility rates, such as the age specific and total fertility rate, average birth intervals are indicators of the extent to which couples in the society are planning their families and the intensity of reproductive load on an average woman. Birth intervals give an indication of birth spacing and the pace of reproductive activity. Reproductive morbidity, indicate the quality of life affected on account of reproductive activity or reproductive tract diseases.
1.1.3. **Scope of Reproductive Health**

As per the International Conference on Population Development (ICPD) Programme of Action, the scope of reproductive health within the context of the primary health care has identified 6 components. These are:

- Family planning counselling, Information, Education, and Communication (IEC) and services;

- Education and services for prenatal care, safe delivery, and post-natal care, especially breast-feeding, infant and women's health care;

- Prevention and appropriate treatment of infertility;

- Prevention of unsafe abortion and the management of the consequences of abortion,

- Treatment of Reproductive Tract Infections (RTIs), sexually transmitted diseases (STDS) and other reproductive health conditions; and

- Information, education and counselling, as appropriate, on human sexuality, reproductive health and responsible parenthood.

1.1.4. **Elements of Reproductive Health**

Though one may deduce the elements of Reproductive Health from the concept of Reproductive Health as well as from its definition and scope, there seems to be some variance in the elements preferred by different sources. As referred to above, the six areas identified under the scope of Reproductive Health clearly indicate elements of Reproductive Health.

The World Health Organisation (WHO) has identified seven basic elements as follows:

- Responsible reproductive / sexual behavior.

- Widely available family planning services.

- Effective maternal care and safe motherhood.
• Effective control of reproductive tract infections (including STDS).

• Prevention and management of infertility.

• Elimination of unsafe abortion.

• Prevention and treatment of malignancies of reproductive organs.

Besides these, the conditions and practices affecting reproductive health, like HIV/AIDS, infant, child and adolescent health, adolescent sexuality, socio-cultural, behavioral, and environmental factors have also been considered as important elements.

The UNFPA has given priority attention to 4 elements, but each of these encompasses wide array of factors and conditions affecting Reproductive Health, their treatment and management. These are:

• Family planning, including availability of a wide range of contraceptive choices, appropriate counseling, and quality of care.

• Safe pregnancy care, including pre-natal delivery and postpartum care of mothers at the primary health care level with appropriate referral for the management of obstetric complications.

• Prevention of unsafe abortion, including the treatment of complications, and post-abortion counseling and family planning.

• The prevention, screening and treatment of STDs and HIV/AIDS as part of primary health care, with appropriate referral for follow-up.

The Government of India has incorporated in its RCH National programme the components related to its earlier programme of Child Survival and Safe Motherhood (CSSM), Sexually Transmitted Diseases (STDs) and Reproductive Tract Infections (RTIS).

Reproductive Health refers to morbidity and quality of life attributable to the reproductive system, process and events experienced by men and women at all ages. Conceptually the term should include reproduction related mortality, morbidity and quality of life issues of both men and women. But discussion about women’s health
problems usually gets larger attention in the context of pregnancy and child birth related morbidity and mortality.

1.2. REPRODUCTIVE HEALTH PARAMETERS

Reproductive Health influences menstrual periods, pregnancy outcome, fertility preference, contraception, gynaecological morbidity, including HIV / AIDS. The succeeding section describes the above aspects in brief.

1.2.1. Menstruation or Menstrual Periods

1.2.2. Pregnancy outcome

1.2.3. Fertility Preference

1.2.4. Reproductive Morbidity

1.2.5. Contraception

1.2.6. HIV / AIDS

1.2.1. Menstruation or Menstrual Periods

Menstruation is a woman's monthly bleeding. It is also called menses, menstrual period. The menstrual blood is partly blood and partly tissue from the inside of the uterus (womb). The amount of blood lost due to the normal monthly period is usually less than 80 ml. Most menstrual periods last from three to five days. Menstruation is a very complicated process involving many different hormones, the woman’s sex organs and the brain. It is a normal, natural cyclic process occurring in all healthy adult women between puberty and menopause. Young women can begin to menstruate at any time between the ages of 8 and 18; naturally women might experience menopause sometimes between the ages of 40 and 60. In most women, menstruation is preceded or accompanied by various unpleasant symptoms caused by the involved hormones and by cramping of the uterus. Among these are abdominal pain, migraine headache, depression and irritability. The list of symptoms experienced varies from person to person. Furthermore, within an individual, the severity of the symptoms may vary from cycle to cycle.
1.2.1.1. Menstruation Problems

Women can have various kinds of menstruation problems with their periods, including pain, heavy bleeding and skipped periods. Hormonal problems - (involving the pituitary, thyroid, ovary or adrenal glands) or problems with the reproductive organs may be involved. Dysmenorrhea - painful periods, including severe menstrual cramps. In younger women, there is often no known disease or condition associated with the pain. A hormone called prostaglandin is responsible for the symptoms. Sometimes a disease or condition, such as uterine fibroids or endometrioses causes the pain.

Abnormal uterine bleeding – vaginal bleeding that is different from normal menstrual periods (also called menorrhagia), periods too close together, and bleeding between periods. In adolescents and women approaching menopause, hormone imbalance problems often cause menorrhagia along with irregular cycles. Sometimes this is called dysfunctional uterine bleeding (DUB). Other causes of abnormal bleeding include uterine fibroids and polyps.

Amenorrhea - is the absence of menstruation. Many conditions that cause amenorrhea, such as ovulation abnormalities, are major contributors to infertility. Irregular periods from any cause make it more difficult to conceive. Amenorrhea that is associated with reduced estrogen levels increases the risk for osteoporosis (loss of bone density).

Menorrheagia - is extremely heavy, prolonged periods. The most frequent causes of menorrheagia are an imbalance between the levels of estrogen and progesterone in the body, which allows the endometrial to keep building up. When the endometrial is finally shed during menstruation, the resulting bleeding is particularly heavy. In some cases, heavy menstrual bleeding is caused by: (a) fibroids or polyps in the uterus (b) Thyroid Conditions (c) Clotting disorders (d) inflammation or infection in the vagina or cervix.

Dysmenorrhea (Painful periods) – There are two types of dysmenorrhea which is severely painful menstruation primary dysmenorrhea is more common in teens and is not caused by a diseases or other condition but due to prostaglandin.
Secondary dysmenorrhea - is pain caused by some physical condition like polyps or fibroids in the uterus, endometriosis, pelvic inflammatory disease (PID) or adenomysis (Uterine tissue growing into the muscular wall of the uterus).

Leucorrea or the whites - is a symptom of many diseases peculiar to women. It consists of white watery discharge from the uterus. The discharge may be thick and white consisting mainly of pus, if the patient is suffering from a serious disorders of the genital organs. Patients suffering from this look pale and a dull, gnawing pain is often experienced in the lower part of the back.

1.2.2. Pregnancy outcome

 Mothers during pregnancy and childbirth are influenced by general socio-economic conditions, nutrition and sanitation as well as by maternal health care. Sometimes short birth intervals may affect a mother’s health and her children’s survival. Closely spaced pregnancies increase the chances of women having low birth weight babies and increased risk of transmission of infectious diseases. It is reported that in India the number of women dying by the age of 30 is usually high, when compared to men of the same age and that the number of pregnancy related deaths, in rural areas are among the worlds highest. India accounts for about 20 percent of worlds maternal death through it shares only about 15% of the worlds population. These maternal deaths are due to infection, hemorrhages, obstructed labour, abortion and lack of appropriate maternity care. Anaemia due to iron deficiency which is widespread among Indian girls and women affects 50 to 90% of pregnant women and early child bearing and closely spaced jeopardize the health of mothers and their children, in addition to contributing to the high rate of population. It is also observed that in India, one woman out of every 59 women stands the risk of dying from complications of pregnancy and child birth or unsafe abortion (Population Action International: 1995).

1.2.3. Fertility Preference

 Fertility, i.e. the basic ability to reproduce is at the root of reproductive health. Both infertility as well as high levels of fertility is bad for health. High prevalence of infertility has important psychological and sociological impact on the
community. Very high levels of fertility means that women are devoting greater part of their lives to child bearing, and the exposure to maternal complications is high. In the contemporary Indian context, a high level of fertility is a major problem. Hence reduction in fertility levels is viewed as an indicator of improvements in reproductive health. The three common measures of fertility are; (a) Crude Birth Rate (CBR), (b) Age-specific fertility rates (ASFR), and (c) Total Fertility Rate (TFR). Crude birth rate (CBR) is the simplest of all and is defined as the number of births per annum per 1000 population. However, crude birth rate is influenced by the age-sex structure of the population apart from its true fertility experience. The Age specific fertility rates, control for age-sex composition of the population. Age specific birth rate (ASBR) for a given age group is defined as the number of children born to women in the said age group per 1000 women in the same age group. In this males are excluded. So variation due to sex composition is controlled. ASFRs are usually computed by five year age group within the reproductive age. For example, ASFR 15-19, ASFR 20-24, ASFR 45-49, etc. This stratification by age group controls for age composition but there are seven pieces of estimate, to deal with. The TFR summarises the ASFRs and provides a single statistic of the fertility experience. Hence TFR is mostly used by demographers to analyse trends of fertility. TFR is the average number of children a woman would bear throughout her reproductive life, if she were to experience the contemporary age specific fertility rates.

In India, as in societies of East Asia, North Africa, the Middle East and other parts of South Asia, couples have been observed to have a strong preference for sons over daughters (Arnold: 1996, 1996 Cleland, Verrall, and Vaessen 1983; UN 1981, 1985; Williamson 1976) and to accord a low status to women (UN 1995). Parent's preferences for sons may have a significant impact on children's welfare and may affect demographic behavior as well.

A large and populous Country, India exhibits substantial variation in its geographic, economic and cultural environment. Not surprisingly, large differentials in the degree of son preference and in demographic behavior have also been noted among Indian regions (Arnold, Choe and Roy 1998).
A strong preference for sons may be an obstacle to fertility decline if couples continue having children after reaching their overall family size goal because they are not satisfied with the sex composition of their children. Moreover, fertility has declined dramatically in some countries where son preference is still widespread for example, in South Korea and China. Research on the relationship between son preference and fertility is confounded by the observation that the link is weak in both high fertility and low fertility populations, high fertility societies, most couples continue to have children regardless of the number of sons and daughters they already have. In low fertility societies the influence of son preference is also weak because few couples want to have more than one or two children even if they do not achieve their ideal number of sons and daughters. The effect of son preferences on fertility therefore is thought to be most pronounced in countries like India that are in the middle of the fertility transition.

1.2.4. Reproductive Morbidity

Reproductive morbidity refers to diseases of the reproductive system that may or may not necessarily be a consequence of reproduction. Reproductive morbidity has three sub-categories namely (a) Gynecologic morbidity, (b) Obstetric (or) maternal morbidity, and (c) Contraceptive morbidity (Fortney, 1995). Anaemia is a general physical problem. But in case of women anaemia has a very close linkage to reproductive health. Hence it is necessary to discuss first about anaemia in women followed by the three specific varieties of reproductive morbidity mentioned above.

1.2.4.1. Anaemia among women

Anaemia is characterised by low level of hemoglobin in the blood. Anaemia usually results from nutritional deficiency of iron, folate, vitamin B12, or some other nutrients. Anaemia may have detrimental effects on the health of women and children, may become an underlying cause of maternal mortality, and results in an increased risk of premature delivery and low birth weight (Sheshadri, 1997). Early detection of anaemia can help to prevent complications related to pregnancy and delivery, as well as child development problems. Anaemia before mid-pregnancy is associated with an increased risk of pre-term delivery. Maternal anaemia during the later stages of pregnancy, especially the third trimester, often reflects the expected expansion of maternal plasma volume (Scholl and Reilly, 2000).
1.2.4.2. Obstetric / Maternal Morbidity

Maternal or obstetric morbidity refers to morbidity from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes (WHO, 2000). Maternal morbidities can be broadly classified as (a) Direct obstetric morbidity resulting from obstetric complications of the pregnancy, labour and the puerperium; (b) Indirect obstetric morbidity resulting from diseases such as anaemia, malaria, hepatitis and tuberculosis, aggravated by the physiological effects of pregnancy; and (c) Psychological obstetric morbidity, which includes post-partum psychoses or depression and other mental health problems related to pregnancy and childbirth (Brundtland, 2000).

1.2.4.3. Abortions

Abortion is the termination of pregnancy before 28th week and before the foetus is viable. In terms of weight the aborted foetus is less than 1000 gm. premature infants are those born after 28th week of pregnancy and before term. Abortions are divided into (a) spontaneous and (b) induced abortions. Spontaneous abortion is called miscarriage. Induced abortion is usually medical termination of pregnancy. The incidence of Spontaneous abortion is 10% to 15% of all pregnancies.

Spontaneous abortion early in pregnancy is almost preceded by the death of the embryo, unlike those later in pregnancy. In first trimester abortions, foetal death may be associated with abnormalities of the ovum itself, immunological factors, and abnormalities in the reproductive tract or systemic disease in a woman. Whereas first trimester spontaneous abortions are often associated with chromosomal abnormalities, second trimester abortions are usually associated with factors such as cervical incompetence, abnormalities of the uterine body, and infections such as listeria monocytogenes. Other factors that can result in spontaneous abortion include maternal disease, particularly those associated with high fever, but also conditions such as diabetes, thyroid disease, renal disease, and hypertensive disorders. Yet other causes of spontaneous abortion include environmental factors such as radiation, drugs and severe stress (WHO, 1998).
Spontaneous abortion may be classified by clinical presentation. (a) Missed abortion is defined as intrauterine foetal demise prior to 20 weeks' gestation or 500 gms foetal weight without clinical symptoms. (b) Inevitable abortion is the occurrence of vaginal bleeding and cervical dilation prior to embryonic or foetal demise. (c) Incomplete abortion occurs when only a portion of the products of conception are spontaneously expelled (Rinehart, 1999).

Elective or therapeutic abortion is the intentional termination of pregnancy prior to foetal viability. Induced abortion may be carried out by a number of medical or surgical means (Rinehart, 1999). Unsafe abortion is defined by World Health Organisation (WHO) as a procedure for terminating an unwanted pregnancy either by persons lacking the necessary skills or in an environment lacking the minimal medical standards or both (WHO, 1992). Complications of unsafe abortion account for a substantial proportion of all maternal deaths around the world. In developing countries with high levels of maternal mortality, the risk of death following complications of unsafe abortion may be 100 to 500 times higher than medical termination of pregnancy.

Complications of abortion can be divided into immediate or delayed. The immediate complications include haemorrhage, uterine perforation, cervical laceration, haematometra and vasovagal reaction. Late complications of pregnancy termination include retained products of conception, infection and continuation of pregnancy (Rinehart, 1999).

A population based study was conducted in 6 villages of North India with an aim to estimate the extent and determinants of spontaneous abortion and induced abortion. Monthly follow-up of 1269 women aged 18-30 years was done. All registered pregnancies (641) were followed till abortion/delivery. Abortion rate, pregnancy wastage rate and foetal death ratio were 10.6%, 16% and 12.6% respectively. More women with spontaneous abortion were aged less than 20 years (27%) as compared to 5% in women who had induced abortion. Spontaneous abortion was reported more in women of lower social class. Government hospitals were preferred as the place for induced abortion by 45% of the women. Female foeticide was reported by 13% women. Ignorance about contraceptives of their availability was reported by 8 women (Singh and Arora, 1996).
Induced abortions are largely due to unwanted fertility. While abortions associated with wanted fertility are spontaneous in nature, the abortions resulting from unwanted fertility could either be spontaneous or induced. Induced abortion services are availed by women from various sources - some are safe conducted by skilled professionals and others are done under unsafe conditions leading to high levels of morbidity and mortality (Padma, 2000).

1.2.4.4. Gynacological Morbidity

Gynacological morbidity includes any condition, disease or dysfunction of the reproductive system which is not related to pregnancy, abortion or childbirth, but which may be related to sexual behaviour (Fortney, 1995). Systematic estimate of gynacological morbidity are not easily available. Our knowledge of gynacological morbidity is based on few studies in parts of the state and some studies in India.

The NFHS-2 collected information from women on some common symptoms of RTIs. 38% of ever-married women reported at least one type of problem related to vaginal discharge, and 19% reported symptoms of a urinary tract infection. Overall, 43% of women reported either problems with vaginal discharge or symptoms of a urinary tract infection.

The review of available literature from various studies suggests that a health worker would come across the following gynacological morbidities quite frequently.

1. Abnormal vaginal discharge, caused mostly by bacterial vaginitis, cervicitis, or to some extent trichomoniosis.

2. Oligomenorrhoea (scanty periods), amenorrhoea, probably due to anaemia, under nutrition, tuberculosis or other pathology.

3. Urinary tract infections

4. Pelvic inflammatory diseases and sexually transmitted diseases.

5. Adolescent menstrual difficulties like back ache (Dysmenorrhoea), calf pain, irritability, etc.
1.2.4.5. Contraceptive Morbidity

Contraceptive morbidity refers to morbidity caused by use of specific contraceptives. Obviously, contraceptive morbidity does not include the protective effects that contraceptives have against a variety of adverse conditions, but the concept of "contraceptive health" does include the absence of these diseases, which include ovarian and endometrial cancer, anaemia, and STDs. Contraceptive morbidities are of 2 broad types:

1. Local effects of contraceptives include irritation from or allergic reactions to barrier contraceptives, IUD-associated bleeding, or infection at wound sites (implants, tubal sterilisation).

2. Systematic effects include impact on the cardiovascular and hormonal systems and carcinogenicity (Fortney, 1995).

NFHS-2 data provides information on the women who are using modern contraceptive methods and reported problem with their method. 64% of sterilised women and 81% of women whose husbands sterilised reported having no problems with their method. The most common problems experienced by sterilised women are headache, body ache or backache (23%), abdominal pain (15%), weakness or tiredness (14%), white discharge (12%) and fever (5%). The results point to a continuing need to strengthen post-operative care and counseling for sterilisation acceptors.

1.2.5. Contraception

Modern contraceptives enable millions of couples and individuals throughout the world to plan the number and spacing of their children or to avoid pregnancy altogether. Today almost 60% couples use some from of contraception and more than 50% use modern methods. India has the unique distraction of sponsoring the first national family planning programme in the developing world. During the past decades, female sterilization has been the mainstay of the National Family Health Survey 1 and 2. NFHS 1 and 2 shows that 82 percent of women sterilized had never used any other method before they underwent sterilization indicating that female sterilization has continued to dominate the method mix in India.
During the six and a half year period between NFHS 1 and 2 there was a minimal increase (from 6% to 7%) in the proportion of couples using pills, IUDs and condoms, modern reversible methods accounted for 6% of contraceptive use by illiterate women and 35% of contraceptive use by women with at least high school education. The high prevalence of reproductive morbidity among women in India is an established fact. One of the factors for this high morbidity has been the use of contraceptives among women, particularly the intrauterine device (IUD) and female sterilization. Among IUD acceptors, the morbidity is mostly related to lack of appropriate screening prior to insertion and inadequate aseptic precaution during insertion resulting in opportunistic infections in the lower reproductive tract presenting itself immediately in the post insertion period. The morbidity conditions such as RTIs (Reproductive Tract Infections) dysmenorrhea and menorrhagia are more among the IUD users. Women who undergo sterilization are more prone to report menstrual problems especially dysmenorrhea. The changes for morbidity are high with increased duration of contraceptive use.

The important aspect of quality care that is screening before using of methods, training for health professionals for improved provision of contraceptives and regular follow up for all methods are to be emphasized. For the clients, information regarding the early detection of morbidity symptoms would reduce the burden of delayed care seeking and the concomitant increase in morbidity burden. There is a need to improve existing methods of contraception; newer methods with less side effects and lower costs are desirable.

1.2.6. HIV / AIDS

AIDS (Acquired Immune Deficiency Syndrome) are a human tragedy. In 2003, approximately 4.8 million new HIV infections and 2.9 million AIDS related deaths occurred worldwide. Women accounted for approximately 2 million new infections and 1.2 million AIDS deaths. Nearly half of all new HIV infections 6,000 per day occur in young people aged 15 to 24 years. Approximately 630,000 new infections occurred among children under 15 years of age, most of who are thought to have contacted HIV through mother to child transmission (also called perinatal or vertical transmission) before or during or through breastfeeding. The rates of
mother-to-child HIV transmission are highest in developing countries and range from 25 to 45 percent compared to 3 percent in U.S. population and 7 percent in Europe. Breast-feeding accounts for up to 50 percent of perinatal HIV transmission in developing countries (UNAIDS, 2003, UNAIDS, 2004). People living with HIV/AIDS face social and cultural barriers, including stigmatization, discrimination and rejection from health service providers, friends and relatives. These barriers often worsened by the concurrence of the HIV can affect their access to health and medical services, the quality of services they receive and their daily livelihoods. Although AIDS is incurable and the transmission of HIV is preventable. Experience worldwide has shown that prevention works. Efforts made over the past 20 years to reduce HIV transmission have shown that effective prevention strategies operate on many levels and reinforce one another.

Prevention programs can increases people’s awareness and knowledge of HIV/AIDS and how to protect themselves against it, create an environment where people can openly discuss safer sexual and during injecting practices and ways to adopt them; provide services such as access to affordable condoms and class injection equipment, HIV testing and treatment for Reproductive Tract Infections (RTIs) including Sexually Transmitted Infections (STIs); Help people acquire the skills they need to protect themselves and their partners; Reform laws to protect people’s health and expand their access to health services.

1.3. SCHEMATIZATION

The thesis has been presented in five chapters. In the first chapter to introduce the concise topic of reproductive health definition, scope, indicators and other related aspects are presented. The second chapter focuses on the comprehensive review of related to the investigation.

The third chapter encompasses the methodology includes the statement of problem, objectives, hypotheses, procedures that are used in the measurement of variables such as selection of respondents, techniques of data gathering and statistical tools employed to analyse the data.

The fourth chapter describes the analysis and interpretation of data. Chapter five summarize the study and presents the conclusions.
CHAPTER-II

REVIEW OF LITERATURE
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REVIEW OF LITERATURE

2.1. Studies related to Family Planning

2.2. Studies related to Reproductive Morbidity

2.3. Studies on Utilization of Reproductive Health Service

2.4. Studies on Menstruation

2.5. Studies on Fertility and Fertility preference

2.6. Studies related to HIV / AIDS
REVIEW OF LITERATURE

A thorough review of literature is of paramount importance to any research endeavor. It helps to acquire a broad general background in the given field. This also helps to find out the available information, which is related to the objectives of proposed research and assists in delineation of the problem area and provides a basis for theoretical framework and for interpretation of the findings. This chapter presents a review of reproductive health - family planning, reproductive morbidity, menstruation, utilization of health services or reproductive health, fertility preference and HIV/AIDS.

2.1. STUDIES ON FAMILY PLANNING

Sowmini and Sarma (1998) Conducted a study on “Reproductive morbidity among contraceptive users; need for quality services”. This study attempts to analyze the association between IUD use and female sterilization with reproductive morbidity among women in Kerala, which has one of the highest contraceptive prevalence rates in the country largely female sterilization. Samples of 523 currently married women in the age group of 15-44 years were randomly selected from Thiruvananthapuram. The sample included all women who had accepted IUD and sterilization from June 1996 – June 1998 and those who had not used modern methods of contraception during this period. The five selected reproductive morbidity conditions, namely RTIS, Menstrual problems, UTI, Prolapse and fistula were separately studied. The morbidity conditions – RTIS, dysmenorrhoea and menorrhagia were more among IUD users. Women who underwent sterilization were more prone to report menstrual problems especially dysmenorrhoea. The chances for morbidity were high with increased duration of contraceptive use. The important aspect of quality of care were screening before provision of methods, training of health professionals for improved provision of contraceptives and regular follow up for all methods.

Mathiyazhagan et al., (2000) have done a research on “sources of information for couples regarding contraceptives and their level of adoption”. Interpersonal communication (IPC) is a popular mode among the villagers in Pali district of Rajasthan for knowledge on contraceptive methods and their acceptance.
Media availability in the study area showed that IPC topped the list followed by radio, television and printed materials. Education, occupation and age are the three important variables that significantly contribute to the level of contraceptive adoption by the couples. Since IPC has emerged more powerful as compared to other modes of communication, sensitising people about their basic health needs through home visits, peer counselling and group meetings in the study area would be appropriate in bringing about desirable changes in their health behaviour.

Jayalakshmi et al., (2002) conducted a study on “Male involvement in family planning”. Male involvement in regulating family size has been a concern for the health policy makers for quite some time. The role of men in such matters is of great importance because, decision-makers in vast majority of the Indian families are males. Their awareness and knowledge are essential pre-requisites for taking correct decisions at right time. Therefore, this study was conducted in a Maternity and Gynaec hospital of Central Government Health Scheme, R.K. Puram, New Delhi to assess the level of knowledge of males and their attitude towards family planning. The study revealed that (i) Nearly one-third of all births is either undesired or unplanned, the major reason being the failure of contraceptive methods or accidental conception during lactation period; (ii) Strong preference for sons compels at least one-third of parents to go in for three or more number of children; (iii) Level of knowledge of various family planning methods like emergency contraceptives and no-scalpel vasectomy is low among the respondents; (iv) Desire to get vasectomy done is low among men; (v) Even after having three or more living children, only half of the men have no intention to adopt a permanent family planning method immediately or in future; and (vi) In half of the families, the husband is the sole decision-maker regarding the number of children.

Shalini Singh et al., (2002) conducted a study on “emergency contraception: knowledge and views of doctors in Delhi” A KAP survey was carried out among 190 doctors in Delhi to obtain their views on Emergency Contraception (EC). All the specialists and most of the interns were aware of emergency contraception. Most of the doctors had never prescribed an EC pill and lacked accurate information on dosage, time frame and side effects. Nearly 82 per cent of them, irrespective of their
specialization, opined that the use of EC would bring down the number of abortions. The interns and specialists were more enthusiastic about the role of EC in reducing the abortion rate. It was also observed that the interns and specialists were less apprehensive of the negative impact of EC on sexual behaviour as compared to the general practitioners.

Murthy and Rao (2003) analyzed the factors influencing the acceptability of vasectomy in Andhra Pradesh in order to determine the factors influencing the acceptance of vasectomy, a multi-stage stratified random sampling method and a 3-year reference period was used covering 900 subjects residing in 6 districts of Andhra Pradesh. Among others, the variables included socio-economic profile, knowledge and perceptions of sterilized couples about family planning methods, myths and misconceptions about vasectomy, reasons for choosing vasectomy, opinion about incentives etc. The study revealed that literacy was not a pre-requisite for undergoing vasectomy. Majority of the acceptors were poor and engaged in labour-oriented jobs. However, 50 percent of the subjects underwent operation only after 3 or more children. Knowledge and use of condoms among the vasectomy acceptors was high in the better performing districts compared to medium performing ones. No complications and a relatively easy method were the prime reasons of motivation towards vasectomy. However, incentives in cash and kind also played a role. Wives of subjects had no role in motivating husbands since majority of the subjects were "self-motivated" and vigorously followed up by the revenue and other Government department Officials. IEC, motivational efforts and coordination among the different Government departments in promoting vasectomy were found to be good in high performing districts. One-third of the acceptors had a feeling of "anxiety and fear" and were preceeding the vasectomy operation which forced them to consume intoxicants. Distribution of condoms and pre- and post-operative counselling were carried out properly with the exception of only one district. The camp approach was a success in conducting mass no scalpel vasectomy (NSV) operations. Nearly 50 per cent of the respondents in the high performing districts expressed that they preferred vasectomy to female sterilization for the reasons that their wives were having one or other reproductive health problems. Based on the
findings, the study has recommended new strategies to repopularise vasectomy operations in the country.

Basu et al., (2004) conducted a study on “Knowledge, attitude and practice of family planning among tribals” in Midnapore district of West Bengal. A specially designed household schedule consisting of close ended, open ended and multiple response questions was used for collecting data on socio-economic status, knowledge, attitude and practices of family planning and utilisation of family welfare services. The study found that 72.7% of Santal had land of their own. They supplemented their income by forest produce. Majority of the Santal (80.3%) and Lodha (87.3%) communities were aware of sterilization, but spacing methods were less known. Only 1.0% of Santals knew of oral pills and 1.7% about IUDS. The major source of information about family planning was through PHC / Anganwadi worker. The poor role of mass media among the tribal population could be due to the non-availability of radio and T.V. and also due to their poor literacy status. They did not gain much information from posters and pamphlets. Factors which influenced to adopt family planning was often their economic condition, incentives, care of their children rather than having a large family and not being able to feed them properly. Female sterilization was the most commonly accepted method among both the tribal groups. It can thus be inferred from this study that poor economic condition and associated financial incentives played an important role in influencing the Tribals to adopt family planning. Lack of awareness, poverty, incentives for undergoing sterilization and convenience were some contributory factors for accepting sterilization than for opting for spacing methods among the tribals under study.

Bartati Banerjee (2004) conducted a survey on “Socio-economic and cultural determinants on acceptance of permanent methods of contraception” in Hoogly district of West Bengal. Systematic random sampling technique was adopted and 200 women between 35-49 years were interviewed. The study found that the contraceptive prevalence rate among couples was 39.5% of which 34.5% had adopted a permanent method, where as only 5.0% were using a temporary contraceptive method. Vasectomy was accepted by 6.5% of the couple, tubectomy by 25.6%, oral pill by 4%, condom 0.5% and rhythm method was practiced by 0.5%.
Acceptance of permanent methods declined with increasing age, 50% of women in the 35-39 years age group had opted for a permanent method, which was significantly higher than that of the 40-44 years age group. This study indicated that Hindus showed higher sterilization prevalence than Muslims. More than two thirds of the acceptors had 5 or more children. Literacy particularly female literacy was seen to influence acceptance of sterilization. Sterilization was significantly higher among non-working than among working women. The acceptances of permanent methods were observed to be directly proportional to the per-capita monthly income of the acceptors.

Saini and Singh (2004) assessed the level of awareness and practice of spacing methods. A study was conducted among couples in Beri block, Rohtak district, Haryana during the period April 1999 to March 2000. It was revealed that 48 percent of the sample couples were not using any kind of spacing method at all. Though the couple protection rate was 52 percent, spacing methods are practiced by only 25 percent of the subjects. Cu-T was the most popular spacing method followed by condom and oral pills. A majority of non-users of spacing methods were the illiterate and lower age couples. Most of the couples were using female-based spacing methods indicating poor male involvement in the programme; a trend that needs to be corrected through well-formulated IEC strategies.

Rahman and Kabir (2005) examined the knowledge of adolescents on contraception and dynamics of its use. Adolescence is a critical period, especially for the married female adolescents, as they enter early into the marital life that pushes them to bear the consequences of childbearing. Although adolescents have knowledge on contraceptives, their use of contraceptives is low. Quantitative data on 1,881 married female adolescents revealed that almost cent percent of the married adolescents are aware of at least one contraceptive method. But the current use rate is low. Multi-variate logistic regression analysis revealed that current age, attitude of the family members towards contraceptive use, marital duration and husband-wife communication appeared to be important predictors of contraceptive use. To meet the family planning and other reproductive health needs of adolescents; field workers need to make greater efforts to extend their services to relatively younger and childless couples. Efforts on behavioral change communication (BCC) are
needed to ensure the participation of young spouses in family planning and other reproductive health services. Another important action to be undertaken for the development of supportive structure at the community and also at the family level is enhancing the educational attainment of females which would help discourage the pattern of early marriage and childbearing.

Stephenson et al., (2006) has examined the influence of religion on the adoption of female sterilization, using data from the 1992/93 Indian National Family Health Survey. The influence of religion at both individual and district levels was examined, and a multi-level modeling methodology were used for assessing community variations in the influence of religion on the adoption of sterilization. Individual religion was a strong predictor of the decision to adopt sterilization, and residence in a district in which more than 20% of the people were Muslims, significantly lowered the odds of adoption of sterilization. There was more variation in the adoption of sterilization between districts for Muslim women and women from minority religious groups. The results demonstrate the influence of community conservatism on the choice of contraceptive methods and point to the mediating effects that community characteristics can have on access to sterilization services for women from religious minority sub-groups.

Bhattacharya et al., (2006) conducted a study on reasons of unmet needs for Family planning among urban mothers of reproductive age group and its association with some demographic and social factors in Kolkata. Objectives of the study were to estimate the magnitude of unmet needs for family planning among married women of reproductive age group, to identify socio-demographic factors associated with unmet needs for family planning and contraceptive users, to explore common reason for unmet needs for family planning. Cross-sectional study with sample size of 10% sample of all mothers attending the clinics for a period of 1 month was selected by systematic random sampling method. This study revealed that extent of unmet needs for family planning is 41.67% of which 25.84% are limiters and 15.83% spacers. Only 45.83% women are contraceptive users. Contraceptive rate increases with advancement of age and prevalence of unmet needs are significantly higher in younger age group. With increase in literacy level
the prevalence of spacers in the unmet needs group has significantly decreased and limiters increases with, increase in number of living children. The major reason for unmet needs is opposition from husband’s family and community (32%). Conclusion of the study was IEC activities are to be improved focusing on men and women associated with good quality, easily accessible convenient methods of family planning.

Shah et al., (2006) made an attempt to explore some of the aspects of contraceptive usage among the newly married women with particular reference to their socio-economic and demographic characteristics in sub-urban Bangalore. The study reveals that (i) the newly married women who were within one year of their marriage had no good attitude towards the use of contraceptives as compared to the other married women, (ii) due to various socio-cultural and demographic factors, they were at the risk of teenage pregnancy leading to pre-term labour and delivering low birth weight babies; and (iii) a significant correlation was found between the usage of contraception and the educational status of the sample women and their monthly family income. The authors recommended that education of human sexuality, which is currently not being addressed adequately in our society, can also be included in the school curriculum.

Saini et al., (2007) have undertaken research on the prevalence of unmet need for family planning in an urban resettlement colony of East Delhi and the factors associated with it are investigated in this study, using a sample size of 1051 married females aged 15-49 years who were fecund and sexually active. The findings reveal that (i) Among the subjects, 562 (53.5%) were currently using contraceptives, 130 (12.4%) were pregnant and 359 (34.1%) were not using any contraception; (ii) The overall unmet need for family planning was 25.4 per cent, of which 6.7 per cent had need for spacing and 18.7 per cent had need for limiting the family; (iii) Unmet need was the highest among the illiterate group, followed by women with per capita income of less than Rs.500 per month and women having three or more children; and (iv) It was lower in women who discussed family planning with their husbands as compared to those who did not.
Sum Up

WHO Expert Committee has stated that family planning includes – the proper spacing and limitation of births, advice on sterility, education for parenthood, sex education, screening for pathological conditions related to the reproductive system, providing adoption services. The above section of literature on family planning has focused on knowledge, attitude and practice of family planning, sources of information, cultural factors influencing acceptance of family planning and also some studies focus on unmet need of family planning etc.

2.2. STUDIES RELATED TO REPRODUCTIVE MORBIDITY

Radha and Nalini, (1995) observed a study on “Higher Fertility: Risk factor for carcinoma cervix”. The study was conducted in a peri urban area of Bombay of Shivajinagar. A total of 1,800 women above the age of 25 years selected by systematic random sampling were called to the UHC (Urban Health Centre) for a pap smear test. Total of 483 women responded and visited the Health Center for a pap smear test, as many as three fourths of all respondents were illiterate. The association between the risk factors and potential carcinogenicity of the cervix, the prevalence of teenage marriage was 79.2% and the risk of developing cervical carcinogenic changes was 4.19 times higher in women who had been married in their teens as compared to those who had entered matrimony after the age of 20 years. Multiparty (more than three children) was also observed to be a potential risk factor. The prevalence of early carcinoma cervix was 13 per 1000 in the study population and teenage marriages (79.2%) teenage pregnancies (68.2%) and multiparity (more than 3 children, 55.8%) was conspicuous risk factors.

Bhatia et al., (1997) conducted a study on “Levels determinants of gynaecological morbidity in a district of South India.” The present study assessed that of gynaecological morbidity among 385 women with young children residing in a district of Karnataka state, South India. All three main models of assessment (clinical examination, laboratory tests and self reports) revealed a high burden of reproductive tract infections. The two most common conditions, identified by laboratory tests, were bacterial vaginosis and mucopurulent cervicitis. Approximately one-fourth of the women had clinical evidence of pelvic inflammatory disease, cervical ectopy and fistula. The contribution of sexually
transmitted diseases to overall gynaecological morbidity appears to be relatively modest; 10% were so diagnosed. Associated conditions of anaemia and chronic energy deficiency were also common among them. Severe anaemia was found in 17% of cases and severe chronic energy deficiency in 12%. These results indicate that radical improvement in women's health in India will require a far more than the diagnosis and treatment of reproductive tract infections.

Edwards et al., (1997) conducted a study on “Pregnancy complications and birth outcomes in obese and normal weight women: effects of gestational weight change”. Objective of this study was to compare the pregnancy course and outcomes in obese and normal weight women and their associations with gestational weight change. Multivariate logistic regression described the relation of weight change to pregnancy course and outcomes in a retrospective study of 683 obese and 660 normal weight women, obese women gained an average of 5 kg. less during pregnancy and were more likely to lose or gain no weight (11% versus less than 1%). Obese women were significantly more likely to have pregnancy complications, but the incidence of complications was not associated with weight change. Compared with obese women who gained 7 to 11.5 kg, normal women who lost or gained no weight were at higher risk for delivery under 3 Kg. or small for gestational age infants, and those who gained more than 16 kg. were at twice the risk for delivery of infants who were 4 Kg. or heavier. Conclusion of this study was gestational weight change was not associated with pregnancy complication in obese or normal weight women.

Mutharayappa (1997) conducted a study on Reproductive Morbidity of Women in Karnataka. The main objective of the study was to highlight the extent of reproductive health problems, the factors responsible for increase in RTI cases and to suggest appropriate strategies. Five types of obstetric problems and seven types of gynaecological problems were listed in both National Family Health Survey – 2 (NFHS-2) and Reproductive and Child Health (RCH) survey. Fewer than half the women reported at least one obstetric morbidity and more than one-tenth reported that at least one gynaecological morbidity. More women in urban areas had reported obstetric morbidity whereas more women from rural areas reported gynaecological morbidity. Educated women, women who work in other activities and Scheduled
Caste and Scheduled Tribe women reported that they were suffering from obstetric problems. Women who do not have toilet facilities at home and women who live in semi-pucca houses reported gynaecological problems. There was a relationship between age at first delivery or ‘child-birth’ and the reproductive morbidity of women. Reproductive morbidity due to abortion was high among rural women. Data also reveals that fewer than half of the women who reported gynaecological problems did not seek treatment. Of the women who reported at least one symptom of gynaecological problems, nearly half were in the 25-34 age group and only 50-60 percent of them sought treatment. Education played a major role in women’s health-seeking behavior. Among those who sought treatment, majority had gone to private health facilities. There is need to expand informed choices among women. Women must be empowered to take charge of their pregnancy-related needs. It is important to raise community awareness regarding early marriage and pregnancy. Misconceptions about nutrition and health care during pregnancy must be confronted at the community level and among pregnant women and the families in which they reside.

Gupta et al., (2000) analyzed “Maternal death and induced abortion”. A total of 249 women with a history of septic induced abortion referred from the peripheral health centers to the All India Institute of Medical Science (AIIMS), New Delhi, during January 1995 to June 1997, were studied. The demographic profile of the patients with bowel injury showed that most of them were young and married and of low socio-economic status. The study revealed that half of the women who were injured due to an MTP procedure, died during the study period. The time between the injury and reparative surgery was an important factor for survival of the patient. When reparative surgery was performed within 24 hours, only one out of four women survived. In the present study, 18 of the 240 septic illegal abortions referred to AIIMS, the rate of maternal death was higher among women who had sustained a gut injury as compared to those who had sustained a bowel injury. Higher mortality was associated with injury of the large as opposed to the small gut. This study concluded that ignorance and inability to take a quick decision regarding termination of an unwanted pregnancy compelled a large number of women to seek MTP in the second trimester from unauthorized persons in unrecognized places.
This can be minimized, if not completely eliminated, by providing safe and efficient family planning services to all women.

**Pande et al.,** (2001) conducted a study on “anaemia a major killer of pregnant women in Jabalpur”. This study was conducted in Rani Durgwati Maternity Hospital of Jabalpur, Madhya Pradesh from January 1992 to December 1999. This was a retrospective analysis of 115 maternal deaths during January 1992 to December 1999. Only deaths directly due to anaemia were included in this analysis. Deaths due to other causes like haemorrhage (antepartom, haemorrhagic, post partum haemorrhagic retained placenta etc.) were excluded from the study. A total of 24,382 live births and 115 maternal deaths were recorded, this giving a maternal mortality rate of 4.72/1000 live births. Out of 115 maternal deaths 60.8% had haemoglobin below 7gm.% and 57.1% of them died mainly due to anaemia. In this study nearly three fourth (72.5%) of the cases belonged to 21-30 years of age group. Anaemia was found to be more among Prime Gravidas than others. There was no difference between the urban and rural population. Significantly more number of unbooked cases (97.28%) was found dead while comparing with booked cases (2.25%). Education is directly related to maternal deaths due to anaemia. Lesser the education, higher the deaths. Majority of patients died within 12 hours of admission, which shows that maximum number of patients was brought to the hospital in a critical state. This study concluded that to prevent anaemia more stress should be given to increase the antenatal checkups and on the improvement of various socio-cultural factors than the medical cause.

**Time Magazine** (Oct 22, 1999 Pg 27) had published that Miscarriages were higher after chemical advent exposure. Two solvent chemicals exposed to working pregnant mothers making silicon chips had a 33% miscarriage rate where normally the miscarriage rate is 15%.

**Yadav et. al.,** (2001) conducted “a study of Delivery Practices among the Semi-nomadic Lohar Gadiyas of Malthon of Sagar District, Madhya Pradesh”. The practices related to delivery in culture are a specific concept and people of all societies. In some societies these delivery practices are unscientific and are the major cause of high maternal mortality. The present study was based on interviewing of 128 housewives and it is conducted by random sampling and semi
participant method. In the present study, it has been observed that 94.53% of respondents did not take any special food before delivery and after delivery. Whereas only a few (5.46%) took special food before and after delivery due to their sound economic conditions. Almost cent percent respondents revealed that they did not take any rest before delivery and performed their daily work normally. Whereas, 4.68% respondents mentioned that they took rest after delivery for 8 to 15 days. Most of the deliveries were conducted at home (94.53%) than hospital (5.46%) because of economic reasons and lack of knowledge. The naval cord of child among Lohar – Gadiyas is mostly cut by blade and its dressing is done by applying antiseptic powder on it. In all, scientific / hygienic delivery practices are absent among them.

Jhalani and Gautam (2001) conducted a study on “Anaemia during pregnancy among Tribal Women in Sailana block of Ratlam District”. The Tribal pocket of Sailana block, with 23% of total population of Ratlam district was surveyed to study the prevalence of nutritional anaemia among pregnant women. In the present study, fifty tribal women in different trimesters of pregnancy were selected. Data were recorded through interview and group discussion, by using a pre-tested performa. Amount of iron and vitamin ‘c’ content was calculated by 24 hour recall method for seven days. The present study comprises of 50 pregnant women, out of which 68% cases were anaemic, out of the cases under study 54% women suffered from mild anaemia whereas 14% suffered from moderate anaemia. This study concluded that majority of the tribal women suffered from anaemia during pregnancy. Mothers having more than two children were more prone to anaemia than those who were having less. Elderly women contained less iron reserves than the younger ones. Majority of the women suffering from anaemia were poor, of whom about one fifth were suffering from severe anaemia. Severity of anaemia was more among women with last trimester of pregnancy. Intake of vitamin ‘c’ and iron was less than the RDA.

Bansal (2001) conducted a study on prevalence of lower RTI among married females in the reproductive age group (15-45). The study reveals that out of 200 females, 81 of them suffered from reproductive tract infections (RTI) of which, a maximum number of 52 had bacterial infections. A prevalence of 26 percent
bacterial vaginitis 6 per cent candidial vaginitis, 4.5 per cent trichomonal vaginitis and 4 percent mixed vaginitis was observed. It was also observed that the prevalence of RTI among females of Hindus and Muslims was almost similar. The highest number of RTI cases was found in the age group of 21-30 years. In the present study, the highest prevalence (54.5%) was found among the IUD users. Almost 60 per cent of cases of RTI were a symptomatic. When the treatment seeking behaviour of the females was concerned, it was found that 65 of them had not taken any treatment.

Garg et al., (2001) studied the" prevalence of various Reproductive Tract Infections in females in a slum of Delhi". All ever-married women in the reproductive age group were interviewed by a pre-designed and pre-tested interview schedule. As many as 62.3 percent-reported one or more problems in the past six months. The risk factors like genital hygiene and abortions were significantly associated with reproductive morbidity. Out of the women who experienced a reproductive health problem, only 27.8 per cent consulted a health facility for management. The authors recommend effective services for RTIs/STIs coupled with an awareness generation for the better utilization of these services in the urban slums.

Pandey and Tiwary (2001) conducted a study on “Socio-cultural reproductive health practices of primitive tribes of Madhya Pradesh”. General objective of this study was birth related practices, health seeking behaviour and their likely effect on reproductive health. Information was collected from 494 female respondents of reproductive age. There were 71, 277 and 146 respondents from the Bharias, Hill Korwas and Kamars. The study reveals that mean age at marriage of the girls is below 16 years. The marriage rituals were very simple. A common practice was to marry the daughter to the son of the girl’s father. This practice might have an effect on their reproductive health by increasing the chance of hereditary diseases. No special diet is given to pregnant women; consumption of liquor is prohibited during pregnancy. Antenatal care is not a common practice. Usually, elderly women and traditional dais conduct deliveries. In complicated cases, the local traditional healer was called. They rarely approach the ANM or a doctor from the primary Health Centre. Colostrum in the primitive tribes is not discarded and the
child is breast fed with in hours of delivery. Breast feeding continues for about three years. The lactating mother does not take any special diet. Majority of the population are unaware of PHC services. It is difficulty for them to differentiate between doctor and a nurse. These tribes consider child birth a natural phenomenon and therefore they believe that there is no need to pay special care to pregnant women. The Hill Kurwas have no knowledge about postnatal care. It was observed that only 20.5% had received BCG, 2% had received DPT and polio vaccines, and 1% had been vaccinated against measles. Administering a few drops of alcohol to cure child diseases is an irrational and harmful practice. Some of their practices were good and could be utilized for strengthening reproductive health.

Rathore et al., (2002) had examined Prevalence of Reproductive Tract Infections amongst Ever Married Women and Socio-cultural Factors Associated with It. A community-based study was carried out to assess the prevalence of reproductive tract infections (RTIs) among ever married rural women aged 15 - 45 years at village Naila during 2002. Six hundred houses were surveyed and all the eligible women residing in these houses were interviewed by MPWs and Interns and were offered medical examinations at rural health training centre, Naila. At least one symptom related to RTIs was found in 471(55%) out of 859 women. Only 50% (432/859) women gave consent for their gynaecological and microbiological examinations. Out of 432 women examined, 61% (263/432) had at least one type of RTIs. Out of 263 cases, 43% had cervicitis, 26% had bacterial vaginitis, 14% had fungal infection, 8% had trichomonas vaginitis, 22% had pelvic inflammatory disease and 19% had cervical erosion. Prevalence of RTI was significantly associated with age, personal hygiene, material used for menstrual blood, gravida status, type of attendance at child birth, invasive contraceptives and gynaecological surgery. Caste, literacy status and place of deliveries were not significantly associated with RTI status in the present study.

Singh et al., (2002) observed “clinical presentation of different gynaecologic infections among Indian Women”. This was a cross-sectional study of 257 women that included clinical, cytological, colposcopic and microbiologic screening for various gynaecological infections. Human papilloma virus (HPV) was the leading infection, effecting 127 (49.4%) women; however, over warts were seen only in
seven (2.7%) patients. Women infected with HPV had a 60.3 fold higher risk of developing all bleeding ectopia compared to those with other infections; women with an unhealthy cervix and cervical ectopias also had an increased risk of HPV infection (7.6 and 2.8 fold respectively) Bacterial vaginosis, detected in 33.5% of the women studied, had an increased risk of bleeding ectopia (9.3 fold) and cervical hypertrophy (2.1 fold) Chlamydial infection, detected in 23.3% of the patient population, was associated with an eight fold increase in the risk of an unhealthy cervix and four fold increase in risk of hyperrophied cervix. Immunoglobulin – Antibodies to the herpes simplex virus were detected in 53 (20.6%) women. More than half (55.2%) of the women had two or more infections and the mean delay of seeking medical treatment was 7-13 months. This study concluded that the specific finding of bleeding cervices was associated with HPV and bacterial vaginosis, hypertrophied cervices with Chlamydia and bacterial vaginosis and unhealthy cervices with Chlamydia and HPV infection.

**Bhatia and Cleland** (2003) conducted research on self-reported symptoms of gynaecological morbidity and their treatment in Karnataka State among 3,600 mothers. Approximately one-third of all women reported at least one current symptom, the most common of which were a feeling of weakness and tiredness (suggestive of anaemia), menstrual disorders; white or colored vaginal discharge (suggestive of lower reproductive tract infection) and lower abdominal pain and discharge with fever (suggestive of acute pelvic inflammatory disease). Obstetric morbidity, associated with the last live birth, was strongly predictive of current gynaecological symptoms. Women who delivered their last child in a private institution were significantly less likely to report symptoms than where those who delivered at home or in a governmental hospital. Non-users or users of reversible contraceptive methods were also less likely to report symptoms of morbid conditions than were sterilising women. These associations persisted in analyses controlling for potentially confounding economic and demographic characteristics and have a reaching policy implications.

**Gulati and Sharma** (2003) conducted a research on “Women’s Reproductive Tract Infections in Uttar Pradesh and Uttaranchal”. The study purports to highlight the crucial factors influencing the incidence of RTIs./STIs, and other
inter-linkages between the incidence of RTIs/STIs and other RCH (Reproductive and Child Health) components viz., utilization of ante-natal and delivery care, children’s immunization, contraceptive usage, socio-economic and cultural factors and infrastructure variables through factorial investigations. The study revealed interstate variations in the incidence of RTIs/STIs among male which was found to be 3% in Himachal Pradesh and 21% in Uttar Pradesh. In general, the incidence was much higher in the Western district of Uttar Pradesh and some hilly district like Tehri-Garhwal (56.5%) of Uttaranchal. The Eastern parts of Uttar Pradesh except Barabanki (52%) have evinced lower levels of the incidence as compared to the Western parts. Muslim dominated districts in Western Uttar Pradesh like Rampur (59%), Moradabad (58%), Pilibhit (56%), Shajahanpur (48%) etc., depict relatively much higher incidence of women’s RTIs. It was found that in most of the districts the prevalence rate was higher for females as compared to males, which could be due to frequent child bearing making women more vulnerable to RTIs. The incidence rates have been classified into three categories viz., Low, Medium and High and women’s incidence rate of RTIs/STIs ranged between 19-31%, 32-39% and 40-59% respectively. The factorial analysis highlighted strong and inverse linkages between incidence of women’s RTIs/STIs and utilization of RCH care. The important socio-economic characteristics depicting strong linkages with the incidence of RTIs turned out to be infrastructural characteristics like housing condition, including pucca (Permanent) to Kaccha (Temporary) house ratio, proportion of houses with basic amenities like toilet, kitchen and safe drinking water; Sectoral aspects of economic development like agricultural, industrial and overall urbanization level. Institutional deliveries and women’s empowerment indices like women’s literacy and participation depicted significant and inhibitive effect on the incidence of RTIs/STIs. Districts with predominance of Muslim population depicted higher incidence of RTIs/STIs. The study also found that higher facility was associated with higher incidence of RTIs/STIs. Hence, it was suggested that proper focus on components like RTI and Infertility control would generate higher credibility of the package of RCH services amongst people. The positive paradigm shift towards the RCH care package now was most appropriate and desirable towards control of RTI/STDs and thereby fertility too.
Srikrishna and Chitra (2003) conducted a study on 959 live births at a tertiary-level hospital in Bangalore over a period of one-year revealed the prevalence of low birth weight in 25.8 per cent of the cases with a mean birth weight of 2775 gm closely matching the figures for the country (24.8% and 2633 gm respectively). However, unlike other studies, birth weight was found to be associated with maternal height while showing no relationship to Maternal Body Mass Index (BMI) or anaemia. Closer scrutiny of the study population revealed a proportion of the mothers had a BMI of 20 and above. This situation, in which low maternal height coupled with a normal BMI, mimics the scenario of a "nutrition transition" thus far described only in women migrating from India and settling aboard as observed in the present study may be explained by the theory offered by some researchers that intra-uterine growth is limited by the "foetal supply line" which in turn is strongly influenced by the mother's own foetal development. It was also stated that it will take at least two generations for this restriction to be removed, while urban studies, such as this, provide an encouraging glimpse of the improved birth weights that India was likely to witness in near future. This must be weighed against the increasing evidence that short heighted Indian mothers with access to better levels of nutrition may in fact place their offspring at a higher risk of diabetes and coronary heart disease in adulthood.

Sidramshettar (2004) has carried study on “health status of women in Karnataka: Problems and future needs”. This study analysed the socio-cultural factors affecting women’s health and identify workable strategies for improving the health and nutrition of girls and women in Karnataka. The data on age at marriage in Karnataka suggest that illegal child marriages are still practiced, social compulsion for marriage of all women at the right age and as early as possible. People living in rural areas are more conservative than those in urban areas in this respect. Available data from Karnataka shows that more than one third of women (39%) have a high prevalence of nutritional deficiency. Poor nutritional intake of women is often co-related with poor economic status. Prevalence of anaemia was higher among rural women (46%) than among urban (36%), high for illiterate, SC or ST and working women who were not self employed mortality rates are higher in
rural area than the urban areas. The infant mortality rates is 41% higher in rural than in urban areas and the child mortality rate is over two and half times higher in rural areas than in urban areas. A large majority (86%) of mothers received antenatal checkups in Karnataka. In Karnataka knowledge of contraceptive methods is nearly universal. Data suggests that current contraceptive prevalence is fairly high, with 58 percent of currently married women. Using a method of contraception female sterilization accounts for 88 percent of total current contraceptive use, only one percent men opt for sterilization. The findings of the study suggest that poor health status of women in Karnataka is inextricably inter-twined with the socio-economic and cultural factors. Illiteracy, low education, early age at marriage, rural residence and other cultural and economic factors constrained women in acquiring health services.

Kanitkar and Radkar (2004) had made an attempt on “Self-reported Symptoms of Reproductive Health Problems of women in India”: This study focused on some aspects related to prevalence rate of Reproductive Tract Infections (RTIs) among married women aged 15-49 and factors associated with RTIs in urban and rural India. Data was collected through National Family Health Survey-2 (1998-99) on some common symptoms of RTIs namely abnormal vaginal discharge, urinary tract infections and intercourse related pains. Demographic, Social, Behavioural and Economic factors were considered. The prevalence rate of RTIs in urban areas was 37% and in rural areas 40%. Abnormal vaginal discharge and severe abdominal pain was found to be 45% in urban and 49% in rural areas. 42% reported pain or burning while urinating and 31% mentioned pain during intercourse in urban areas. On an average, the women reported more than two symptoms of RTIs, were 2.32% in urban and 2.50% in rural areas. Highest prevalence rate of RTI symptoms were noted in the North-Eastern states and Jammu and Kashmir. North-Eastern states show prevalence rates within the range 67% for Meghalaya and 42% for Arunachal Pradesh, whereas 61% women reported at least one symptom of RTI in Jammu and Kashmir. It was observed that women having no children had the highest prevalence rate of RTIs (42% in urban and 43% in rural areas). Muslim women reported the highest RTI prevalence. Illiterate women reported high prevalence rate of RTIs as compared to literate women. Among the iatrogenic factors, induced abortions, spontaneous abortions and sterilizations were
significantly associated with RTI prevalence in both areas. One important factor associated with RTI symptoms was the place of delivery. Home delivery was the greatest risk factor associated with RTI symptoms, and delivery in private hospitals had minimum risk. Highest RTI prevalence rate was observed for women who married at the age of 15 years and lowest for women married at 19 years or above. Those who were exposed to mass media reported fewer symptoms of RTI. Women who had experienced beating were more likely to have RTI symptoms than those who had not. It was found that women having high standard of living had fewer symptoms of RTIs than those with a low standard of living. It was suggested that there was urgent need for improving the implementation of reproductive health programmes and strengthening health education for mothers.

Datta et al., (2004) conducted a study on knowledge, awareness and extent of male participation in key areas of reproductive and child health in an urban slum of Delhi among 400 couples through a semi-structured interview schedule. It was found that vasectomy was adopted by only 1.8 percent of the males and another 13.8 percent were using condoms at the time of the survey. While 57 percent of the husbands felt the need for a proper antenatal care, only 5.7 percent ensured rest and 9.5 percent ensured increased diet to their wives during pregnancy. More than half of the men interviewed, did not feel the need to disclose the symptoms of sexually transmitted diseases to their wives. In majority of the cases, husbands did not accompany their wives (88.5%) to seek treatment for their children’s illness. While 25 percent of the husbands ensured weaning at the appropriate age, 18 percent ensured providing ORS to their children. Wives were consulted on reproductive matters by 21 percent of the husbands and in most cases (54 %) the discussions were initiated by the husbands only. The present findings indicate rather a poor male participation (56 96) in reproductive and child health matters among the study population and it ranges from 5 to 10 based on a 20-point scale developed for the purpose.

Tripti and Saritha (2005) conducted a study on “Foetomaternal outcomes in jaundice during pregnancy” in Raipur. An analysis of foetomaternal outcome of 41 pregnant women admitted with jaundice during January 2002 to September 2003 in pt. J.N. Medical College, Raipur was made. The maternal outcome was noted in
terms of the mode of termination of pregnancy, maternal complications and maternal end result. Foetal outcome was assessed by perinatal morbidity and mortality, need for admission in nursery and neonatal end result. Out of 41 women, two aborted, 34 delivered and five remained undelivered. For 55.88% of women the onset of labor was spontaneous. 76.47% delivered vaginally. Perinatal mortality was 61.76% with 50% still births and 11.76% early neonatal deaths. For 55.89% of women were discharged in improved condition. Four women were transferred to medicine department for further management and four left the hospital against medical advice. Maternal mortality was 30.3% (10/33) in 33 patients who were managed in the department; 50% of them died within 24 hours, 20% on the second day and 20% on the third day of admission. The cause of death was hepatic encephalopathy with renal failure in 60%, disseminated intravascular coagulation in 20%, postpartum hemorrhage and congestive cardiac failure associated with severe anaemia in 10% each.

Dey (2005) has made an attempt to study levels of Reproductive Morbidity among Scheduled Tribes in Madhya Pradesh and Chhatisgarh states. The study was based on RCH-1 of 1998-99 and RCH-2 of 2002-03 data. A high proportion of Reproductive complications were noticed. The pregnancy, delivery, post-delivery, RTI / STI, and contraceptive complications among Scheduled Tribes were seen as 62, 38, 47, 22 and 14 percent respectively in 1998-99. Relatively, a high risk of pregnancy complication was noticed among women belonging to rural areas, staying in Kuchha houses and among women having early marriage. Also, early age at consummation of women was found to have higher risk of reproductive complications. District-wise analysis of reproductive complications in the Chhatisgarh state was carried out. It was seen that reproductive complications were high in Sarguja, Raigarh and Bastar districts as compared to the other districts of the state.

Dabash et al., (2005) conducted a study on “A strategic assessment of cervical cancer prevention and treatment services in Uttar Pradesh, India”. Cervical cancer claims the lives of almost half a million women world wide each year. India bears one-fifth of the global burden of the disease, with approximately 1, 30,000 new cases a year. In an effort to assess the need and potential for improving the
quality of cervical cancer prevention and treatment services in Uttar Pradesh, a strategic assessment was conducted in three of the state’s districts: Agra, Lucknow and Saharanpur. A multidisciplinary team of stakeholders carried out an assessment of the quality of cervical cancer services. The assessment included a review of the available literature, observation of services, collection of hospital statistics and the conduct of qualitative research (in-depth interviews and focus group discussions). The study revealed the cytology based cancer screening tests (i.e., pap smears) were often used to help diagnose women with symptoms of reproductive tract infections but not routinely screen asymptomatic women. Access to appropriate treatment of precancerous lesions was hysterectomy in many urban centers. Cancer treatment facilities were well equipped but mostly inaccessible for women in need. This study concluded that to address gaps in services and unmet needs, state policies and integrated interventions have the potential to improve the quality of services for prevention of cervical cancer in Uttar Pradesh.

Nanda and Tripathy (2005) conducted a study on “reproductive morbidity, treatment seeking behavior and their plausible casual relationship with human fertility”. The primary data for this study has been collected through a survey conducted among 300 members from Schedule Caste and 300 members from Schedule Tribe in Orissa. The bivariate and multivariate analysis showed that certain health problems impose negative effect on fertility although few did not show common association possibly due to reverse causation. Menstrual irregularity consistently emerged out to be a significant attribute of lower fertility and some others such as small pox, sickling, malaria and gynaecological problems showed negative effect of fertility.

Dabral and Malik (2005) conducted a study on “Demographic study of Gujjars of Delhi : Maternal and child health care practices”. The risk in case of mothers connected with child bearing, while in the case of infant and children are connected with growth, development and survival. The data for the present study was collected by interviewing ever married Gujjar women aged 15-49 years from a sample of 221 household. Majority of Gujjar mother received antenatal checkups, though institutional deliveries were less common the median number of check-ups for those who received at least one check-up in 3 visits. The median timing of the
first antenatal checkup among Gujjar women of Delhi is 4 months i.e. during second trimester of pregnancy. The coverage of other two interventions, namely to tetanus toxiod injections and full course of iron and folic acid supplementation is also incomplete. Higher educated mothers have more likelihood for antenatal care and institutional deliveries. Majority of the deliveries in the last 4 years had no complications. Immunization coverage among Gujjar children is incomplete. Proportion of fully vaccinated children is low. Vitamin ‘A’ supplementation below 5 years of age is not only incomplete but also irregular. Diarrhoea is the most frequent cause of child morbidity among Gujjars. Treatment of the three childhood ailments under study is fairly high. The likelihood of using ORS, increase with increase in the level of education. Mother’s breast feeding is universal among Gujjars, however supplementation begins relatively early. Slightly more than half the children begin breast feeding within 24-29 months of age.

Sogarwal et al., (2006) reported on “reproductive health problems among urban women in four metro cities in India “Community-based research in India has made it evident that reproductive problems are not confined to any special clinic-based population but is widespread within the community at large. Therefore, an attempt has been made to study the prevalence of reproductive health problems and treatment seeking behaviour among currently married women in four metro cities in India namely; Mumbai, Delhi, Chennai, and Kolkata. Further, this study also examines the effect of socio-economic and demographic factors on self-reported reproductive health problems. Based on NFHS-2 data, the analysis shows that the prevalence of any reproductive health problem among women is the highest in Mumbai (54%) followed by Delhi (36%), Chennai (30%), and Kolkata (28%). A majority of women in all four metro cities have reported abdominal pain, itching, and burning sensation as the major problems while urinating. However, in spite of the high prevalence of reproductive health problems, a large proportion of such women in all these cities do not seek any advice or treatment for these problems. This study also examines determinants that affect the prevalence of reproductive health problems to help policy makers plan for proper interventions for improving woman’s reproductive health.
Patel and Yadav (2006) were doing research on "reproductive and general health problems among women in the reproductive age group in Jamnagar." This study assesses the type and extent of reproductive and general health problems prevailing among women in the reproductive age group (15-44 years) in Jamnagar district of Gujarat. Gynaecological history of the sample respondents preceding three months of data collection for the study revealed that 205 (34.16%) of them had some reproductive morbidity viz., excessive vaginal discharge (27.50%), burning in micturition (4.66%), pruritus (3.33%), prolapse of uterus/vagina (1.33%), foul smelling discharge (1.00%) and infertility (2.66%). The pattern was almost same in rural, urban and slum settings. 35.36 per cent of the women had some kind of menstrual problems, of which 27.41 per cent had dysmenorrhoea, 8.46 per cent had irregular menstruation and 2.87 per cent had excessive bleeding. 274 (45.66%) women suffered from some kind of general health problem during the last one year like backache (22.50%), headache (18.16%), acid peptic disease (10.83%), arthritis (4.83%) and cardio-vascular symptoms (4.00%). Health problems were more prevalent in lower socio-economic class and illiterate women. 170 (28.83%) women had acute illness like ARI, fever, diarrhoea and dysentery during the last one month preceding the study. On clinical examination, 41.66 per cent of women were found anaemic, more in slum and rural areas. Prevalence of hypertension was 2.82 per cent and obesity was 5.33 per cent among the sample respondents.

Singh (2007) in his study "Vaginal Discharge: Its Causes and Associated Symptoms as Perceived by Rural North-Indian Women". Reproductive health is closely associated with the culture of a country. Its sign and symptoms can be best understood with in the ethno medical contest rather than biomedical theories. To ascertain the views of the respondents regarding vaginal discharge, three roadside villages of Panchkula, Haryana were purposively selected. A house to house survey was done and a total of 236 married women of 15-45 years were interviewed by a female social worker on various aspects on vaginal discharge. Six FGDs and five case studies were also done. Prevalence of vaginal discharge was 28.7%. Weakness, backache and poor vision were report as the main health effects of vaginal discharge. Heat, melting of bones, sexual promiscuity, poor hygiene and diet were reported as the major causes of vaginal discharge. Consultation rate for vaginal
discharge was 59%. The views of the rural north Indian women regarding vaginal discharge reflected the Ayurvedic system of thinking of the Indian masses.

**Sridevi and Swarnalatha (2007)** conducted a study on “prevalence of RTI/STI among women of reproductive age (15-49) group in urban slums of Tirupati town, Andhra Pradesh”. Prevalence of RTI/STI in the present study was 35.6 per cent based on the symptoms and 26.9 per cent based on per-speculum examination. Prevalence of RTI was maximum in 15-29 years age group. The most commonly observed symptoms were vaginal discharge (21.3 per cent) and lower abdominal pain (4.9 per cent). Prevalence of vaginal discharge decreased with an increase in age, education and per capita monthly income. Prevalence was observed higher in scheduled castes and tribes, married women, unskilled workers, IUCD acceptors and those with unhygienic menstrual practices, history of abortions and non-institutional deliveries. Based on laboratory findings, highest positive results were seen in candidacies (88.9 per cent) followed by trichomoniasis (50.0 per cent). 80.0 per cent of women completed the course of treatment and 57.2 per cent of women got complete relief.

**Vinitha et al., (2007)** conducted a study on” level of reproductive health awareness and factors affecting it in a rural community of South India”. A cross-sectional study of 624 women aged 13-49 years from 532 households belonging to two health sub-centre areas in North Tamil Nadu was done to examine the level of awareness and the different factors affecting awareness on reproductive health issues like safe sex, reproductive tract infection, safe age to bear children and types of family planning methods. Apart from educational status, which was significantly associated with awareness on all the four reproductive health issues studied, other factors like place of residence (an easily accessible area - SC-1 or not easily accessible area – SC-2), age group and standard of living were significantly associated with awareness on family planning methods and reproductive tract infections. Only 9.5 per cent of the adolescents interviewed had knowledge on safe sex. Adolescents aged 15 years and above, belonging to an extended family with educational status of above 5th grade, working outside home and having a high standard of living had significantly more awareness on safer sex. 79.5 per cent women aged 13-49 years knew it was unsafe to bear children before 20 years. Age,
marital status and place of residence were significantly associated with awareness. Hence, this study shows that adolescents (Girls) (<19 years), who are illiterate or educated less than grade 10 and living away from basic health care services with a low standard of living are less aware of reproductive health issues and need targeted interventions for reproductive health messages.

Sum up

Reproductive morbidity refers to diseases of the reproductive system that may or may not necessarily be a consequence of reproduction. Anaemia is a general physical problem, but in case of women anaemia has a very close linkage to reproductive health. Studies on reproductive morbidity are pregnancy and its complications, studies on reproductive tract infections and also contraception and related morbidity etc.

2.3. STUDIES ON UTILIZATION OF REPRODUCTIVE HEALTH SERVICE

Kirti Mishra (1998) conducted a study on “Determinants of Utilization of Antenatal Services and reasons for not asking for antenatal services in India”. Objectives of study were to examine the determinants of utilization of antenatal care services in India by background characteristics of women and to find out the reasons for patients not asking for antenatal services by background characteristics of women in India. For analysis of the study bivariate as well as multivariate logistic regression models were applied by considering socio-economic and demographic characteristics as independent variable. The results indicated that only two-thirds of women in India received antenatal care (ANC), and of this, one-third received care at home by health worker. ANC coverage was found to be directly associated with education of women, place of residence and standard of living. Strangely, 54% of the women reported “no necessity to go for antenatal care” as a reason for not asking for services. This data concludes that it was necessary to raise awareness about benefits of ANC services through Information Education and Communication (IEC) and to lower cost and reduce the distance to make the services more accessible.
Hennik et al., (1998) conducted a study on “Asian Women’s use of family planning services”. Detailed research on the family planning needs of Asian women is extremely important in forming public policy in the new purchaser – provider environment of the National Health Services (NHS), which was introduced in 1991. In depth interviews were conducted with Asian women of Indian, Pakistan and Bangladesh background in the south and west regional health authority area, to investigate their family planning behaviour and use of family planning services. This research shows significant diversity in the knowledge and use of contraception between married professional women, married non professional women and unmarried women. The results showed that professional married women and unmarried women are able to meet their family planning needs by utilising existing family planning services. However, married non-professional women experience significant difficulties in using family planning services largely due to communication problems with health professionals and their low levels of personal autonomy.

Murali et al., (2000) carried out a study on “Health care delivery Model for Tribal area: Bastar District of Madhya Pradesh”. Socio-economic profile of the study population was out of 1580 households covered from four districts, 63 percent were nuclear families, only 24.8 percent were literate, 96 percent had Kuchcha House, 77.5 percent had hand pumps as source of drinking water, 99 percent had no latrines of any type, 87 percent disposed of waste water through open drains. Only 45.4 percent had electric supply in their houses. 1.1 percent had exposure to newspapers, 22.1 percent possessed radios. 5.2 percent had television and 75.9 percent had ration cards. The major health problems exposed by the community were respiratory infections, fever of different types particularly malaria, diarrhoeal diseases / dysentery, skin infections etc. Women expressed problems were, service complications of home delivery (53%), postnatal complications (6.3%) etc. Other problems expressed by women were anaemia, pregnancy complications like toxemia, bleeding, prolonged labor, abnormal foetal presentation etc. difficult to be handled by dais at home, discharge etc. With regard to awareness of health facilities and services provided, sub-centers were known to only 40.8% and PHCs were known to only 39.5% of respondents. As far as health facilities preferred for health
care, government facilities were preferred as the first source of care by majority of the respondents. However, nearly 25% stated sirsh / gunia (Traditional practitioners) as their first choice. With regard to utilization of health services, antenatal registration at health facility was 74%, T.T. immunization was 85%, delivered at home with Dai as the attendant was 86%, contraceptives used by 30 Percent of couples and services from Anganwadi 4 percent. Various suggestions made for better health care to the tribal population include: (1) Strengthening the Government Health Care infrastructure would be ideal. (2) More active involvement of NGOs, ISM practioners and trained dais may be considered (3) strengthening of referred support (4) local area specific IEC activities may be planned.

Garg et al., (2001) reported the perceived reproductive morbidity and health care seeking behaviour among women in an urban slum. This study estimates the prevalence of various Reproductive Tract Infections in females in a slum of Delhi. All ever married women in the reproductive age group were interviewed by a pre-designed and pre-tested interview schedule. As many as of 62.3 per cent reported one or more problems in the past six months. The risk factors like genital hygiene and abortions were significantly associated with reproductive morbidity. Only 27.8 per cent consulted a health facility for management. The authors recommended effective services for RTIs/STIs coupled with an awareness generation for the better utilisation of these services in the urban slums

Singh et al., (2002) carried a study on “Antenatal care of pregnant women in India”. Objective of this study was to assess the status of antenatal care for pregnant women in India. WHO 30 Cluster survey methodology with certain modifications incorporating Information on female literacy and distance of the village has been used. Results of the study showed that the characteristics of sample holders for pregnant women were broadly in proportion to the characteristics of all India population. About 62% had received three or more ANC visits. Those receiving second dose of TT or booster dose was about 78%. About 73% of the pregnant women received IFA tablets during their pregnancy. About 53% had full package of ANC. The proportion of Institutional deliveries managed by hospitals and health centers was about 41%, it being higher among literate women and in urban areas.
The study concluded that the literacy of women is the key to improving antenatal care of pregnant women. Hence, efforts should be made to have Information, Education and Communication (IEC) activities targeted to educate the mothers especially in rural areas. The tribal, small and accessible villages in the states of Bihar, Rajasthan, UP, MP and North Eastern States (combined) should be focused and targeted in the RCH programme.

**Joseph et al.,** (2002) attempted to find out the preferences of women belonging to a sub-urban community of Bangalore city either for home deliveries or institutional deliveries and try to correlate the relationship between the factors such as the educational status and socio-economic status of women and their preferences. In addition, the influence of the place of delivery on the care of the newborn and infant was also investigated in this study. The study revealed that (i) educated parents and families belonging to a higher socio-economic status preferred hospital deliveries; (ii) difference in the acceptance of ante-natal care between these two groups was not significant; and (iii) children born in hospitals found to have a better chance of being breast-fed within the first 30 minutes of delivery and were also more likely to be fully immunized in time as compared to those delivered at home.

**Pathak, et al.,** (2003) analysed a study on “Child Spacing and the Utilization of Maternal Health Care Services in Some Selected States of India”. This study was conducted for the effect of the utilization of antenatal care services as indicators of the contraceptive environment and breast feeding practices on fertility by taking the most recent birth interval as the outcome variable in three selected states of India namely, Tamilnadu, Madhya Pradesh and Orissa. More urban than rural women received ANC services in all the three states. The utilisation is higher among literate mothers than among illiterates. However, in Madhya Pradesh and Orissa where utilisation of maternal health care services were quite low, ANC services were less among SC/ST women compared to non SC/ST in all the three states. The utilisation of maternal care services were more likely to have their deliveries in medical institutions attended by health professional was significantly higher among young mothers in the age group 25-34 years than those who were aged 35 years and above.
The median birth interval was observed to be 39 months in Tamilnadu and Orissa and 37 months in Madhya Pradesh.

Khokhar et al., (2003) conducted a community based cross-sectional study during the period 2002-2003 in the slum populations of Basti and Dhobi Ghat, Delhi, to find out the extent of utilisation of present health care services meant for RTIs/STIs and diarrhoeal diseases. Males and females in almost equal proportions, comprising 32.9 per cent in the reproductive age group availed treatment for RTIs/STIs in a Government allopathic health facility. In contrast, a significantly higher percentage (82.9%) reported for treatment for diarrhoeal diseases. The main reason for preferring a Government health facility was the low cost of the treatment followed by easy availability of services. Quality of treatment and satisfactory behavior of the health care personnel were up to expectations in 80.3 per cent and 75.9 per cent of subjects respectively. Waiting time for availing the services varied between 2 (for 44.4%) to 4 hours (for 29.3%) of those interviewed. A vast majority (72.2%) of subjects expressed their willingness to pay more for further improvement of health care services in the government sector.

Uppal et al., (2006) conducted a study on "health care seeking behavior among men in an urban slum for reproductive morbidity" A total of 268 males residing in an urban slum of Delhi were interviewed to study their socio-demographic characteristics, perceived reproductive morbidity and sources of health care facilities utilized by them for reproductive morbidity during the last 6 months preceding the study. The study revealed that majority of the sample respondents were in the age-group of 20-29 years and 154 were married. Out of 268 males, 64 (23.9%) had some kind of perceived reproductive morbidity, of which, 25 (39.1%) did not seek any treatment from any health care facility. the study revealed of those who sought any treatment, more than half (56.5%) preferred informal sources. So, the investigators felt the necessity for making people aware of the availability of formal health care services for male reproductive morbidity.

Sum Up

The provision of high quality health care can have a positive influence on utilization which in turn can improve the quality of life. Studies on utilization of
reproductive services focused on utilization of antenatal services, uses of family planning services, reproductive health care seeking behaviour and utilization of maternal health care services, etc.

2.4. STUDIES ON MENSTRUATION

Sridevi and Rao (1999) conducted a study on “Yoga practice and menstrual distress”. Menstrual distress refers to the characteristic negative symptomatology experienced by women over the course of the menstrual cycle. Physiological and psychological treatment measures such as exercise and progressive relaxation are used in the treatment of menstrual disorders. As yoga encompasses the methods for relaxing the minds as well as the body, an attempt has been made in the present study to investigate the effectiveness of certain yogic practices in relieving menstrual problems. Two comparable groups of unmarried women (N is equal to 40) of age range 20 to 24 years were assessed for the number of reported menstrual symptoms with a Menstrual Distress Questionnaire. One group underwent yoga training which involved a regular practice of certain asanas and transcendental meditation (TM) for a period of 10 months, whereas the other group which served as a control had no such training. The results revealed that the yoga trained group obtained significantly lower scores on the sub scales of MDQ compared to the control group in both the premenstrual and also menstrual periods. This indicates that the distressing physiological and psychological changes occurring in both the menstrual phases can be successfully reduced with the help of yogic methods.

Sharma and Sahay (2001) attempted to understand the experience of menstruation in the socio-cultural context of an urban Indian slum in Delhi. Observations were gathered as part of a larger study of reproductive tract infections in women in Delhi, using both qualitative and quantitative methods. The qualitative phase consisted of 52 in-depth interviews, three focus group discussions and five key informant interviews. In the quantitative phase, inferences were drawn from 380 respondents. Mean age at menarche was 13.5. Onset of menarche is associated with physical maturity and the ability to marry and reproduce. However, a culture of silence surrounds menarche, an event which took the women interviewed almost by surprise. Most were previously unaware that it would happen and the information they were given was sparse. Menstruation is associated with taboos and restrictions
on work, sex, food and bathing, but the taboos observed by most of the women were avoidance of sex and not participating in religious practices, the taboo on not going into the kitchen, which had been observed in rural joint households, was not being observed after migration from rural areas due to lack of social support mechanisms. There is a clear need to provide information to young women on these subjects in ways that are acceptable to their parents, schools and the larger community, and that allow them to raise their own concerns. Education on these subjects should be envisaged as a long-term, continuous process, beginning well before menarche and continuing long after it.

Baridalyne and Reddaiah (2004) in a community-based cross-sectional study attempted to know knowledge, beliefs and practices on menstruation of the women of reproductive age group residing in an urban resettlement colony of Delhi. Though menstruation is a physiological process, 86 percent of women were not psychologically prepared for it. An absorbent, homemade pads made of unwashed clothes were used by 60 percent of women and three-fourths of them were unaware of the problems caused as a result of using dirty clothes. The quality of absorbent material used was significantly related to age and maternal education of the subjects. 79 percent of the subjects admitted that excessive bleeding and severe abdominal pain were abnormal. For those women having problems (28 %) in the last menstrual period, 44 percent reported excessive bleeding while 17 percent had severe abdominal pain. While 38 percent did not seek any remedial measures, 45 percent consulted a doctor and 15 percent took self-medication. The above findings highlighted the need for health education among women so as to increase awareness and correct knowledge regarding various aspects of menstruation and menstrual hygiene.

Khanna et al., (2005) conducted research on “Menstrual Practices and Reproductive Problems – among Adolescent Girls in Rajasthan.” The study indicates that a significantly large proportion of girls were not aware of menstruation when they first experienced it. Mothers, sisters and friends were found to be the major source of information. Much of this information imparted to a young girl is in the form of restrictions on her movements and behaviour. More than three-fourths reported using old cloth during menstruation and a large proportion of them were
reusing the same during subsequent periods. Regression analysis in this study identified schooling, residential status, occupation of father, caste and exposure to media to be the major predictors of safe menstrual practices among adolescent girls in Rajasthan. Importantly, this study found a significantly strong relationship between practices during menstruation and prevalence (reported symptoms) of RTIs. The prevalence of RTIs was more than three times higher among girls having unsafe menstrual practices. The article makes a strong case that ignorance; false perceptions and unsafe practices regarding menstruation are not uncommon among adolescents in the study area, having serious implications for reproductive and sexual health. Further, the study demonstrates that among the determinants for reproductive morbidity, practices during menstruation appear to be the most dominant factor. These findings reinforce the need to bring them out of traditional beliefs, misconceptions and restrictions and encourage safe and hygienic practices.

**Sum up**

The review of literature on menstruation focused on perception, beliefs and practices on menstruation and also different religious practices on menstruation and knowledge regarding various aspects of menstruation and menstrual hygiene.

### 2.5. STUDIES ON FERTILITY AND FERTILITY PREFERENCES

Gangopadhyay and Das (1996) conducted a study on “Transition of preferred sex combination of children in a family size: An analysis of the behavioral mechanism”. Data for this study were collected from a total of 245 women from ten villages of Delhi. The study shows that while two children (one boy and one girl) are by and large the desired family size, the actual family size is different. This occurs irrespective of education or occupation of the husband or wife or who makes decision about having additional children. This may be because of a strong bias for the preferred sex combination of children, which in most cases, is at least one son. Thus, couples who only have daughters do not go in for sterilisation even after they have the number of children they want, a large proportion of couples with one son and more daughters also sometimes cross their preferred family size limit. This may happen as a result of pressure from her-in-law on the women, or it can be the couple’s own decision to opt for another child. Strong desire for sons as well as for