CHAPTER II

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2.1 INTRODUCTION
During the last few decades reproductive and sexual health issues have attracted enormous attention worldwide. The level and nature of reproductive morbidity have been illustrated by a number of researchers. In India also quite a few studies have examined different aspects of reproductive health of women and men including morbidity and treatment seeking behaviour. The two series of major surveys, District Level Household Survey-Reproductive and Child Health (DLHS-RCH) and National Family Health Survey (NFHS), included questions on reproductive health. The DLHS-RCH survey has gone into these to a greater extent than the NFHS. Besides, a number of small community or facility based studies have investigated reproductive health. As the number of studies is quite large and the present research is for India, this review is primarily of the research in India. Reviews of studies in other countries are available (Annis, 1981; Joseph and Bantock, 1982; Stock, 1983; Wasserheit, 1989; Wasserheit et al., 1989; Younis et al., 1993; Mouelhy et al., 1994; Zurayk et al., 1995; Goodburn et al., 1995; Ballweg and Pagtolon-an, 1996; Bulut et al., 1997; Salter, 1997; Wall, 1998; Solo et al., 1999; Kaufman et al., 1999; Hodoglug et al., 1999; Noorali, 1999; Akin and Hutchinson, 1999; Acharya and Cleland, 2000; Perry and Gesler, 2000; Nemet and Bailey, 2000; Bhuiya et al., 2001; Walraven et al., 2002; Hawkes et al., 2002; Lien et al., 2002; Calves, 2002; Khan et al., 2003; Thapa et al., 2004; Chowdhury et al., 2004; Stephenson et al., 2006).

Many factors have been identified by researchers on the basis of empirical studies, which explain reproductive morbidity and treatment seeking behaviour. Reproductive morbidity is influenced by various socio-economic and demographic characteristics. Some of the major factors are age, education, and standard of living etc. The first section in this review presents literature related to obstetric morbidity and treatment seeking behaviour in India. The second section deals with research related to gynaecological morbidity and treatment seeking. The third and fourth sections deal more specifically with work on contraceptive morbidity and
treatment seeking behaviour and male reproductive health problems and treatment seeking behaviour, and sexual health behaviour respectively. The last section discusses work related to reproductive and sexual health infrastructure.

2.2 OBSTETRIC MORBIDITY AND TREATMENT SEEKING BEHAVIOUR

A community based study was conducted on maternal morbidity among pregnant women in a rural community of Alwar district in Rajasthan (Datta et al., 1980). Based on a sample of 281 women, it was observed that 16.5 percent suffered from serious illness related to pregnancy and childbirth, and more than one-fourth (28 percent) reported illness or sickness during the period of pregnancy, childbirth, and puerperium. The reported illnesses were found significantly higher during the first trimester and the puerperium than during the second and third trimesters. It was also observed that the morbidity incidence rises with parity.

Bhat et al., (1995) have estimated maternal mortality ratios by using data from sample registration system (SRS) through indirect methods of estimation. According to these estimations, the maternal mortality ratio in India is estimated to be 580 deaths per 100,000 live births during 1982-1986 periods. The maternal mortality ratio was estimated to be higher in rural (683) than in urban (389) areas. Regional variations were also observed. For instance, Assam has an estimated ratio of 1068 whereas Punjab has 207 maternal deaths per 100,000 live births for the same period.

Bhatia and Cleland (1996) studied obstetric morbidity in northern part of rural Karnataka. They interviewed 3,600 mothers with at least one pre-school age child. The study found that 41 percent of women reported experience of some obstetric morbidity during their last pregnancy. Eighteen percent of women reported some problem during the antenatal period; another eighteen percent of women reported any problem during delivery, and 23 percent of women reported some problem during the post-partum period. As many as 10 percent of all women experienced potentially life threatening morbidity in the antenatal period (swelling, fits and convulsions, hypertension, bleeding, and high fever), eight percent during delivery (long labour, excessive bleeding, loss of consciousness, ruptured uterus, torn vagina or cervix, and convulsions), and 11 percent during the post-partum period (long labour,
excessive bleeding, loss of consciousness, and convulsions). Urban women and Hindus of higher social strata are more likely to report at least one problem during pregnancy period than rural women and middle and lower strata caste women. The study also observed that higher maternal morbidity is significant among nulliparous women than either women at parity 1-3 or 4 and more. Women who received antenatal care are more likely to report antenatal problem than women who do not received antenatal care.

Srinivasa et al., (1997) studied prevalence of maternal morbidity in South Arcot district, Tamil Nadu on a sample of 3,844 pregnant women during the periods of 1992 to 1995. It was found that 88 percent of women experienced live births followed by stillbirths (2 percent), and abortion (6.4 percent). About 60 percent of deliveries were institutional. Fifty six percent of pregnancies reported some maternal morbidity. Around thirty eight percent of women experienced antenatal morbidity, during labour and delivery (18.7 percent), and post-partum period (24.6 percent). Out of 245 women who had a miscarriage, ninety-three percent reported some morbidity, excessive bleeding (81 percent), pain in the abdomen (79 percent) and fever (29 percent). About two-thirds of the women sought medical care and more than one-fourth of the women sought treatment from a government facility.

Satya Sekhar (1997) estimated morbidity and treatment seeking behaviour in Andhra Pradesh by using the NSS (42nd round) data. Of women of age group 15-39 years who had reported problem related to maternity, 11.3 percent in rural area and 10.0 percent from urban area had taken treatment from in-patient care in hospitals. In the out-patient care, the majority of the communicable diseases had been treated by public hospitals in rural areas but by private health providers in urban areas.

Salam et al., (1998) studied maternal morbidity and mortality pattern from hospital data from Bijapur, Karnataka during 1990-94. The study estimated that maternal mortality rate was 651 per 100,000 live births. Out of 44 reported maternal deaths, about one-third was due to eclampsia and haemorrhage. More than fifty percent of maternal deaths occurred among women in the age of below 25 years. In addition, about seventy five percent of maternal deaths occurred to mothers having above 30 weeks of gestational period.
Ramakrishna et al., (2000) studied obstetric morbidity and treatment seeking behaviour in rural Karnataka. The study covered 388 women from 11 villages in Karnataka and was based on self-reported morbidity. The incidence of perceived morbidity was 62.2 percent in the ante-partum period, 36.3 percent of during labour and delivery period, and 15.0 percent in the post-partum period.

In an urban slum of Delhi 1,396 pregnant women were interviewed at around 37 weeks of gestation during April 1997 to December 1997 (Mayank et al., 2001). It was observed that 96 percent of the women had experienced some complications during their current pregnancy, 12.1 percent reported symptoms of serious morbidities such as high blood pressure and vaginal bleeding, and 75.8 percent of symptoms of other morbidities such as anaemia and reproductive tract infections. Nearly two-thirds or more sought appropriate treatment for bleeding, high blood pressure, and fits. Women with higher education, women with high standard of living, older women, women with higher parity, experience of still births and abortion were more likely to report serious morbidity than others.

Matthews et al., (2001) studied antenatal care, antenatal morbidity and care seeking in 11 villages of Karnataka. Out of 282 women, 56.0 percent of women received antenatal care in the first trimester. The study found that 62.0 percent of women reported some antenatal problems. The most frequently reported were abdominal pain, followed by anaemia, inability to digest, and nausea.

Bhat (2002) estimated the maternal mortality in rural India by using data from the National Council of Applied Economic Research-Human Development Index (NCAER-HDI) survey, 1994. The survey covered about 37,000 ever married women from 33,000 rural households and the sisterhood method was adopted for estimation of maternal mortality. According to these estimates, maternal mortality was 544 deaths per 100,000 live births. In India, the maternal mortality ratio was high in the north-east (636) and in the north-central (618) regions and low in the north-west (289) and in the south (383) regions. The study observed that maternal mortality ratio was higher among the Scheduled Castes, Scheduled Tribes, and illiterate women and low among Muslims.
Paul and Chellan (2004) analysed prevalence of post-delivery complications and treatment seeking behaviour among young women in India by using the data from the RHS-RCH-1 and 2, 1998-1999. The study sample was 73,309 currently married young women. It was revealed that 44.2 percent young women suffered from some post-delivery complication during the first week of the delivery. Among the various complications reported, 28.2 percent of women experienced lower abdominal pain followed by 19.1 percent who reported high fever, dizziness, severe headache (18.6 percent), excessive bleeding (13.4 percent), foul smelling/vaginal discharge (9.4 percent). Among women who had reported any post-delivery complication, 44.9 percent of women sought treatment from any source. Multivariate analysis showed that place of residence, educational and economic level, place of delivery, full ANC checkups had significant effect on post-delivery complications. Women with high education, high age at marriage, and urban residence were more likely to seek treatment than others.

A study was conducted on maternal morbidity during the intra-partum and the puerperium in 39 villages of Gadchirolj district, Maharashtra during 1995 to 1998 (Bang et al., 2004). Out of 772 women, 17.7 percent reported a serious complication during intra-partum, and 42.9 percent reported complication during puerperium period. The most common intra-partum morbidities were prolonged labour (10.1 percent), prolonged rupture of membranes (5.7 percent), abnormal presentation (4.0 percent), and primary post-partum haemorrhage (3.2 percent). The post-partum morbidities included breast problems (18.4 percent), secondary post-partum haemorrhage (15.2 percent), puerperal genital infections (10.2 percent), and severe anxiety or depression (7.4 percent). More than 15 percent of women needed emergency obstetric care and 24.0 percent required non-emergency medical attention. Abnormal presentation and some puerperal complications (infection, fits, psychosis, and breast problems) were significantly associated with adverse prenatal outcomes. The authors emphasized need for home based post-partum care for both mother and baby.

Chellan (2005) analysed prevalence of post-abortion complication and abortion related care among currently married women in India by using the RHS-RCH-1 and 2, 1998-1999. Of the 2,983 currently married women who experienced induced or spontaneous abortions, that 28.1
and 45.7 percent respectively reported some post-abortion complications within six weeks after the abortion. Among those who reported complications, more than 78 percent of women received medical care. Regression analysis identified that minority groups (Muslim and SC/ST) and women who had an abortion after first trimester are more likely to have post-abortion complication. In addition, women with some education, women with high household standard of living, and women who had abortion after first trimester are more likely to seek medical care for post-abortion complication.

In rural Karnataka a total of 388 women were interviewed both during pregnancy and immediately after delivery (Matthews et al., 2005). The study was based on self-reported morbidities and observed that 87 percent of women planned to have delivery at home. Intrapartum morbidity was reported by 32 percent of women. Fourteen percent of women reported pain, followed by heavy bleeding after delivery (6.4 percent), retained placenta (5.2 percent), and perineal tear (4.9 percent). Caste, wealth, education, experience of previous problems in pregnancy, and perceived quality care were found to be important factors in health seeking behaviour. Those women who experienced inadequate progression of labour pains were most likely to proceed unexpectedly to a hospital delivery.

Chellan and Kulkarni (2006a) examined obstetric morbidity and treatment seeking behaviour in Tamil Nadu by using data from the RHS-RCH-I. The study observed that about three-fourths of women reported some obstetric morbidity; pregnancy complication (66.6 percent), delivery complication (24.6 percent), and post-delivery complication (34.5 percent). Among those who reported pregnancy and post-delivery complication, more than sixty percent of women had treatment from any source, most of them from the private medical sector. The study found that highly educated women and women who had pregnancy wastage are more likely to experience pregnancy complication; this is based on self-reporting. Those with higher education, pregnancy wastage, and any pregnancy complication face relatively higher risk of delivery complication. Similarly, women with pregnancy wastage, any pregnancy complication and any delivery complication are more likely report post-delivery complication. In addition, women with higher education and full ANC check up are more likely to seek care for pregnancy and post-delivery complication.
Analysis of the data from the second round of District Level Household Survey-Reproductive and Child Health-2 (DLHS-RCH-2), 2002-2004 in India (Paul and Chellan, 2007), showed that about one-third of women reported experienced any post-delivery complication. Lower abdominal pain, higher fever, and severe headache were most frequently reported by women. About half of those who reported complications, sought treatment from any source. Regression analysis revealed that geographical region, residence, women education level and standard of living, children ever born, pregnancy wastage, place of delivery, full ANC checkup have significant effect on post-delivery complications. Geographical region, educational level, standard of living of household, and full ANC checkup have significant effect on seeking treatment for complications.

Mukhopadhyay et al., (2006), studied obstetric morbidity in villages situated in the eastern district of Sikkim. Total sample was 200 women residing in 20 villages and information was collected on health problems experienced by mothers who had their most recent childbirth during the year preceding the survey. Based on self-reported symptoms of morbidity, it was found that incidences of some ante-partum, intra-partum, and post-partum problems were 65.8 percent, 90.4 percent and 75.4 percent respectively. Women with high birth order are more likely to report ante-partum problems, but less likely to report intra-partum and post-partum complications.

A survey of 2805 women from urban slums in Gujarat, found that 18.3 percent of women experienced at least one pregnancy related complication, and 10.4 percent of women experienced some health problems within six weeks of delivery (Das and Shah, 2007). Among women who reported complications, more than two-thirds sought treatment.

2.3 GYNAECOLOGICAL AND OTHER RELATED MORBIDITY AND TREATMENT SEEKING BEHAVIOUR

Bali and Bhujwala (1969) conducted a study on reproductive morbidity in Haryana on a sample of 105 currently married women in the age groups 18-45 years. The study was based on self-reports and clinical examinations. It was observed that about 49 percent of currently married women reported symptoms of vaginal discharge. But clinical examination results
revealed that of the symptomatic women only 65 percent had infection. The Scheduled Caste women and those with low level of personal hygiene, husband’s occupation and poor economic status had relatively high prevalence of reproductive morbidity.

A community based study on gynaecological morbidity in Gadchiroli district, Maharashtra (Bang et al., 1989) covered a sample was 650 rural women in the age group 13 years and above. Information was obtained from interviews, clinical examinations and laboratory tests. It was found that 55.3 percent of women had reported some gynaecological symptoms but clinical examination and laboratory test showed that 92 percent had at least one gynaecological or sexual disease. Infection of the genital tract contributed half of the morbidity. Forty nine types of diseases were observed including infection (bacterial vaginitis, candida vaginitis, pelvic inflammatory disease, trichomonas vaginitis, syphilis, cervical erosion, cervical dysplasia and metaplasia) and menstrual disorders (dysmenorrhoeal, and menorrhagia). Only 8 percent of the women underwent gynaecological examination and treatment in the past. The high prevalence of gynaecological morbidity was found to be more common among those using contraceptives.

A large-scale study on vaginal discharge was undertaken in Chandigarh in 1992 (Palai et al., 1994). The sample included 1,682 women of the reproductive age groups 15-44 years, and the information was obtained through self-reporting by women. The prevalence of vaginal discharge was found to be 22 percent and 45 percent had received treatment. The remaining did not take any treatment, because of shyness, not being interested, not aware of infection and high cost. Seventy five percent of those who sought treatment did so after one year; besides 11 percent of husbands were also advised to take treatment.

Bhatia and Cleland (1995) obtained information on self-reported symptoms of gynaecological morbidity from 3,500 women in Karnataka. One-third of all women reported some reproductive health problems. The most common were a feeling of weakness and tiredness, menstrual disorders, white or colored vaginal discharge with fever (suggestive of lower reproductive tract infection), lower abdominal pain and discharge with fever (suggestive of acute pelvic inflammatory disease). The proportion who had sought treatment
or consultation ranged from 43 to 55 percent. Thirty percent of women had received treatment from government health facilities. Women with low level of economic status were more likely to report more symptoms. Obstetric morbidity associated with the last live birth was strongly predictive of gynaecological morbidities. Women who delivered their last child in a private institution were significantly less likely to report symptoms than were those who delivered at home or in a hospital. The prevalence of self-reported symptoms of RTIs is relatively higher among sterilised women than non-users of contraception.

In another study in Karnataka with a smaller sample of 385 women having children between 6 and 12 months and married and younger than 35 years, information was obtained from self-reported morbidity, clinical examination and laboratory tests (Bhatia et al., 1997). It was observed that the prevalence of some gynaecological complaints as reported was 40 percent. The major gynaecological complaints were excessive weakness, vaginal discharge with bad odour or itching or irritation, lower abdominal pain or vaginal discharge with fever, painful menstruation or menstrual bleeding discharges or spotting. The clinical examination revealed that the prevalence of any reproductive tract infections was 40 percent, and the results of laboratory tests showed that 54 percent of women had some endogenous infection. There is a significant association between reproductive tract infection and number of pregnancies. The laboratory tests detected that sexually transmitted diseases were found to be significantly lower among Muslims than among Hindus and vaginitis (bacterial vaginosis, candida albicans) was significantly high among urban and sterilised women.

A community study of gynaecological morbidity was undertaken in four different sites in India, during 1988 to 1991 (Latha et al., 1997). It was observed that the prevalence of any gynaecological problem was 64-84 percent. The prevalence of menstrual problems was high, followed by excessive discharge and low backache. Clinical examination revealed that 26-74 percent of women had one or more gynaecological morbidity, cervicitis, genital prolapses, pelvic inflammatory diseases, and vaginitis.

Visaria (1997) studied gynaecological morbidity and treatment seeking behaviour in rural Gujarat based on a sample of 800 women in the age group between 16 and 60 years, based on
self-reported morbidity and clinical examination. Seventy-five percent of women reported problems with reproductive functions (including backache, vaginal discharge, painful intercourse, and itching in a vaginal area). The majority of women discussed their reproductive health problems with husband. However, nearly 90 percent did not take any treatment, because of high cost of treatment and non-availability of any reproductive treatment at government hospital. Treatment seeking behaviour did not indicate any relationship with women's education.

Shenoy et al., (1997) examined reproductive health and gynaecological morbidity in Kerala on the basis of a sample of 1,383 women in the age group 13-68 years from five panchayats of Trivandrum district. All the information was obtained through structured interviews and clinical examinations. Out of 1,383 women, 50.4 percent of women reported back pain, followed by lower abdominal pain, vaginal discharge, vaginal itching, and dysuria. Clinical diagnosis for vaginitis revealed that vaginal discharge had 75 percent of sensitivity and 76 percent of specificity. The study found that vaginal discharge, dyspareunia, menstrual problems, and lower abdominal pain and back pain were significantly higher in the age group of 20-39 years. Women who had parity of more than three had high risk of morbidity compared to those at lower parities.

A community study of reproductive health services in primary health care was undertaken in two different centers, post-partum center (PPC) and primary health center (PHC) in Uttar Pradesh (Khan et al., 1998). The post-partum center sample consisted of 5,241 women in the year 1997. All the information was obtained through self-reported morbidity, clinical examination and laboratory tests. The study found that the prevalence of gynaecological problems was 29 percent and reproductive tract infection six percent. Out of 278 cases of reproductive tract infections, 235 cases went for laboratory test and only six percent reported clinical evidence of reproductive tract infection. In the primary health center sample of 2,873 women, 22 percent reported gynaecological problems (including urinary tract infection, bleeding problem, infertility, and prolapse or menopausal problem).
In a sample of 451 married women in the age group of 16-22 years in villages near Vellore, Tamil Nadu, information on the menstrual and sexual history, obstetric history, perceived gynaecological symptoms was obtained and urine and blood samples were collected (Prasad et al., 2000). The study found that 59 percent of women reported one or more gynaecological problems, but laboratory investigations revealed that 49 percent had reproductive tract infection, prevalence of other infections was less than nine percent. Only 35 percent of the women with symptoms had sought treatment mostly from traditional practitioners, others did not take any treatment.

An investigation of gynaecological morbidity among women in rural Gujarat revealed that 45 percent of women reported white discharge; urinary tract infection (UTI) was reported by 39 percent, menstrual problems reported by 17 percent and other by less than 5 percent (Joshi et al., 2000). Among women with reproductive health problems, only 24 percent had sought treatment.

Rangaiyan and Sureender (2000) studied women’s perceptions of gynaecological morbidity on the basis of a sample of 484 ever-married women in Tamil Nadu. One-third of women reported any symptoms of gynaecological morbidity, followed by white or colored discharge, menstrual problem, lower abdominal pain and discharge with fever, and other infection. Out of 368 women who reported some morbidity, only 15 percent had taken any treatment. The analysis revealed that women having had abortion, sterilisation, contraceptive users, and those who had high parity reported greater symptoms of gynaecological morbidity. Women who had sex during menstruation, frequent intercourse and whose husband had extramarital relations reported more symptoms of urinary tract infection than other women.

In Tamil Nadu, Ravindran et al., (2000) studied women’s experience of utero-vaginal prolapse from a sample of 37 poor women based on interviews and clinical examination. It was revealed that the prevalence of utero-vaginal prolapses was 87 percent. Half of women did not take any treatment. The causes include lack of time, non-approval by husband, long time wait for treatment, ineffective treatment, fear of surgery and high monetary cost. Half of
women were suffering for more than ten years because they were disadvantaged socially, economically and physically.

Ramasubban and Bhanwar (2000) examined treatment for reproductive morbidity on the basis of a sample of 66 ever married women in Mumbai. It was found that one third of women reported menstrual cycle problems. The most common complaints of irregular periods and white discharge were reported by 50 percent, and one third of women reported painful intercourse. Only about 40 percent received medical care for menstrual problem and 15 percent had treatment for painful intercourse but were not satisfied with it. The awareness of treatment is very poor in this study area.

A study in New Delhi focused on vaginal discharge in a reproductive health clinic (Vishwanath et al., 2000). The sample was 319 women and the investigation based on interviews and gynaecological examination. The vaginal discharge and cervical samples were collected for laboratory test. The prevalence of vaginal discharge was noted to be 60 percent. The investigation used gold standard method (sensitivity, specificity, positive predictive value). The sensitivity of gold standard was low for chlamydia, on the other hand infection sensitivity was higher.

Purwar et al., (2001) investigated bacterial vaginosis among pregnant women of between 12 and 28 weeks gestation period in Nagpur. The sample covered 1,006 pregnant women in the age group 19-31 years. The study utilised interviews and clinical examination and also obtained information on age, parity, last menstrual period dates, medical disorders and last obstetric performance. The prevalence of physiological discharge was 41 percent and bacterial vaginosis 12 percent. It was noted that frequency of intercourse and experience with abortion are factors that highly influence bacterial vaginosis. The authors mention that bacterial vaginosis is common in asymptomatic pregnant women.

Garg et al., (2001), observed that of 380 women who attended a clinic in an urban slum in Delhi, eighty eight percent reported any symptom of gynaecological morbidity. The most common symptoms are low backache, vaginal discharge, and pain in the lower abdomen.
Among 301 women who underwent internal examination, 91 percent reported any one or more symptoms of reproductive morbidity. On clinical examination, overall gynaecological morbidity was detected by the gynecologist to be 74.1 percent of women.

A large-scale community study on reproductive tract infection undertaken in Uttar Pradesh in the year 1997 (Nandan et al., 2001), covered 272 women in the reproductive age group and was based on self-reported morbidity, clinical as well as microbiological examination. It was observed that the prevalence of vaginal discharge was reported by 54 percent, pain in lower abdomen by 39 percent, and dyspareunia by 13 percent and other reproductive tract infection less than nine percent. The microbiological diagnosis revealed that trichomoniasis was found among 12 percent, bacterial vaginitis 15 percent and other diseases less than 9 percent.

A study carried out in urban slum (Delhi) among 201 married women of age group 15-49 years on perception and practices regarding RTI/STI (Roy and Bhattacharya, 2002) found that 43 percent of women reported symptom of abnormal vaginal discharge, and only 21 percent of women had treatment for RTI/STI.

Garg et al., (2002) examined reproductive morbidity in New Delhi. The 446 respondents were ever married and cohabitating women of age group 15-44 years. The results showed that the prevalence of some gynaecological morbidity was 88 percent, 64 percent of women had low backache, 57 percent reported vaginal discharge, 42 percent reported pain in lower abdomen, 26 percent had menstrual problems, 21 percent reported urinary complaints and less than 16 percent had other reproductive tract infection. Of the 332 women who underwent laboratory examination, bacterial vaginosis was detected among 42 percent, chlamydia 29 percent, and candidiasis 19 percent. Among 301 women, 56 percent were found to be infected with any of RTI/STIs (including bacterial vaginosis, trichomoniasis, and gonorrhea). The authors mention that women from poor communities were at a high risk of gynaecological morbidity. Clinical examinations are nearer the truth than self reported morbidity and that laboratory test results are nearer the truth than clinical results.
A survey of 1,577 women from villages along Himalayas found that 567 women had symptoms of RTI out of whom, 139 women went for clinical examination (Gupta et al., 2002). Among these 139 women, bacterial vaginosis was diagnosed for 45 percent, followed by chlamydial cervicitis (38 percent), pelvic inflammatory diseases (36 percent), vaginal candidiasis (9 percent) and trichomoniasis (8 percent). Sixty five percent had treatment for RTI out of which 48 percent had complete relief of symptoms. The authors mentioned that symptomatic treatment is useful for a large number of patients.

Kambo et al., (2003) studied self-reported gynaecological problems among rural married women in 23 districts from 14 major states/union territories of India during January 1996 to February 1997. A total 93,356 married women in the age group of 15-45 years were covered in this survey. It was found that 24.4 percent of married women reported some gynaecological morbidity during the six months preceding the survey. The common problems were backache followed by low abdominal pain, menstrual disorders, and vaginal discharge. Among women who reported gynaecological problems, about 15 percent sought treatment and of these only about 10 percent of women were satisfied with the services. The reasons for not seeking care were lack of time, loss of wages, inability to go along, and family not bothering. Women in the age group of 30 years and above were significantly more likely to report any gynaecological problem.

Kanitkar and Anjali (2004) studied self-reported symptoms of reproductive health problems of women in India by using data from the National Family Health Survey-2. The sample covered about 84,682 currently married women aged 15-49. It was observed that about forty percent of Indian women experienced some symptoms of RTI during the three month period prior to survey; the problems related to abdominal vaginal discharge, severe abdominal pain, itching/irritation in vaginal areas, and vaginal discharge having bad odour. Pain or burning while urinating, and pain during intercourse also were most commonly reported. Large inter-state differences exist between rural and urban prevalence levels. Multivariate analysis in both rural and urban areas reveals that Muslim women, young women, those from medium standard of living, who experienced spontaneous abortion and induced abortion, or were sterilised are significantly more likely to report morbidity compared to other categories.
Further examination of the NFHS-2 data for rural areas revealed that less than one-third of women in rural India who had gynaecological problems sought formal treatment (Rani and Bonu, 2003). The study also found that the proportions seeking care varied by socio-economic and demographic characteristics. The probability of consulting private health care providers was relatively high among highly educated, forward caste, older women, and those with high standard of living.

An analysis of gynaecological morbidity and treatment seeking behaviour in Tamil Nadu based on the data from the RHS-RCH-1 and 2 with sample of 18,040 currently married women aged 15-44, revealed that 36.3 percent of currently married women reported some symptoms of RTI/STI, and 31.5 percent have taken treatment among them (Chellan, 2004). Multivariate regression showed that women with low level of education, with pregnancy wastage, and contraceptive users were significantly more likely to report symptoms of RTI/STI. The tendency to seek treatment from the public health sector was greater among women belonging to the SC/ST, having experienced pregnancy wastage, and contraceptive users. Literate women are significantly more likely to seek treatment from the private medical sector.

A survey of 254 women in the age group of 15-49 in New Delhi found that 28 percent of women experienced some kind of health problems during the last menstrual period (Braidalye and Reddaiah, 2004). The most common problems were excessive bleeding (44 percent) and severe pain in the abdomen (17 percent). Among those who reported problems, 45 percent consulted a doctor.

Bhawsar et al., (2005) studied prevalence of RTI/STIs among women in Punjab by using the data from the RHS-RCH-1. It was seen that 81.7 percent of the 7,605 interviewed women were aware about RTI and 31.3 percent of women aware of STI. More than one-fourth of women in Punjab reported any symptom of RTI/STI, of whom 45 percent sought treatment. Most of the women received treatment from the private health sector. The multivariate analysis revealed that women who had history of abortion/still birth, those who experienced
any induced abortion, sterilised women, who experienced obstetric complication, and were aware of RTI/STI were significantly more likely to report symptom of RTI/STI.

Chellan and Kulkarni (2006) studied gynaecological morbidity and treatment seeking behaviour in the North-eastern region of India by using data from the first round of the RHS-RCH, 1998-1999. The sample in this region covered 63,887 currently married women in the reproductive age group of 15-44 years. The prevalence of any symptom of reproductive tract infection/sexually transmitted infection was 24.1 percent and among those 39.2 percent had taken treatment. The utilisation of the private medical sector was slightly higher than that of the public medical sector. The results of multivariate analysis show that the risk of RTI/STI was relatively higher in the states of Tripura and Mizoram and the tendency to seek treatment was quite high in Mizoram and Sikkim. Those with low standard of living, early marriage, younger age, zero parity, and contraceptive users show relatively higher reported prevalence levels. Further, the tendency to obtain treatment was higher among women who are residing in urban area, educated, have a high standard of living, and contraceptive users.

Khanna et al., (2005) examined quantitative and qualitative data on menstrual practices and reproductive problems among adolescent girls in Ajmer district of Rajasthan during April to July 2002. The sample was 730 women in the age of 13-19 years. It was observed that the women had several restrictions during menstruation period like not attending the religious rituals and not cooking. The study also found that 70 percent of women reported reproductive health problems during menstruation periods. This was lower among the girls going to school than those out of school. Abdominal pain and irregular periods were commonly reported. Of those who reported problems during menstruation, only one-third sought treatment. The proportions were higher rural area and among school going girls compared to urban area and those out of school. The multivariate analysis reveals that those with unsafe hygienic practices during menstruation are more likely to report prevalence of RTI compared to those having safe practices.
2.4 CONTRACEPTIVE MORBIDITY AND TREATMENT SEEKING BEHAVIOUR

The NFHS-I conducted during 1992 to 1993 and covering 89,997 women, provided estimates of contraceptive morbidity. Singh (1997) noted that this was 18.7 percent, 20.7 percent, 31.1 percent of among those women who were using contraceptive pills, IUD, sterilised women respectively. Among pills users a higher proportion of women reported bodyache and dizziness while in the case of IUD menstrual problems were prominently reported and sterilised women frequently reported pain/backache. Large inter-state variations exist in contraceptive morbidity. Rural women, non-Hindu, literate, women with medium standard of living, with high number of pregnancies, and history of abortion and still birth and long term users were more likely to report health problems or side effects among pills users. Among IUD users and sterilised women, non-Hindus, women with low standard of living, history of abortion/still births, with more than three pregnancies, those who received services provided by paramedics and public health facility were more likely to suffer.

In a study of 1,513 sterilised women in Andhra Pradesh and 1,287 sterilised women from Uttar Pradesh, Suhasini (1997) found that the problems faced were more in public health facility than in private health facility. Among those who received sterilisation services from the public health facility, 22.3 percent in Andhra Pradesh and 27.4 percent in Uttar Pradesh have reported some health related problem. Multivariate analysis reveals that those with high standard of living and older women (35 and above) and women who perceived quality of services was good were significantly less likely to report health problems. The people’s perception is that the private medical sector provides better services and care than the public sector.

In Rural Maharashtra, out of 471 sterilised women, 84.7 percent of women experienced any symptom of gynaecological morbidity before sterilisation (Char, 2001). The most commonly reported symptoms are vaginal discharge, menstrual problems, and lower back pain. About half of women reported two or more symptoms of morbidity, and 20 percent of women reported three or more symptoms. Among those who went for sterilisation without any symptom of gynaecological morbidity, 17.5 percent of women reported lower back pain after six months of sterilisation, followed by menstrual problems, itching, and vaginal discharge.
Sowmini and Sankara (2004) observed that the prevalence of menstrual problems and RTI are high among contraceptive users in Thiruvananthapuram, Kerala. Among IUD users and sterilised women, the menstrual problems are commonly reported followed by RTI, and menorrhagia. The multivariate analysis reveals that women who used an IUD and women who underwent sterilisation are significantly more likely to report symptom of RTI, menstrual problems, dysmenorrhoea, and menorrhagia compared to non-users.

In an urban slum in Gujarat, Das and Shah (2007) observed that about 4.9 percent of current users of contraceptive reported some health problems after they started using the method. This proportion varies by the type of method used. About 7.8 percent of IUD users had some health problems such as excessive bleeding, bodyache/backache, cramps, and weakness. Six percent of sterilised women reported side effect/health problems mainly experienced cramps, weight gain, irregular period, excessive bleeding, and white discharge. Among those who reported some health problems, 65.0 percent and 50.0 percent sought treatment for female sterilisation and IUD respectively.

Chellan (2007) studied contraceptive morbidity and treatment seeking behaviour in India by using data from the RHS-RCH-1 and 2, 1998-1999, with a sample of 474,463 currently married women of age group 15-44 years. About one-fifth of women reported some type of health problem among current users of type of modern contraceptive methods such as female sterilisation (20.8 percent), IUD users (17.4 percent), and contraceptive pills (16.1 percent). The self-reported health related problems/side effects such as bodyache/backache, weakness/inability to work, other health problems, dizziness, white discharge, irregular periods, excessive bleeding, cramps, and weight gain were very common among users of modern methods of contraception. Among women who reported health problems, treatment seeking was higher in case of female sterilisation (64.7 percent), and IUD use (58.5 percent), than users of oral pills (40.0 percent); a majority sought treatment from the private health facility.
2.5 MALE REPRODUCTIVE HEALTH PROBLEMS AND TREATMENT SEEKING BEHAVIOUR

Recently, social researchers have shown concern about male reproductive health as well. The RCH-RHS survey indicated that 12.3 percent of men had experienced some reproductive health problems and among them, 55.3 percent had taken some treatment. There are wide variations in the prevalence of reproductive health problems and treatment seeking behaviour among men within the country (IIPS, 2001). The highest prevalence is reported in West Bengal (18 percent) and the lowest prevalence reported in Pondicherry (0.3 percent).

Collumbien et al., (1999) studied male sexual health concerns in four coastal districts in Orissa covering a sample of 2,087 men in the age group of 18-35 years between May to September 1997. About half of the men reported swapnadosh (night time discharge) followed by jadu (itching) and dhatu padiba (semen discharge). The prevalence of semen discharge and itching were high among rural, less educated, married men, and those with low household income. Inter-district variations were large; Ganjam district reported higher prevalence than average and Cuttack and Balasore lower.

Verma et al., (2000) investigated sexual health problems and treatment seeking behaviour among men in Northeastern part of Mumbai slum. The sample covered 1,279 currently married men in the age group of 18-50 years 43.2 percent of whom reported some sexual health problems. Among them, two-thirds of men suffered from non-contact (anxiety) problems and the remaining one-third reported contact (discharge) problems. Among the various problems, wet dream was most commonly reported, followed by kamjori (weakness), white discharge, early ejaculation, and burning urination. Of those affected, 19.4 percent sought some treatment, mostly from allopathic sources. The study reveals that young men, illiterate men, those with low standard of living, from more crowded households, with habit of regular gambling, habit of drinking, and men who did not stay with their wife were more likely to report experiencing sexual health problems. Men who suffered from anxiety related sexual health problems were more likely to seek treatment than men who suffered from discharge. Men with education level of secondary and above, men who have multiple sex
partners, and those who stay with women other than their wife were more likely to seek treatment for sexual health problems.

A more focused study on a smaller sample of 56 men collected information based on free-listing, pile sorting and rating alongside in-depth interviews (Verma et al., 2001). A large number of men considered that sexual weakness was very frequently reported as sexual health problem followed by itching around genital areas, burning sensation during urination, early ejaculation, sores on the genitals, and semen discharge. On the other hand, AIDS was noted as a severe sexual health problem followed by syphilis, gonorrhea and pus discharge.

Sexual behaviour of men in rural parts of five states was investigated from a sample of 2,910 men in the age group between 18 and 40 years (UNFPA, 2003). It was observed that 89.5 percent of men reported having experienced sexual intercourse and 55.1 percent reported any sexual health problems in the past 12 months. The level ranged from a low of 25.1 percent in Karnataka to 84.5 percent in Uttar Pradesh. Among five possible types of STIs, 11 percent of men have reported genital discharge during the last 12 months, and five percent of men reported genital ulcers and sores. Among those who reported genital discharge, less than 17 percent of men sought any treatment mostly from private unqualified practitioners. Besides, a large number of men who have reported genital ulcers and sores did not seek any treatment and only seven percent of men sought treatment from government doctors or dispensaries.

Verma and Collumbien (2003) examined the link between poor sexual health and risk behaviour among men in urban slums in Mumbai, India; the sample was 1,279 currently married men and 553 currently married women in the northeastern part of Mumbai. It was observed that 27.1 percent of currently married men reported semen related problem (reduced quantity and quality of semen, involuntary loss of semen and nocturnal emissions) during the two month period preceding the survey, followed by performance related problems (erection problems and early ejaculation) and sexually transmitted infections (syphilis, gonorrhea, and pus discharge from penis). Currently married men who reported extramarital sexual activities in the past two months were more likely to report sexual health related problems than others.
Another study in Mumbai slums yielded morbidity levels close to those observed here (Verma et al., 2003). Multivariate analysis reveals that men who do excessive gambling and drinking, have non-marital sexual relations, and staying with women other than the wife were significantly more likely to seek treatment for sexual health problems than others.

Verma and Lhungdim (2004) studied sexuality and sexual behaviour in rural India. of the 2,901 married men in the sample, 32.8 percent reported having experienced pre-marital sexual intercourse. The pre-marital sexual activity in Uttar Pradesh was much higher than in other sample states. In addition, about 15.1 percent of the currently married men reported having had extramarital sexual activities in the 12 months preceding the survey. It ranged from a low of 6.3 percent in Uttar Pradesh to 37.4 percent in Orissa. One-third (33.3 percent) of unmarried men were actively involved in pre-marital sexual activities. The highest level was found in Orissa (48.0 percent) and the lowest in Karnataka (15.6 percent). About 9.5 percent of unmarried men and 3.1 percent of the currently married men reported having had sexual intercourse with other men in the 12 month period before the survey. Besides, 4.7 percent of married men and 2.3 percent unmarried men reported sexual intercourse with commercial female sex workers. Only about a third of men reported of use condoms with commercial sex worker. The study found that men who watch blue films and consume alcohol were significantly more likely to have pre-marital sex and extramarital sexual activities.

A small survey in rural Vadodara district in Gujarat covered men in the age group of 18-60 years from eight villages during October 1997 to March 1998 (Joshi et al., 2004). Information on sexual behaviour and health was largely obtained from in-depth interviews and focus group discussions. Out of 124 men, 97 men and out of 46 unmarried men, 42 men had pre-marital sexual relations. Majority of their sexual partners were reported to be unmarried girls in the villages. Among those who had pre-marital sexual relations, only 12 men were current users of condoms and 37 men were past users of condoms. Out of 124 sexually active men, 47 reported having experiences of some symptoms of STIs in the past, but one-fourth of them did not seek any treatment for their problems.
Chellan and Rangaiyan (2004) analysed reproductive health problems and treatment seeking behaviour among men in India by using data from the RHS-RCH survey, 1998-1999. The study observed that 12.3 percent of men reported experiencing at least one of the five symptoms of reproductive morbidity during the three months prior to the survey, the commonly reported being difficulty or pain during urination or frequent urination, followed by any discharge from penis, sore in the genital or anal area, swelling of testes or in groin area, and syphilis. Among men who reported any reproductive health problems, about half sought treatment; 57.5 percent from private medical sector and 25.4 percent from public medical sector. Multivariate analysis reveals that men from the central, the eastern, the north-eastern, and the western regions, those who belong to minority groups (Muslim and SC/ST), living in semi-pucca houses, with awareness about RTI and STI are significantly more likely to report reproductive health problems. Further, apart from urban and Muslim men, those who living in pucca houses and with awareness of RTI, STI, and AIDS are more likely to seek treatment for their reproductive health problems.

Joshi et al., (2005) studied reproductive health morbidities among urban school going adolescent boys in Mumbai. The sample was 300 adolescent boys in the age of 11-19 years from secondary school and junior college. Both quantitative and qualitative data were collected. The major reproductive health problems reported were itching of genitals, discharge from urethra, painful micturition and boil on genitals. Majority of boys sought treatment for health problems; most commonly from private practitioner.

Sexual behaviour and sexually transmitted diseases of men in East Delhi were examined from a sample of 302 men in the age group of 15-49 years from the out-patient clinic run by the government of NCT of Delhi (Gupta et al., 2005). Information was collected regarding socio-demographic profile, sexual behaviour, and history of sexually transmitted diseases. In the sample, 13.2 percent of men reported symptoms of sexually transmitted diseases in the past, the most common being discharge from urethra, and ulcerative lesion of genitalia. Clinical examination showed that about thirteen percent were found to have one or more STDs. The multivariate analysis revealed that men who had pre-marital or extramarital
sexual relations were more likely to report symptom of STDs than men who did not have pre-marital or extra-marital sexual relationships.

2.6 UTILISATION OF HEALTH CARE SERVICES
Quite a few researchers have investigated various aspects of utilisation of health services. Some of these have also covered reproductive health services, utilisation, quality and satisfaction. In a survey in Bihar, Khan et al., (1987) noted that quality of services is an important factor in utilisation. Because of non availability of doctors, staff, nurses and medicines, the public health services provided by PHC and health sub-centres were not being used by the population.

Samuel et al., (1992) have carried out a study to explore the level of satisfaction and the reasons for not using the health services from primary health centres in rural Karnataka during the period between January 1989 and March 1990. It was noted that over one-third of households did not use public health facilities. The principal reasons for not utilising public health facilities were improper functioning of the system, i.e., either doctor was not available or has not attended in time, medicines were not available and doctor gave only prescriptions rather than medicines. Thus, public health facilities have failed to generate faith in the system. Levine et al., (1992) carried out a qualitative study on quality of health and family planning services in rural Uttar Pradesh. The general perception was that services of poor quality were an important reason for non utilisation of family planning services.

Yesudian (1994) studied behaviour of the private facilities in the health market of Bombay. It was found that the private health care facilities (including nursing homes and clinics) have grown tremendously and these were available to all sections of population. The study noted that most of the doctors like to settle in bigger cities. Access to the private health services would depend on individual economic level was likely on account of the ability to pay for medical care.

Kumar (1995) observed that most of the people were not utilising the services mainly due to the lack of transportation facilities and poor management of public health services in some
parts of Andhra Pradesh. If public health services have better infrastructure facilities like essential equipments, essential drugs and consumables, buildings and staff quarters, and complete staff of medical and paramedical personnel with service training they can provide good quality of reproductive health services. In Uttar Pradesh, Singh and Devi (1997) observed that lack of health infrastructure was not as serious as its efficient utilisation. Poor utilisation of public health services is the result of less frequent visit of doctors and staff, improper distribution and lack of medicines and from time to time illegal demand of money. Poor quality of health services and lower level of satisfaction come as major obstacles in the utilisation of public health care services. The poor and lower caste people were relatively more satisfied than the upper caste.

Chakarabarty (1998) studied health status of Scheduled Castes and Scheduled Tribes in rural India. It was found that two-fifths of the villages have no health sub-centre or hospital within 5 km. More than three-fourths of the deliveries take place at home due to inaccessibility of the health centres.

Murthy (1999) studied quality of family welfare services in rural Maharashtra. It was noted that women residing in more remote villages are less likely to have been visited by health workers, and less likely to have received other maternal and child health services. The study found that women residing in more remote villages and poorer women are substantially less likely to have been informed about spacing method of contraception and side effects of methods. Sunder (1999) observed that health care infrastructure is poor in some parts of Tamil Nadu. For example, the nearest PHC is located at a distance of 21 km from the community. A few private doctors are available within 4 km but the poor cannot afford to pay fees. Most of the deliveries take place in the village. Though people are willing to go to hospital for deliveries, they are unable to access the facilities available due to lack of poor transport facility.

Quality and coverage of family welfare services including follow-up services in Uttar Pradesh were studies by Khan et al., (1999). They noted that significant number of acceptors of sterilisation and the IUD were unwilling to recommend those methods to others. Perhaps
not surprising in view of the significant rates of reported method related complications and low level of follow-up by programme staff after acceptance.

On the other hand, in an investigation of villages in Andhra Pradesh, it was found that almost all the respondents were satisfied with health sub-centre location and timings, and also with the behaviour and quality of services provided by ANMs (Mitra et al., 2000). Over a third took less than 10 minutes to reach the health sub-centre and more than two-thirds of respondents reported not having to wait for even 10 minutes to consult the ANM. Majority of ANMs were staying in the Sub Centre’s residential quarters and were easily available to the community.

A study of selected districts of Andhra Pradesh based on secondary data obtained from various sources observed a wide inter district as well rural-urban disparities (Baru, 2004). There is least amount of variation in the public health facilities whereas private health facilities are mostly concentrated in urban areas. The study reveals that facilities are not equally accessible to all segments of population and availability of road and transport facilities are important in determining accessibility. Ager and Pepper (2005) found that there was a low level of utilisation of first level primary care provision in rural Orissa. The major reasons were local perceptions of poor service quality and non availability of staff. The study also found that availability of health services in the villages did not enhance the use of health services.

Analysis of rural health services in India by Sinha et al., (2006) showed that the availability as well as distance of nearest health centre and visit of health worker and client satisfaction are significant predictors in utilisation of the contraception, ANC, and immunisation of children. Women staying in villages having a health sub-centre are more likely to get regular home visit by the health workers. Women who received regular home visits by the health workers are more likely to utilise the services.

Datar et al., (2007) analysed health infrastructure and immunisation coverage in rural India by using data from the NFHS-1 and 2 surveys, conducted in 1993 and 1998. It was noted that
the availability of higher level facility like a hospital or PHC in the villages, or with in 2 or 5 km, tended to have a larger effects on immunisation coverage than lower level facilities (health sub-centres, dispensaries). However, the presence of community health workers in the villages was not associated with increased immunisation covered.

Hulton et al., (2007) carried out a study for accessing the quality of care of institutional maternity services in an urban slum in India. It was found that quality is far from optimal in both public and private health facilities. The problems include lack of essential drugs, evidence of physical and verbal abuse, birth occurring in hospital without a professional attendance. Thus, overall quality of care was poor.

2.7 OVERVIEW AND RESEARCH GAPS

Numerous studies have examined the prevalence of reproductive morbidity such as maternal or obstetric morbidity, gynaecological morbidity, and contraceptive morbidity, treatment seeking behaviour, and utilisation of health care services across the states in India. However, only a few studies on male reproductive health problems and treatment seeking behaviour are available across the states. The level of prevalence of reproductive morbidity is examined via the three methods such as self-reported symptoms, clinical examination, and laboratory tests were used individually or collectively, though studies based on self-reported symptoms of reproductive morbidity dominate. For clinical examination of symptoms, large number of medical professionals and laboratory equipment is needed which is not easily available and usually it becomes very expensive to do so in large sample surveys. Existing literature reveals that there is large variation in the prevalence rates in the studies including those in India. Many investigations have also detected differentials by socio-economic factors such as education, religion, caste, standard of living and demographic factors such as age and parity. But the large sample errors on account of small sample size make comparisons difficult. Besides, differentials cannot be examined from data from small samples. Only studies based on large samples can be used for such a purpose. But due to considerations of cost and feasibility, most large scale studies generally depend on self-reported symptoms rather than on clinical diagnosis and laboratory examinations in spite of limitations of the methodology.