REPRODUCTIVE AND CHILD HEALTH SERVICES AND THEIR UTILISATION BY ADOLESCENT WOMEN IN RURAL MADHYA PRADESH

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DECLARATION

I do hereby declare that the thesis entitled "**Reproductive and Child Health Services and their Utilisation by Adolescent Women in Rural Madhya Pradesh**" submitted by me is a bonafide work and that it has not been submitted to any other university for the award of any other degree.

(Abhilasha Sharma)

It is hereby recommended that the thesis may be placed before the examiners for evaluation.

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Chapter I: Introduction

Adolescents today form approximately 1.2 billion of the world's population, more than at any time in human history and out of these at least 900 million are living in developing countries (UNFPA 2003). Even if we achieve the replacement level fertility rate of 2.1 births per woman, the population will continue to grow rapidly for some time as a consequence of large number of adolescents. Thus, adolescents (defined as persons aged 10-19 years) represent our collective and demographic future. But adolescents also form one of the largest groups with unmet need for reproductive health services in the context of rising unwanted sex, unplanned pregnancy, early childbearing, unsafe abortion and sexually transmitted diseases like HIV/AIDS infection.

Worldwide, young women and men suffer a disproportionate share of unplanned pregnancies, Sexually Transmitted Diseases (STDs), and other serious reproductive health problems. Nearly 333 million new cases of STDs occur worldwide each year, and at least 111 million of these cases occur in people aged under 25 years. Similarly, about one half of all HIV infections worldwide occur among people age 25 and under. In the Asia and pacific region, a total of 6.4 million people are living with HIV/AIDS (Joint United Nations Programme on HIV/AIDS 2000). These figures indicate that many adolescents are sexually active and unprotected adolescent sexual activity significantly contributes to these numbers. Premarital sex is common and rising worldwide (RRB 2000). In many sub-Saharan countries, the first sexual activity takes place before marriage. By age 20, at least 80 percent of sub-Saharan African youth are sexually experienced (Joint United Nations Programme on HIV/AIDS 2000).

Adolescent childbearing is not only a violation of the concerned woman's reproductive rights- the right to informed choice on whether and when to have a child but it also has wide-ranging adverse social, economic, psychological and health consequences for the woman concerned. As births to adolescents are often unplanned, too-early or unwanted pregnancy often leads to induced abortion and its complications which are among the main causes of death for women under age 20 years. Approximately 2 million adolescent women in developing countries undergo unsafe abortions each year, and a third of all women seeking hospital care for abortion complications are under age 20 (Hirsh and Barker 1992; Singh and Wulf 1993).

Even when pregnancy among young married women is planned, the health risks for teenage mothers and their babies can be serious. Because their bodies are not fully mature, the risk of maternal mortality is two to four times higher for pregnant adolescents than for pregnant women over 20 years. Young women are more likely to experience delayed or obstructed labor, premature labor and spontaneous abortions. Babies born to adolescent women are also more prone to birth injuries, low birth weight and still births (AGI, 1998; Singh 1998; MaCauley and Salter 1995; Sendrowitz 1995). Infant mortality is also greater among adolescent mothers -- typically 30 percent higher for infants born to women ages 15 to 19 years than for those born to women 20 years or older (McDevitt 1996; DHS 2003). Even Reproductive Tract Infections (RTIs) among adolescent women can lead to major pregnancy complications, infertility and general ill health and they have also been identified as a predisposing factor in transmission of HIV (Temin et al., 1999).

Adolescent childbearing has obvious demographic consequences since it increases the average number of children a woman can bear during her reproductive life span. Evidence suggests that the countries where women have their first child before age 20 are experiencing a high rate of population growth compared with the countries where women wait until early 20s to begin childbearing (Singh 1998; Adhikari 2000). A woman who delays childbearing until after adolescence may gain increased opportunities to acquire education and skills that may enable her to better care for her family and compete in the job market (AGI 1998). Generally, girls who marry young or start childbearing early experience more health difficulties and stop their educational development (Adhikari 2000). Thus, reproductive health of young women is also directly linked to the social and economic development of societies.

In response to these realities, at the International Conference on Population and Development (ICPD) held at Cairo in 1994, governments recognized the substantial and largely unmet needs of adolescents for sexual and reproductive health information and services. They set themselves the challenge of meeting those needs and recognizing adolescents' rights. This challenge becomes more urgent as 1.2 billion young people—the largest generation ever—enter their reproductive years. Each year, more than 13 million adolescents give birth in developing countries in Asia, Africa and Latin America (PRB 2000).

As a result of ICPD, adolescent sexual and reproductive health has become part of the public health agenda in many countries, and policies, standards, and services have been adapted to address adolescents' specific needs. Countries have also incorporated adolescent reproductive health into youth programs and national health plans or established youth offices within their ministries. The five year review of the Cairo programme of action states: " In order to protect and promote the right of adolescents to the enjoyment of the highest attainable standards of health, provide appropriate, specific, user-friendly and accessible services to address effectively their reproductive and sexual health needs, including reproductive health education, information, counseling and health promotion strategies. These services should safeguard the rights of adolescents to privacy, confidentiality and informed consent, respecting their cultural values and religious beliefs and in conformity with relevant existing international agreements and conventions" (Ingwersen 2001).

Although international attention on adolescent sexual activity tends to focus on premarital sex, majority of births to adolescent women in South Asia still occur within wedlock (Bott and Jejeebhoy 2000). As can be seen from Table 1.1, a majority of women marry as adolescents in Bangladesh, India and Nepal. As adolescent marriage is the norm in these countries and is often synonymous and immediately followed by adolescent childbearing, pregnancy during adolescence is common in the region. Many girls become pregnant even before their bodies are fully mature to bear a child, which has adverse health consequences both for young women and their children.

Table 1.1: Percentage of Women Married by Age 15 and 18 Years

Country and Year	15 years	18 years
Bangladesh 1999-2000	38.2	65.3
India 1998-99	17.8	47.6
Nepal 2001	14.1	56.1
Pakistan 1990-91	11.4	31.6
Sri Lanka 1987	1.1	13.7
Indonesia 1997	5.8	29.6
Philippines 1998	2.0	14.6
Thailand 1987	2.4	20.5
Vietnam 1997	0.9	12.4

Note: Data is presented for women in the current age group of 20-24 years.
Source: DHS, Bangladesh 1999-2000; IIPS, India 2000; NFHS, Nepal 2001; DHS, Pakistan 1990-91; DHS, Srilanka 1987; DHS, Indonesia 1997; DHS, Philippines 1998; DHS, Thailand 1987; DHS, Vietnam 1997.

Table 1.2: Childbearing among Adolescents, Circa 2002

Country	Percent of women aged 20-24 who gave birth by age 20	Adolescent Fertility Rate
Bangladesh	63.0	129
India	49.0	104
Nepal	52.0	112
Pakistan	31.0	62
Sri Lanka	16.0	20
Indonesia	8.0	15
Philippines	31.0	-
Thailand	21.0	33
Vietnam	24.0	72

Note: AFR refers to live births per 1,000 women aged 15-19 years
Source: PRB 2000; World Bank 2003

Data in Table 1.2 show that 63.0 percent of women aged 20-24 years in Bangladesh and at least half of the women in India and Nepal give birth by age 20. As a result, the adolescent fertility rate of these countries is as high: 129, 104 and 112 birth per 1, 000 adolescent women respectively.

Although Adolescent Fertility Rate of India is lower than the neighboring countries but is still one of the highest in the world. However, National Family Health Survey's estimates show a declining trend in the adolescent fertility from 116 in 1992-93 to 107 live births per 1,000 adolescent women in 1998-99. Even within India there is a large variation in the levels of teenage childbearing. It is evident from Table 1.3 that early childbearing in India is particularly high in Madhya Pradesh, Haryana, Bihar, Rajasthan, Uttar Pradesh, Andhra Pradesh, Karnataka and Maharastra where the rate is above the national average of 107 births per 1,000 adolescent women.

Table 1.3: Adolescent Fertility Rate in India by State, 1998-99

State	Adolescent Fertility Rate
India	**107**
Andhra Pradesh	132
Assam	89
Bihar	113
Gujarat	87
Haryana	92
Karnataka	112
Kerala	39
Madhya Pradesh	142
Maharashtra	129
Orissa	79
Punjab	40
Rajasthan	126
Tamil Nadu	83
Uttar Pradesh	120
West Bengal	107

Source: IIPS 2000

Madhya Pradesh records the highest level of adolescent fertility rate of the order of 142 births per 1000 adolescent women and the rate is as high as 162 births per 1, 000 adolescent women in rural areas of the state.

As adolescent fertility rate in India, especially in some of the states is high, newly married couples where wife is an adolescent form an important group to receive reproductive health information and services in the country. The stakes are particularly high for adolescent women who are at the risk of getting pregnant at an early age and once pregnant, as mentioned above, for complications during pregnancy including unsafe abortions, for maternal death, as well as for poor infant outcomes. Also, if sexually active, adolescent women are also at higher risk for RTIs with the risk of later infertility or even death (Mamdani 1999). The focus on reproductive health of adolescent women also becomes important, as there is a continuum of reproductive health problems, if remained untreated from adolescence to adult ages. Also, neglect of health care needs is generally higher among adolescent women as older women enjoy relatively better status and more autonomy compared to adolescent women.

In order to meet the needs of these women, the importance of reproductive health services for adolescents as specific target group in the country has increasingly been realized. In the last few years, the family planning program of India has undergone a metamorphosis. The National Family Planning Programme began in 1951 as a demographic programme but in the seventies its focus shifted entirely to terminal methods or "targets". After the emergency, where there was a set back to the Family Planning Programme, the programme was renamed as Family Welfare Programme focussing on the health needs of women in the reproductive age group and children under 5 years of age. In the Eighth Plan (1992-97) all these programmes were integrated under the Child Survival and Safe Motherhood (CSSM) programme. The aim was to improve the health of women and children and ambitious targets were set to reduce maternal/infant and child mortality.

After the ICPD in 1994, in India the focus shifted from Maternal and Child Health (MCH) and family planning to a comprehensive Reproductive and Child Health (RCH) program. Similarly, the approach has also changed from target oriented to target free where the targets for contraceptive acceptance have been eliminated. This approach is now known as Community Needs Assessment Approach (CNAA) where planning is done at the grassroots level after assessing the needs of individual clients. The government of India launched the National

Reproductive and Child Health (RCH) program in October 1997 which provides a prioritized adolescent health component in order to effectively address the special needs of adolescents. The objective of the program is to improve the out-reach of services particularly for the adolescents who have been till now left out of the planning process. In the RCH package, adolescent girls form an important segment of targeted beneficiaries with an emphasis on counseling and reproductive health services (MOHFW 1997).

The National Population Policy 2000 also provided a major thrust to adolescent health. In the past, needs of adolescents including the need for protection from unwanted pregnancies and RTIs have not been specifically addressed to. India's National Population Policy 2000 underscored adolescent health as a strategic focus is in achieving socio-demographic goals. The policy aims at ensuring that adolescents' need for information, counseling, population education and contraceptive services are accessible and affordable, food supplements and nutrition services are available and the legislation on restraint of child marriage is enforced. The policy also emphasized that reproductive health services for adolescent girls and boys are especially needed in rural areas, where adolescent marriage and pregnancy are most prevalent. The policy also stressed the need for programmes that encourage delayed marriage and childbearing and the need for education about the risks of unprotected sex (MOHFW 2000). The draft National Youth Policy 2000 also calls for a multi-dimensional integrated approach to youth development. This policy focuses on youth empowerment, gender justice, youth participation in decision-making, establishment of a strong inter-sectoral approach and building a robust information and research network to address needs of the young population.

Although reproductive health programs are increasingly addressing the needs of adolescents, adolescent women still face multiple barriers to accessing reproductive and sexual health services and maintaining their reproductive health (UNFPA, 1998). Data from the recent NFHS-2 show a dismal state of the utilization of RCH services by married adolescent women. Table 1.4 shows that although more than two-thirds of adolescent women have received antenatal care, medical care during delivery is disturbingly low. At least 67.0 percent of deliveries occur at home and only 41.6 percent of births are attended to either by a health professional i.e. doctor or ANM or nurse/midwife. Moreover, more than 80 percent of women do not receive any post-natal check ups within two months of delivery. Similarly, although the contraceptive prevalence rate in India is moderate with 48.2 percent currently married women in the reproductive ages are using fertility control methods, the survey reports that only 8.0 percent

of adolescent women are currently using any method of family planning. Among these an insignificant 4.7 percent are using modern methods.

Table 1.4: Percentage Distribution of Adolescent Women by Utilization of Maternal and Child Health and Family Planning Services in India and Madhya Pradesh

Item	India	Madhya Pradesh
Antenatal Care		
Received Antenatal Check-up either at Home or Outside Home	68.3	61.3
Received TT Injections	76.9	69.7
Received Iron and Folic Acid Tablets	58.8	48.2
Natal Care		
Delivery at a Health Facility	33.0	17.9
Assistance by Medical Personnel	41.6	28.7
Post Natal Care		
Received Within Two Months of Birth	18.1	10.5
Family Planning services		
Ever Use of Contraception	13.4	9.3
Current Use of Contraception	8.0	5.3

Source: IIPS 2000

Utilization of other reproductive health services is also poor among adolescent women. Women face constraints in expressing their reproductive health problems. According to NFHS-2, at least 10.4 percent of currently married women living in rural areas reported one gynecological symptom and out of these more than 70 percent did not seek any treatment (Rani and Bonu 2003).

Compared with India, the utilization of services is meager in Madhya Pradesh, the state with the highest level of adolescent childbearing. As can be seen from Table 1.4, more than 60 percent of adolescent women have used antenatal care services and 69.7 percent received all the doses of TT injection. But only half of adolescent women have received iron and folic acid tablets during pregnancy. Utilization of natal care services is also poor among adolescent women in the state. More than 80 percent of deliveries of adolescent women occur at home. Only 28.7 percent of births are assisted by trained medical personnel (either by a doctor or nurse/midwife). In case of more than 70 percent of births no medical help was sought. Similarly, only 10.5 percent of adolescent women seek any post-partum care after the delivery. An insignificant 5.3 percent of married adolescent women in the state are currently using any method of family planning.

An understanding of the barriers to utilization of services in Madhya Pradesh is therefore, critical for enhancing access to health care for adolescent women given the social, cultural and economic constraints which adolescents face. As very few studies have analysed the utilization of RCH services by adolescent women, the present study is an attempt to fill the gap in the literature. Our focus is only on the married adolescent women in rural areas since majority of sexually active adolescent women in India are married and adolescent marriage is most prevalent in rural areas (Jejeebhoy 1995).

Objective of the Study

This study is an attempt to analyse the utilisation of RCH services among adolescent women.

Specific objectives

The objectives of the study are to examine:

1. the availability of RCH services for women at Primary Health Centers (PHC)/ Community Health Centers (CHC)
   - RCH package of services generally available at the health centres includes services such as family planning, prenatal, natal and post-natal care including immunization. Treatment of RTIs and STDs are also important components of the RCH program. We analyse these services for adolescent women
2. the existing institutional health facilities/services that are utilised by the adolescent women
   - to what extent the services are utilized by adolescent women and the type of provider
3. the nature and prevalence of reproductive morbidity among adolescent women
   - Reproductive morbidity as defined by WHO includes gynecological, obstetric and contraceptive morbidity. In this study we examine self-reported symptoms of all the three kinds of morbidity mentioned.
4. the factors which influence the utilisation of RCH services including treatment seeking for reproductive morbidity
   - factors include socio-economic and demographic characteristics of women, their perception of health and contextual and programmatic factors, which determine their treatment seeking behaviour. We analyse these factors as they relate to adolescent women

5. the nature of services that are required by adolescent women
   - based on the findings of the study we describe health services in particular and other services in general so as to increase the utilization of RCH services by adolescent women.

About the Study

The study is divided into six chapters. A brief review of the literature and the conceptual framework is presented in chapter two. The next chapter describes the methodology of the study and profiles the respondents. Fourth chapter presents the appraisal of utilization of maternal and child health and family planning services by adolescent women. Chapter five focuses on the prevalence of self-reported symptoms of gynecological, obstetric and contraceptive morbidity. In this chapter we also examine their treatment seeking behavior. Finally, the concluding chapter discusses the major findings of the study and draws policy and programmatic recommendations.

Chapter II: A Review of Literature and Conceptual Framework

This chapter is divided into three sections. The first section presents a review of literature on the utilization of reproductive and child health services by adolescent women. In this review we have attempted to cover studies related to adolescent women, however, since there are very few studies on utilization of RCH services by married adolescent women either in India and elsewhere, the review also includes studies, which are not exclusively focussed on adolescent women. The review of literature is followed by a section on the description of conceptual framework for analyzing the influence of various factors on the utilization of RCH services. Finally, some hypotheses derived from the conceptual framework to understand the factors influencing utilisation of RCH services have been presented.

2.1 Literature Review

Under-utilisation of RCH services by adolescent women has been well documented (LeGrand and Mbacke 1993; McCauley and Salter 1995; Westley and Kanther 1996; AGI 1998; Barua 2000; Josheph et al., 2000). But under-utilisation or non-utilisation of services does not imply that these women do not want to use these services. In fact, the use of these services is affected by a number of factors. In order to identify these factors which influence the utilisation of RCH services by adolescent women a review of literature has been presented below.

Substantial evidence is found in existing literature on the influence of socio-economic factors on utilization of reproductive and child health services. A woman's socio-economic characteristics such as education, her work status and exposure to mass media are important determinants of her health seeking behaviour. Woman's education is not only associated with later age at marriage and lower fertility but also with better health and nutrition (Jejeebhoy 1995). Education increases a girl's knowledge and exposure to the outside world. A better-educated woman as she is more informed of contraceptive methods, is more likely to plan her family through deliberate use of birth control methods (Islam and Islam 1998). Islam et al., (1998) in a study of determinants of contraceptive use among married teenage women found that ever-use as well as current use of contraception in all the age groups increases with an increase in the educational level of women. An educated woman is also more likely to use pre-natal and post-natal services. Ray et al., (1984) in a study of maternal health care in rural West Bengal found

that those who utilise the services are more educated than the non-users. As an educated woman is more aware of her health and hygiene and seeking treatment of diseases such RTIs and STDs is also expected to be higher among these women.

Bhatia and Cleland (1995) noted that better-educated women and women from affluent households sought more treatment for symptoms of gynecological problems as compared with their less privileged counterparts. Jimenez (1996) in a study of rural areas of Bolivia found considerably higher maternal mortality rates among illiterate women. Thus, he concluded that lack of education among women is a serious barrier to the utilitsation of reproductive health services as it impedes the access to information. Mondal (1997) and Toan et al., (1996) also observed a positive relation between the utilisation of family planning services, antenatal care, and delivery services and the educational level of women. Education also strengthens a woman's decision making power in the household and in turn enhances her autonomy (Jejeebhoy 1995). Mensch et al., (1998) contend that lack of education not only decreases an adolescent woman's ability to use contraception but it also inhibits her decision making power pertaining to contraceptive choice and thus results in her having fewer alternatives to motherhood. As the reproductive behaviour of a woman is usually determined by her husband, husband's education also plays a significant role in influencing the utilization of reproductive health services by wife (Khan et al., 1997). The results of the study show that the women whose husband completed middle school or above are three times more likely to use maternal and child health and family planning services compared with women whose husbands were illiterate.

Studies have also shown a positive relationship between work status of women and the use of contraception. According to Sastry (1976) work motivates the women working outside home, as these women want to avoid the problem of frequent pregnancies and child-care responsibilities associated with them. Moore (1972) observed that if the commitment to work or career life is greater among women, the tendency to use contraception is also higher. According to Mensch et al., (1998) income-generating work not only provides adolescent girls with a degree of autonomy but also self-respect and freedom from traditional gender roles.

Studies have shown that exposure to mass media or modern forms of mass communication has a strong effect on reproductive outcomes, especially on contraceptive use (Westoff and Bankole 1997). Mass Media Exposure is an important means of communication especially when the

target group may be illiterate, out of school or unemployed (Webb 1998). Exposure to media also influences the utilisation of antenatal care services (Mondal 1997).

The economic status of the household also influences the utilisation of services. Visaria et al., (1995) found that in Gujarat a higher proportion of the users of a method belonged to the category of better living conditions. Similarly, Moncler and Foelix (1990) in their study of rural health care services found that increase in household income also increases the probability of service utilisation at PHCs. In a study of Maternal health care utilisation in Jordan, Obermeyer and Potter (1991) found that a high standard of living and high educational attainment are positively associated with intensity of utilisation of prenatal care. Similarly, Mondal (1997) in the study of utilisation of antenatal care services in Rajasthan observed that woman's standard of living index is positively associated with service utilisation. A study of five south Indian villages found that women reported financial constraints as one of the important reasons for not seeking treatment for RTIs (Dixon-Muller 2001).

A number of studies have examined the relationship between status of women and their health seeking behaviour. A newly married young woman has no say in the reproductive decision making that is, in the matters regarding her sexuality and childbearing. "On marriage a woman comes under the authority of the husband's family, that the authority is mainly exerted by her mother-in-law, and that nothing, neither her relationship with her husband nor those with her parents, should impair the legitimate authority or her willing submission"(Mandelbaum, 1970). A wife enters the household of her husband's family at a young age and is expected to obey her mother-in-law and husband who take decision regarding family size or the use of contraception. Age is an important factor, which influences the autonomy. Young women are not able to negotiate about sex, contraception and childbearing with their husbands (AGI 1998). Thus, lack of autonomy in the household influences a woman's decision to seek reproductive health care (Ravindran 1999). A Study of women aged 15-29 years shows that in Yemen around 11 percent of wives did not use contraception due to opposition expressed by their husbands (Alauddin and Maclaren 1999).

According to Masuma Mamdani (1999) limited decision making power in their sexual relationships is an obstacle to obtaining appropriate and timely care among adolescent women. Due to the lack of decision making, adolescent women even though do not want children are not

able to use contraception (Mensch et al., 1998). Khan and Patel (1993) also argued that neglect of health care needs is generally higher among adolescent women as older women enjoy relatively better status and more autonomy in relation to adolescent women. A possible explanation for lack of autonomy among adolescent girls could be larger age gap between spouses. Mensch et al., (1998) noted that in Colombia, Egypt and Turkey a husband is likely to be substantially older than his wife, if she is married as an adolescent. Due to this large age difference, many adolescent girls are not able to negotiate with their husbands about sex, contraception and childbearing.

As reproductive decision making is generally considered a prerogative of the husband or other elder members of his family, there is very little or often no communication between a young woman and her husband regarding the use of contraception or family size (Jejeebhoy, 1996). "Acceptance of family planning is often hindered by a lack of discussion on the issue with their partners" (PRB, 1995). Many studies have shown that discussion of family size desires and family planning methods between husbands and wives is associated with higher level of use of contraceptive methods. Mahmud and Islam (1995) found that in Bangladesh young couples who made joint decisions regarding family planning were 1.8 times more likely to be current contraceptive users than those where husband alone made such decisions. Similarly, McCauley et al., (1994) in their study of seven African countries, report that women who had discussions regarding the use of contraception with their husbands were on average almost four times more likely to be using contraceptives than those who had not discussed family planning.

In addition to family planning, inter-spousal communication on other reproductive health issues is also likely to motivate women to seek treatment of RTIs and STDs. A study in Uttar Pradesh found that limited inter-spousal communication was an important determinant of lack of awareness among many men regarding their wives' pregnancy or any other reproductive health problems with which they were suffering (Visaria and Visaria 1998). A study of five villages in south India found that out of those women who reported experiencing at least one symptom of RTI, only one third informed their husbands (Dixon-Muller 2001).

Attitude of other family members regarding reproductive health services also has an influence on service utilisation. Khan et al., (1997) have noticed that the favorable opinion of the respondent and her family members towards reproductive health services encourages service

utilisation. A study of adolescent reproductive health in Bangladesh recorded that most of the married adolescent girls were not allowed to use contraception by their in-laws. Similarly, they were also not able to seek antenatal care during pregnancy and had to face adverse pregnancy outcomes as well as complications during delivery (CWFP 1998). Similarly, Islam and Islam (1998) in their study of contraceptive use among married adolescent women in rural Bangladesh found that the negative attitude of older family members acts as a major obstacle to service utilisation.

Lack of knowledge and awareness are also deterrent to the health seeking behaviour. Adolescent women's knowledge regarding sexual and reproductive health is limited; McCauley and Salter (1995) find that a very limited proportion of adolescent girls are able to link menarche with sex, pregnancy and reproduction. This is particularly due to the socio-cultural inhibitions prevalent in our society, which prevent parents and teachers to discuss these issues with their children/students. Due to this social stigma attached to reproductive health, adolescent girls often perceive any reproductive health problem with shame and embarrassment and do not seek treatment of RTIs and STDs (CWFP 1998). Female reproductive health problems such as difficult pregnancies and childbirth, excessive menstrual bleeding and genital discharge are generally considered dirty and shameful rather than as treatable condition. Thus, women feel shame in presenting at the clinic (Dixon-Muller 2001). Similarly, Ashford and Makinson (1999) noticed that in Uganda the use of family planning and STI treatment services was low due to the fear of social stigmatization attached to it in the community. Even if they seek medical treatment they often visit non-trained health care providers. Westly and Kartner (1996) noted that those women who seek treatment from quacks are concentrated in the age group of under 20 or over 40 years. They found that among those women, who reported a RTI, only 40 percent sought treatment from medical personnel, 41 percent did not seek any treatment and some of them sought help from a traditional birth attendant or a traditional practitioner or consulted a relative. Bang and Bang (1989) noted that due to the existing taboos and inhibitions regarding sexual and reproductive health, women do not seek treatment of gynecological diseases. Even if they seek treatment, they prefer female doctors. Joseph et al., (1997) in a study of reproductive health of adolescent girls in rural south India noted that female doctors were preferred for gynecological check ups by adolescent girls.

Adolescent women also face stigma if they use family planning services immediately after marriage. A young woman is expected to bear a child and attain motherhood to prove her fertility soon after marriage (Srinivas and Ramaswamy, 1977; ICRW 1997; Singh 1998). Alaudin and Mclaran (1999) observed that many studies in the Middle East have shown that a newly wed couple is not expected to use contraception until they have had at least one child. Fear of social stigmatization also prevents young women to use safe abortion services even if the pregnancy is unintended.

Availability, accessibility and quality of care i.e. programmatic factors are also important determinants of health seeking behaviour. The non-availability of temporary methods acts as a serious impediment to the utilisation of services by adolescent women. Obermeyer and Potter (1991) contend that the under-utilisation of services in Jordan is a response to the deficiencies of the available services. Non-availability of trained doctors or surgeons at the rural PHCs also prevents women from taking an initiative to use the services. Khan et al., (1989) found that in rural Uttar Pradesh the PHCs and sub-centers were not only ill equipped but also running short of medicines and staff. Khan et al., (1987) in a study of reasons for under-utilisation of health services in Bihar mention that although the PHC was supposed to have 4 doctors, only one was present. Due to the non-availability of female doctor women preferred to go to Missionary Hospital for maternity and gynecological problems. They also observed that the supply of medicine was always short of the needs of the clients and due to the lack of supervision the sub-centers were almost nonfunctional.

A survey of health delivery infrastructure in Madhya Pradesh found that at least 25 percent of the positions for female health supervisors and 50 percent of the positions for male health supervisors (MHS) were vacant. Moreover, specialists at the community health centers (referral units supposed to deliver emergency obstetric care) were also not available. The study found that inadequate facilities for abortion, diagnosis and treatment of RTIs/STDs and emergency obstetric care at rural health centres are important factors affecting utilization of health services. Other important factors are cost of services (including loss of wages and transportation), non-availability of medicines, lack of confidentiality and privacy and counseling services. Moreover, sterilization services are only available during camps held at certain times of the year. The study also points out the lack of infrastructure of health facilities and even if the building exists, it lacks essential electricity and water supply. Thus, even if staff at the health centre is trained to

provide the services such as abortions, they are unable to provide services due to the lack of equipment (UNFPA 2000).

Even if women want to use the services, the RCH services are not easily accessible to women, especially in the villages. Women have to travel long distances to avail the services. In a study of family welfare program in Madhya Pradesh, Talwar (1988) noted that 38 percent of respondents reported that government services were far off and it takes a very long time to reach there. He found that a large number of women had no knowledge of the advantages of the antenatal care, had no strong motivation and found facility far off. Sanderson and Tan (1995) in their study of the quality of services in Asia contend that the proximity to service outlets promotes the use of family planning by reducing the time and travel costs to users.

Similarly, Westley and Kartner (1996) report that women in Philippines, especially those living in rural areas, have to travel longer distances to reach family planning facility than those living in towns. A newly married young woman is generally not allowed to travel freely. Unless she is accompanied with someone, she cannot travel long distances to PHCs. According to Dixon-Muller (2001) even in the extreme emergency cases such as prolonged obstructed labor they are not allowed to leave home. Due to the restriction on mobility, especially in rural areas, adolescent women are not able to utilise the services (Mensch et al., 1998). In a study of determinants of contraceptive use among married adolescent women in Bangladesh, Islam et al., (1998) found that women who had permission to go out of the house on their own were two times as likely to be using contraception with respect to women who had no permission to go out. Thus, the travel time to the service delivery point and then long waiting time at the centers is an important factor in explaining the under-utilisation of services by adolescent women (Miller et al., 1991; Moncler and Foelix 1990). McCauley and Salter (1995) argue that it is difficult to obtain contraceptives, as many young women are unable to pay for services or for the transportation to clinics. Kulkarni and Adhikari in a study of adolescent women in India and Nepal report relatively high rates of gynecological morbidity, especially in the settings where girls have limited access to adequate health care (quoted in Bott and Jejeebhoy 2000).

To sum up, non-availability and inaccessibility of services is a serious limitation to the utilisation by the adolescent women living in rural areas. This is an important reason why people living in rural areas turn to private practitioners as they find their services more cost-

effective as compared with the government health facilities (Khan et al., 1989, Khan et al., 1985). Due to dissatisfaction and non-availability of services at PHCs villagers are forced to seek treatment from private practitioners whether qualified or unqualified (UNFPA 2000; VHAI 1997). Gangopadhy and Das (1997) in their study of user's perspective on quality of family planning services observed that the respondents preferred private practitioners due to better quality services including provision of information and counseling. Moreover, it also saves their time. Bhatia and Cleland (1995) in their study of gynecological morbidity and their treatment observed that women prefer private practitioners. People also seek private medical care as confidentiality at public health facilities is lacking (UNFPA 2000).

Due to non-availability of abortion services in rural areas women resort to untrained personnel (Khan and Patel 1993) for the service. According to Anderson (2001) in Bihar married adolescent women are the most common seekers of abortion who wish to delay the start of childbearing. Availability of safe abortion services is especially important for adolescent women in the context of lack of autonomy in reproductive decision making. Due to lack of acceptable forms of modern contraceptives and deep rooted social and religious disapproval to abort, a large number of women either self-administer or undergo traditional or faulty modern procedures to induce an abortion which results in damage to the reproductive organs, hemorrhage, infection, sepsis and even death (Anderson 2001). One of the important causes of maternal death among adolescents is unsafe abortion (Anderson 2001; PATH/Outlook 1998).

In a study of women's perspectives on the quality of reproductive health care in rural Maharastra, Gupte et al., (1999) found that to seek abortion services, the doctor's insistence on husband's signature was a major obstacle among married women. Moreover, post-abortion contraception is also insisted upon (Gupte et al., 1999; Khan et al 1998). Thus, women have to generally resort to private practitioners. Mondal (1998) in a study of induced abortions in rural West Bengal found that confidentiality, availability, affordability and accessibility of abortion services are important for approaching quacks and paramedics, however, it may also result in post-abortion complications. Ganatra et al., (1998) in a study of induced abortions in a rural community in western Maharastra found the reasons for choosing a provider are guided by good quality service, cost consideration, sex of the provider, repeated visits not required, and no insistence on adoption of contraception. To quote Acuin et al., (1995) "these traditional practitioners are favored by women due to their cultural accessibility as they a part of the

community, they are seen as more understanding and less judgmental than formally trained practitioners" (Westley and Kartner, 1996).

Quality of care is also an important part of the programmatic factors. One of the important components of the quality of care framework developed by Bruce is provision of adequate information to clients i.e. about the whole range of methods available, their side effects and how to deal with them. But few providers discuss clients' goals (Koenig et al., 2000). Lack of knowledge is important factor for not accepting family planning (Roy and Verma 1999). Providing information to clients on the range of services available can help them to seek additional services. According to Vernon and Foreit (1999) an important determinant of utilization of reproductive health care in Latin America is not an absence of services but inadequate information regarding the existing services among the clients.

Khan et al., (1994) in the study on quality of care in family welfare programme from user's perspective noted that out of 792 women who were visited by the health workers, only 440 were informed about specific family planning methods. Out of those who were informed, only one third of the women were informed about all the available methods, how to use them, possible side effects and follow up visits required after acceptance. Women are generally not given adequate information about the benefits and potential side effects of various methods (Jain 1989). Thus, on experiencing any side effect they develop negative attitudes towards the methods (Miller et al., 1991). Roy and Verma (1999) in a study of women's perception of the quality of family welfare services found that one of the most common reasons for not accepting family planning is the fear of side effects. Clients' fear of formal clinic or hospital settings also inhibits utilization of natal care even if the facility is located nearby (Dixon-Muller 2001).

Low contraceptive awareness has been reported in a study of adolescent reproductive health in Bangladesh. The study shows that adolescents could name only some of the methods. Moreover, superstitious beliefs prevalent among the participants are a barrier to the use of family planning methods. Adolescent girls are not allowed to use contraception, as it is believed that the use of contraceptives from the beginning would cause infertility, uterine cancer etc. Due to the lack of knowledge of reproductive health problems, adolescent women become susceptible to the rumors regarding the use of family planning methods. A study of Kenyan

adolescents shows that the respondents had misconception regarding the protective effects of condom as they think that condoms are laced with HIV (Erulkar and Mensch 1997).

Adolescent women's limited knowledge on the significance of antenatal care leads to complications (Harrison 1996). Similarly, awareness of STDs/AIDS was also found to be limited among adolescents (CWFP 1998). Knowledge of adolescents regarding the provision of diagnosis, prevention and treatment of RTIs was limited (Barkat 2000). Lack of knowledge about the legality of abortion is also an important factor influencing the utilisation of abortion services. Despite the fact that abortion is legal in India for last 25 years, most of the women still believe that abortion is against the law (Anderson 2001). A study of induced abortion in rural Maharastra shows that the knowledge of legality was low among the abortion seekers (Ganatra et al., 1998). To sum up, adolescents lack awareness of reproductive health and gender issues, contraception, hygiene and sanitation (UNFPA 2000). Fear of side effects due to the lack of knowledge also affects the use of contraception among young adults. In Kenya and Nigeria, young people know about contraceptives but incorrectly cited dangerous side-effects (Barker and Rich, 1992).

Another important component of the quality of care framework is contraceptive choice available to the client. In his study on analysis of the effect of multiple methods on contraceptive prevalence Jain (1989) found a positive relationship between the contraceptive choice and CPR. He found that an addition of one method to the choice of methods available could lead to an increase in the CPR of a country; an increase in the number of methods available not only increases the acceptance rates but also the continuation rates. Similarly, Roy and Verma (1999) have argued that limited variety of methods available is an important factor for not accepting family planning. Sanderson and Tan (1995) noticed that the family planning services in India are dominated by sterilization services whereas the services for temporary methods are inadequate due to lack of supplies and trained personnel.

Lack of contraceptive choices for adolescent women as a result of Family planning programs continued emphasis on female sterilization also influences adolescent women's attitude towards the utilisation of services. Adolescent women as they still want to have children have a demand for spacing methods, which are generally not available at local PHCs.

Recontact and follow-up of services is also very essential to promote continuity of use (Jain 1989). Generally women report that there is no follow-up after they start using a method. The Integrated Population and Development project in Madhya Pradesh also pointed out that the follow up is not available for the acceptors (UNFPA 2000).

Interpersonal relations between providers and clients is an important component of quality care (Bruce 1990). A good relationship between providers and clients has implications for the utilisation of services (Jain 1989). The quality of client-provider interaction affects all aspects of reproductive health care. It has been observed that the probability of utilisation of reproductive health services increases if clients are treated with respect, have had their questions fully answered and received appropriate guidance/counseling. Training is essential for health care providers not only to improve their technical skills such as good counseling principles but also to overcome their biases and become sensitive to clients' perceptions. Studies have shown that those women who have been counseled about the potential side effects of contraceptives are more likely to continue using a method. Thus, clients who are better informed and more satisfied with the services are not only more likely to continue using the services but also promote them to others. Researchers have observed that client-provider interaction encourages client satisfaction (Miller et al., 1991). In a study of maternal health care services in rural West Bengal, Ray et al., (1984) and Monclear and Foelix (1990) in a study of rural health care service found unfriendly nature of the staff as one of the reasons reported by women for the non-utilisation of the services. In their study of Quality of care in family welfare programme in rural Bihar Khan et al., (1994) observed that the overall credibility of health workers among women was very low. The study reveals dissatisfaction among women regarding the time spent by the workers during home visit. Only half of the women reported that the workers were appreciative of their need for privacy and answered their queries. At least one fourth of the respondents did not want the health workers to visit them again.

Simmons et al., (1990) in a study of maternal and child health and family planning in rural Bangladesh observed that the frequency of contact between female outreach workers and rural women is less. Moreover, they also lack skills and professional competence. Dixon-Muller (2001) observed that women also complain that they have been mocked and patronized by the health care providers who consider themselves superior to the clients.

Studies have shown that young married females in conservative and high fertility societies often encounter provider resistance against fertility regulation services (Rajaretnam and Deshpande 1994). In a study of determinants of contraceptive use among married teenage women in Bangladesh, Islam et al., (1998) found that the female fieldworkers who provide family planning services at home are reluctant to visit adolescent women. This is due to the fact that the fieldworkers receive little incentive to visit the home of young married women or they assume that a need for family planning services does not exists among the young and newly married women. Although the younger women are much less likely to ever have been contacted by a family planning fieldworker, the study indicates a positive correlation between family planning fieldworker contact and contraceptive use. Of the respondents who had been contacted within the last six months ever use was 71.5 percent compared with only 26.5 percent for those who had never been visited. Similarly, the use rate was reported to be higher among women who have ever visited a health and family welfare centre. Service providers are generally not equipped or trained to deal with the problems of adolescent women. Moreover, they also lack inter-personal skills (WHO 1997).

Technical competence is also an important component of quality of care. Khan and Patel (1993) pointed out poor training of ANMs in IUD insertion as an important factor in under utilization of services. Moncler and Foelix (1990) in their study of rural health care services noted that although PHCs play an important role in the provision of health care services in rural areas, they fell short of expectations due to shortage of qualified health personnel, inadequate and irregular supply of medicines, inadequate training facilities for staff, indifferent allocation of the workers and inefficiency of paramedical staff. In their study of Quality of care in family welfare programme in rural Bihar, Khan et al., (1994) noted that most of the PHCs did not have the facilities for female sterilization.

In addition, ANMs were not trained in IUD insertion and the insertion kit was also not available. Also, not only contraceptives were in short supply at PHCs and sub-centres the availability of contraceptives through regular visits of ANMs/other staff was limited. In a study of adolescent reproductive health in Bangladesh, adolescent women expressed their preference for home delivery out of the fear that an institutional delivery might turn out to be a caesarian section, as they believe that the doctors usually operate instead of opting for a normal delivery (CWFP 1998). The Integrated Population and Development project in Madhya Pradesh also pointed out

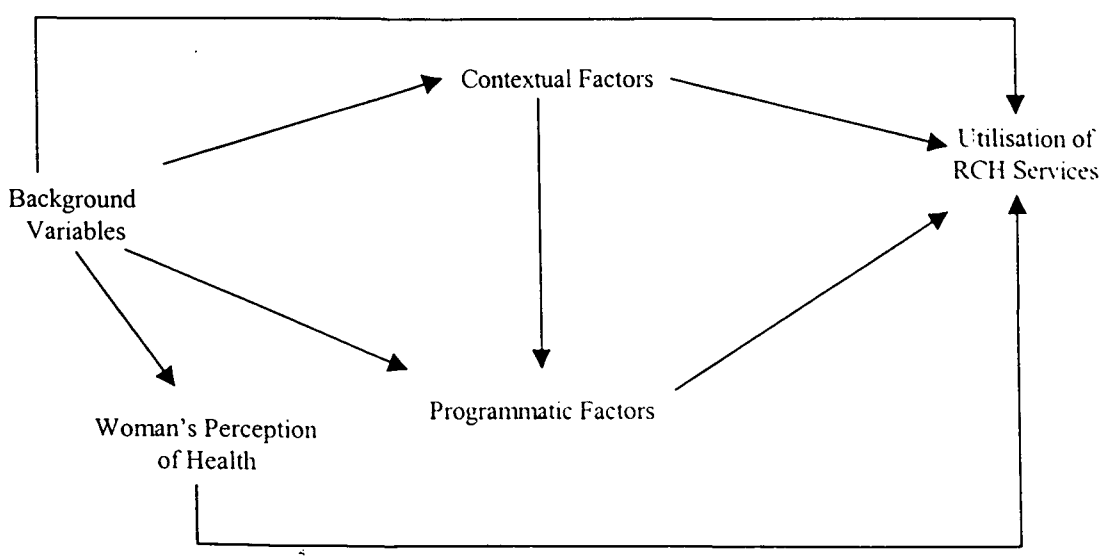
the lack of competency of staff nurses in midwifery, inadequate training in conducting abortion, diagnosis and management of RTIs/STDs. Also, even the doctors are not aware of any standard guidelines to be followed for clinical procedures and greater workload on the ANMs who have to travel extensively in the vast area they are serving. (UNFPA 2000).

To sum up, the review of literature above clearly shows that the utilization of RCH services by adolescent women is influenced by an array of factors. Since examination of relationship between all these factors and utilization of RCH services is out of the scope of this study, a limited number of factors have been considered to examine this relationship in the conceptual framework described below.

2.2 Conceptual Framework

In order to analyse the utilisation of RCH services by adolescent women we have developed a conceptual framework. This framework is presented in Figure 2.1. In the framework the dependent variable is utilisation of RCH services by adolescent women. The RCH package includes services such as family planning, prenatal, natal, post-natal care and immunisation services. Treatment of RTIs and STDs are also important components of the RCH program.

Figure 2.1: A Conceptual Framework for Analysing Utilisation of RCH Services by an Adolescent Woman



The independent variables, which influence the utilisation of these services, are classified as background variables, contextual factors, programmatic factors and woman's perception of health. The mechanism through which these factors influence the utilisation of services by an adolescent woman is discussed below.

Background Variables

A woman's education, her work status, economic status of the household, number of children ever born and other pregnancy outcome such as spontaneous abortion comprise background variables. As mentioned above in the last section, a better educated woman is more informed of contraceptive methods and she is more likely to plan her family through deliberate use of birth control methods (Ray et al., 1984; Jimenze, 1996). An educated woman is also more likely to use pre-natal and post-natal care services (Toan et al., 1996). As she more aware of her health and hygiene, seeking treatment of diseases such RTIs and STDs is also higher among an educated woman. Similarly, work status of a woman is positively related to the use of contraception. As mentioned in the review of literature, women who are working, especially those working away from home have a higher utilisation rate of the family planning services as they want to avoid the problem of frequent pregnancies and child-care responsibilities (Sastry 1976). Economic status of the household is also an important factor influencing maternal health services. In a study of maternal health care utilisation in Jordan, Obermeyer and Potter (1991) found that a high standard of living and high educational attainment are positively associated with intensity of utilisation of prenatal care. Studies have also shown that demographic factors such as number of children ever born to a woman and pregnancy outcome are important factors influencing health care utilization (Simmons et al., 1990).

Contextual Factors

Among the contextual factors, lack of autonomy in the household and inter-spousal communication are important determinants of a woman's decision to seek health care. When a woman enters the household of her husband's family at a young age she is expected to obey her mother-in-law and husband who take decision regarding her daughter-in-law's family size or the use of contraception. She generally has no say in the reproductive decision making that is, in the matters regarding her sexuality and childbearing. As reproductive decision making in our

society is generally considered a prerogative of the husband or other elder members of his family, communication between a young woman and her husband regarding the use of contraception or family size or about any other reproductive health problem is an important deterrent to use of services. As mentioned in the literature review, women who had discussions regarding the use of contraception with their husbands were on average almost four times more likely to be using contraceptives than those who had not discussed family planning (McCauley et al., 1994). Attitude of other family members also forms a part of contextual factors influencing a woman's health care behaviour.

Programmatic Factors

Availability and accessibility of services and quality of care are important programmatic factors. Adolescent women as they still want to have children, have a demand for spacing methods, which are generally not available at local PHCs. Thus, lack of contraceptive choices for adolescent women influences their attitude towards the utilisation of services. Sanderson and Tan (1995) noticed that the family planning service in India is dominated by sterilization services whereas the services for temporary methods are inadequate due to lack of supplies and trained personnel. Non-availability of trained doctors or surgeons at the rural PHCs also prevents women from taking an initiative to use other reproductive health services. Accessibility of services is more difficult for newly married young women, as they are not allowed to travel freely. The travel time to the service delivery point and then long waiting time at the centers is an important factor in explaining the under-utilisation of services by adolescent women (Miller et al., 1991; Westley and Kartner 1996).

Re-contact and follow-up of services is also very essential to promote continuity of use. Generally women report that there is no follow-up after they start using a family planning method. Moreover, as mentioned in the literature review, a good interpersonal relationship between providers and clients also has implications for the utilization of services (Jain 1989). In addition, studies have also pointed out towards lack of competency of health workers to deal with the problems of adolescent women, shortage of qualified health personnel and irregular supply of medicines as important factors in under utilization of services (WHO 1997).

Women's Perception of Health

Lack of knowledge and awareness on issues of sexual and reproductive health is also a deterrent to the health seeking behaviour of adolescent women (McCauley and Salter 1995). Due to the lack of knowledge adolescent girls often perceive any reproductive health problem with shame and embarrassment and do not seek treatment of RTIs and STD's (CWFP 1998). Even if they seek medical treatment, they often visit non-trained health care providers. Adolescent women also face stigma if they use family planning services immediately after marriage. As mentioned in the literature review, Ashford and Makinson (1999) noticed that in Uganda the use of family planning and STI treatment services was low due to the fear of social stigmatization attached to it in the community. Fear of social stigmatization also prevents young women to use safe abortion services even if the pregnancy is unintended.

The framework also shows that these factors not only affect the utilisation of RCH services but they are also interrelated among themselves. For instance, the background variables such as woman's level of education, her work status and economic status of the household affects contextual factors, programmatic factors and her perception of health. Similarly, contextual factors viz., woman's autonomy in reproductive decision making influences the programmatic factors such as accessibility of services. But an analysis of these interrelationships is out of the scope of this study.

2.3 Hypotheses

From the above conceptual framework, we have derived the following hypotheses to understand the factors influencing utilization of RCH services.

H-1: Higher the economic status of the household, higher the utilization of services.
Women belonging to better economic status not only have greater exposure to the availability of services but they can also afford the services. Therefore, the economic condition of a household positively affects the utilization of services.

H-2: Utilization of services is better among women who have more autonomy in the household decision making.

Studies have shown that gender power imbalances and lack of autonomy are leading underlying factors for women's vulnerability to reproductive tract infections. Due to lack of decision making, women become socially and economically dependent on their husbands and other members of the household not only in matters of sex and reproduction but also health care. Thus, autonomy in the household positively increases utilization of reproductive health services.

H-3: Higher the inter-spousal communication or discussion with any other member of the household, higher the utilization of services.

It is well documented that women do not communicate their reproductive health problems, as they are bashful and hesitatingly discuss with family members or with health personnel. As communication of symptoms is a pre-requisite for treatment seeking, discussion of problems may lead to better utilization of services.

H-4: As the physical distance of the user from a health facility decreases, the utilization increases.

Inaccessibility of services also poses barriers to health seeking for adolescent women who due to social reasons do not travel alone. Thus, greater distance from a health facility negatively affects the utilization of services.

H-5: Better the quality of services, higher is the utilization of services.

Poor quality of care is a hindrance in health seeking. Adequate information to clients, choice available to clients, re-contact and follow up services, inter-personal relations and technical competence are important components of quality of care. Better quality of care positively influences utilization of health services.

H-6: Knowledge of different aspects of reproductive health leads to higher utilization of services.

Lack of knowledge and awareness on issues of sexual and reproductive health is also a deterrent to the health seeking of adolescent women. Generally adolescents are found to be ill-informed about reproductive health and they have incorrect information or misconceptions about fertility and contraception. An increase in their knowledge and awareness about reproductive health and services will lead to greater utilization of services.

Chapter III: Methodology and Socio-Economic Characteristics of the Sample Population

This chapter is divided into two sections. A detailed methodology of the study is presented in the first section and socio-economic and demographic characteristics of the sample population are presented in the other section.

I. Methodology

3.1 Study Area

The sampling area chosen for the study is the Indore district of Madhya Pradesh, which is one of the most developed districts of the state (Government of Madhya Pradesh 2002). Initially the study aimed to select two districts, a most developed and a least developed but the least developed district could not be studied due to constraints of time and resources. Moreover, less developed districts in the state are also tribal dominated. As the characteristics of these districts are different, a separate study is required to study these districts.

In Table 3.1 we present the basic data regarding socio-economic and demographic indicators in Indore district and Madhya Pradesh. For some of the indicators we have data from the 2001 census but for those indicators where 2001 data are not available, we have presented data from 1991 census. Indore is not only the largest district in the state but also has the highest proportion of population (71.6 percent) living in urban area with a density of 663 persons per sq. km. Compared with the state as a whole, Indore district has sex ratio of as low as 911 females per 1,000 males. But this lower sex ratio in Indore is understandable considering its fast urbanisation in the recent past that has attracted migrant population from neighboring districts of the state who are mostly men. According to 1991 Census, the proportion of SC and ST in the district is 22.2 percent, which is much lower than that of the state average of 37.8 percent.

Table 3.1: Basic Socio-Economic and Demographic Indicators for Indore District and Madhya Pradesh

Indicator	Madhya Pradesh	Indore
Population 2001 (in lakhs)[1]	604	26
Decadal Growth Rate of Population (1991-2001)[1]	24.3	40.8
Sex Ratio 2001[1]	920	911
Literacy Rate age 7+ (2001)[1]	64.1	74.8
Female Literacy Rate[1]	50.3	64.0
% of Urban Population[1]	26.7	71.6
Density (Person per sq. km)[1]	196	663
Percentage of SC & ST Population , 1991[4]	37.8	22.2
Human Development Index (2001/2002)[2]	0.394	0. 694
Total Fertility Rate[3]	3.3	2.2
IMR[3]	92.5	18.6

Note: TFR and IMR for the state have been obtained from NFHS – 1998-99 report of Madhya Pradesh and for the Indore district from RHS of Indore district conducted in 1999.
Source: (1) Census of India 2001, (2) Planning Commission 2001/Government of Madhya Pradesh 2002 (3) IIPS 2000/MOHFW 1999 (4) Census of India 1991.

The 2001 census data reveals that more than 70 percent of the population of the district is literate (excluding 0-6 age group). The district shows a high literacy rate of 74.8 percent compared with 64.1 percent of the state as a whole. Female literacy rate in the district is also much higher than the state average (64.0 percent as against 50.3 percent). As regards demographic indicators, Total Fertility Rate in the district is 2.2 children, which is much lower than that of the state average of 3.3 children. According to the Rapid Household Survey (RHS) conducted in the Indore district, IMR of the district is 18.6 per 1, 000 live births which is the lowest in the state among all the districts.

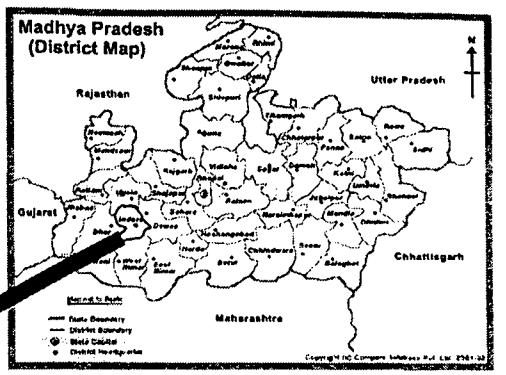
3.2 Study Design and Sample Size

In order to cover the diversity of contexts in terms of access to services and infrastructure two tehsils namely, Depalpur and Indore have been selected on the basis of their level of socio-economic development from the Indore District (Table 3.2).

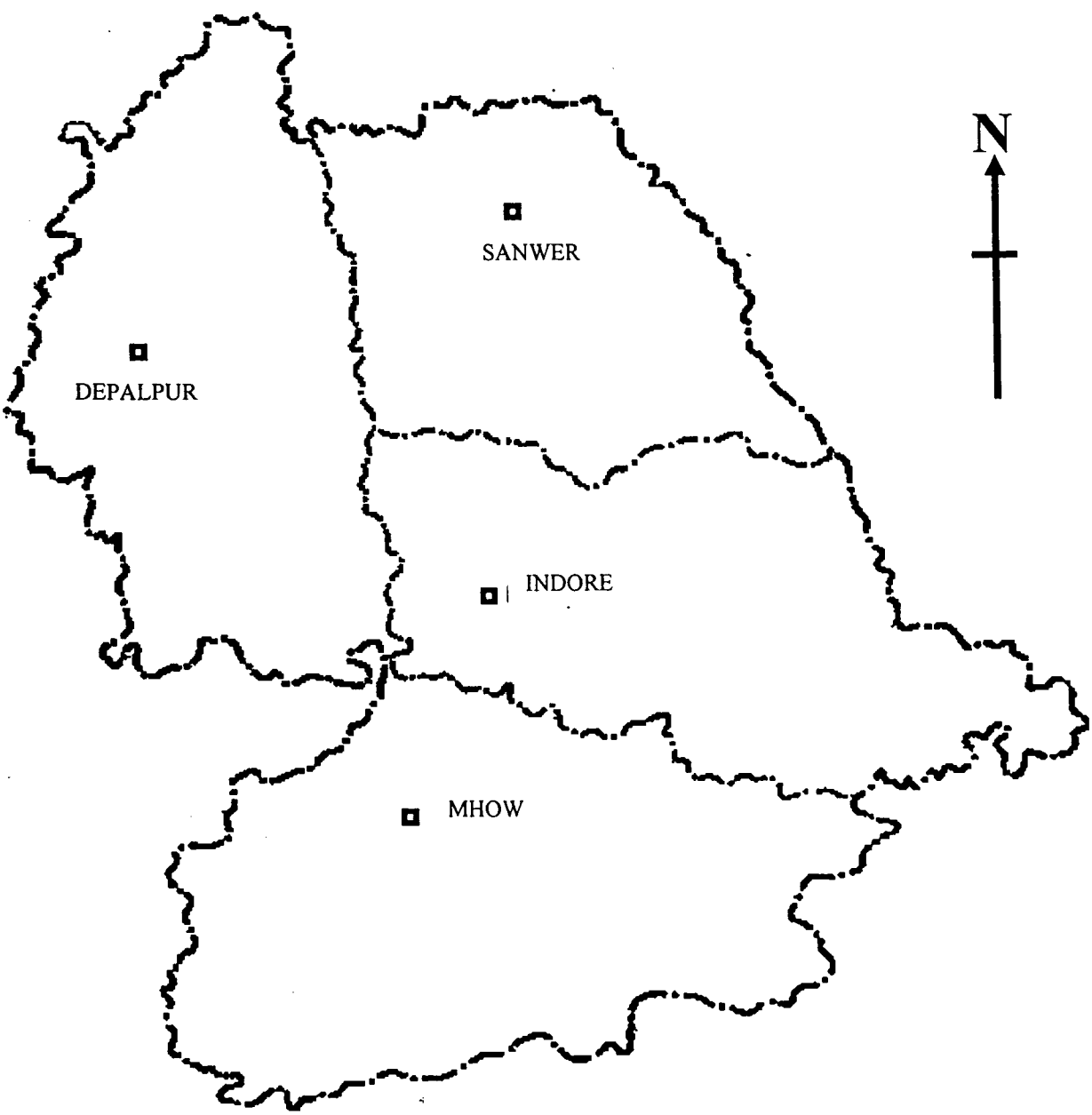
Table 3.2: Indicators of Development in Indore District by Tehsil

Tehsil	% Urban 2001	% Literate 2001	% Villages have Amenities (1991)			
			Educational	Medical	Post & Telegraph	App by Pucca Road
Depalpur	19.4	55.5	92.44	8.14	13.37	22.09
Indore	88.8	79.3	85.71	12.96	21.43	44.29
Mhow	38.8	68.0	67.90	19.29	16.67	41.98
Sawer	10.2	60.7	95.24	13.61	19.05	27.21

Source: Census of India 1991 and 2001



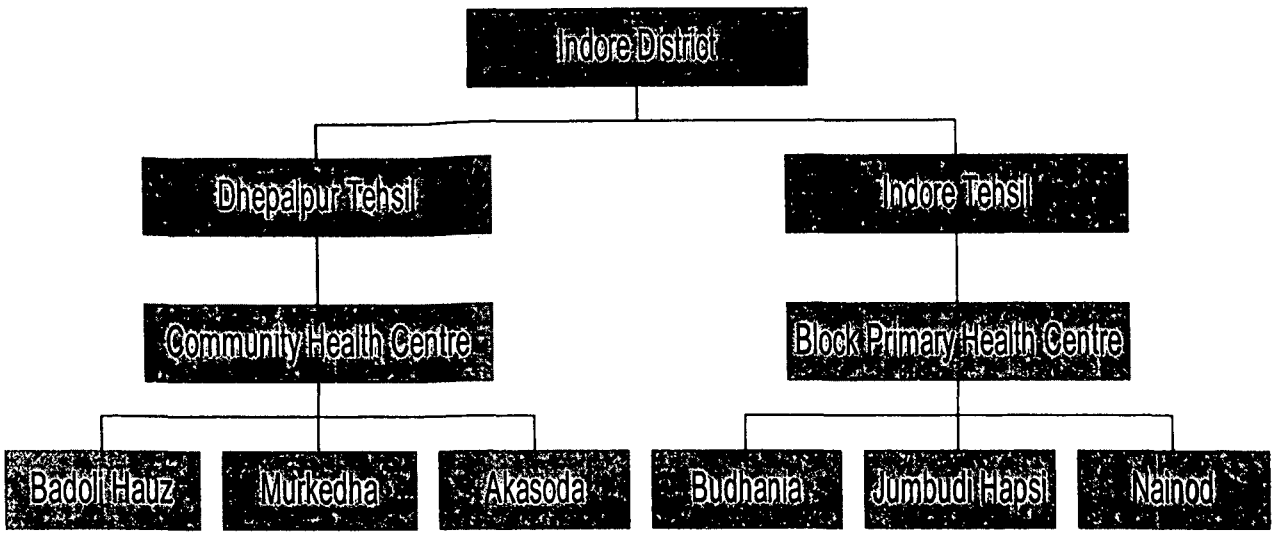
INDORE DISTRICT (MADHYA PRADESH)



As can be seen from Table 3.2 Depalpur ranks consistently low and Indore high among all the four tehsils of Indore district in terms of percentage of villages having basic amenities. The latest census data of 2001 also reveals that Depalpur has the lowest percentage of urban population and literacy rate whereas Indore has the highest among all the four tehsils of the district. Thus, we have selected one better and another poorer tehsil of Indore district. Within each tehsil, a block Primary Health Centre (PHC)/Community Health Centre (CHC) has been selected. Depalpur tehsil has only one CHC, which is selected for the study. As Indore tehsil does not have a CHC, a block PHC in the tehsil in Hatod village has been selected for the purpose of the study.

One of the factors, which have been identified to cause disparity in service utilisation, is the distance of the user from the service facility. Studies have shown that women do not utilize health care services if the health centre is located at far away place as not only they have to spend on their own transportation but also lose their wage time in order to utilize the distantly located services (Gittlesohn et al., 1994). This is assumed to be more so in the case of adolescent women who are not allowed to travel alone. As the aim of the study is to examine the utilization of RCH services, villages in each of the Tehsils have been selected according to their distance from the service centre. 175 villages under the jurisdiction of CHC in Depalpur and 155 villages served by the block PHC in Indore tehsil are divided into three categories according to their distance from the CHC/PHC. These three categories are: 2-3 km, 6-7 km and 10-12 km from a higher level facility. A village has been randomly selected from each of these three categories in both the tehsils. Three villages selected from the Depalpur Tehsil are Badoli Hauz, Murkheda and Akasoda. Sample villages of Indore tehsil are Budhania, Jumbudi Hapsi and Nainod.

Figure 3.1: Sample Selection



Thus, a total of six villages formed the sample. Each village has around 300-400 households. For the purpose of selecting the households from the selected villages, approximately 45-50 households with a married adolescent woman in each village have been identified. As there is no existing list of married adolescent women available, households with married adolescent women have been identified with the help of key informants i.e. ANMs (who helped us to identify married adolescent women from Eligible Couple Register) and Aganwadi workers. A total of 298 ever-married adolescent women in the age group of 13-19 years have been interviewed for the study.

3.3 Tools for Data Collection

For the purpose of data collection, the study has used a combination of both quantitative and qualitative techniques as given in the summary Table 3.3.

I. Quantitative Methods

Structured Questionnaire

A structure questionnaire has been used to collect information on utilization of RCH services by adolescent women (Appendix II). The questionnaire consists of nine sections. The first section contains questions on socio-economic background of the respondent such as caste,

religion, educational and occupational status of the woman. It also consists of questions related to household resources such as source of drinking water, type of house, type of toilet facilities, fuel used for cooking and number of livestock in the house. This section also includes information on the demographic characteristics of a woman and her knowledge regarding age at marriage as well as risks of adolescent childbearing.

The second section deals with awareness regarding antenatal care, utilization of antenatal including antenatal check ups, TT injection and iron and folic acid tablets. It also has questions on obstetric morbidity (problems experienced during pregnancy) and treatment seeking behaviour of an adolescent woman. The next section is on natal and postnatal care. It consists questions on utilization of natal care services and reasons for non-utilization of a health facility. It also collects information on complications of delivery, problems experienced after delivery and treatment seeking. Questions on utilization of postnatal services and reasons for not using are also asked in this section.

Section four includes information on utilization of immunization and section five deals with prevalence and treatment seeking for short-term morbidity among children under 5 years of age. In section six, information on utilization of family planning services has been collected. It also contains questions on contraceptive morbidity and treatment seeking. The seventh section asks questions on incidence of spontaneous /induced abortion and health seeking among women.

Section eight contains information on symptoms of gynecological morbidity and treatment seeking. This section is divided into two parts: before and after marriage. Each section on utilization of services also contains questions on quality of care. Finally, section nine deals with information on husband's socioeconomic background such as husband's education and occupation and questions on woman's autonomy.

Questionnaire for Facility Survey

A structured questionnaire has been used for collecting information on the availability of RCH services at the sample block PHC and CHC (see Appendix II). In this survey, information has been collected on physical facilities at the health centres such as type of building, source of drinking water, toilet facility, electricity, telephone, number of beds,

In-depth Interviews

16 in-depth interviews have also been conducted with the providers such as Auxiliary Nurse Midwife (ANM), Lady Health Visitor (LHV), Aganwadi workers, Lady Doctor, Staff Nurse and Multi-Purpose Worker (MPW) to understand their perception of the utilization of the services by adolescent women and the obstacles in the utilisation of services. A semi-structured interview schedule has been used to interview the providers.

Table 3.3: Number of Respondents by Tehsil

Tool	Depalpur Tehsil	Indore Tehsil
Structured Interview		
Village 1	49	48
Village 2	48	50
Village 3	50	53
Focus Group Discussions	6	4
Case Studies	7	13
In-depth Interviews	9	7

3.4 Data Collection and Analysis

The author herself in local language has conducted interviews, FGDs and Case Studies with adolescent women. The FGDs were also tape recorded and then translated into English. FGD participants have been selected maintaining the goal of having a diverse set of adolescent women in terms of their age, caste and status of childbearing. Assistance has been sought from aganwadi workers in the respective villages to organize the FGDs. The in-depth interviews have been conducted at the block PHC in Indore Tehsil and CHC in Depalpur tehsil, and also during the providers' field visits in the sample villages. Data have been analysed using SPSS (Statistical Package for Social Sciences).

3.5 Statistical Methods Used

In this study various statistical techniques have been used for the analysis of utilization of RCH services. In order to understand the nature of distribution of response variables with respect to predictor variables, a bivariate analysis has been conducted.

Chi Square Significance Test: This statistic is used to test the hypothesis of no association of columns and rows in tabular data. It can be used with nominal data. Chi Square is more likely to find significance to the extent that the relationship is strong, the sample size is large, and/or the number of values of the two associated variables is large. A chi-square probability is commonly interpreted by social scientists as justification for rejecting the null hypothesis that the row variable is unrelated (that is, only randomly related) to the column variable.

***Correlation Analysis*:** The correlation analysis is carried out to understand how the predictor variables co-vary with each other. On the basis of correlation analysis, some of the highly correlated variables have been dropped in different models of multivariate analysis.

***Logistic Regression Methodology*:** As utilization of various RCH services among adolescent women is found to be generally poor and thus distribution of most of our response variables is rather skewed, multivariate technique of logistic regression model has been used in the study.

When data are analyzed by logistic regression, for each variable the log odds are given. The log odds indicate the change in the response variable with respect to the predictor variable while other predictor variables are constant. If p is the probability of the variable, then the logistic regression coefficient gives the change in log (p/(1-p)) when the variable changes by one unit. As the interpretation of these values is difficult, the odd ratios have been worked out. These ratios give the proportionate change in the odds of the variable occurring when there is a unit change in the variable. As logistic regression is used for categorical variables, the interpretation of the log odds is with reference to a category of the variable for which the log odds is one.

In the case of both bivariate and multivariate analyses, only statistically significant results have been discussed in chapter IV and V.

3.6 Definition of Variables Used

In this section, we have defined only those variables, which have been used, in our quantitative analysis.

Response Variable	Definition	Category	Number
Utilization of Antenatal Care	Whether respondent received full package of ANC during her last birth	Yes No	86 82
Utilization of Natal Care	Whether respondent delivered at a health facility	Yes No	93 74
Utilization of Post Natal Care	Whether respondent received post natal care within 42 days of delivery	Yes No	14 153
Utilization of Immunization	Whether respondent fully immunized her last birth	Yes No	133 23
Treatment for Short Term Morbidity	Whether respondent sought treatment for any short term morbidity for her last birth	Yes No	86 17
Current use of Family Planning	Whether respondent or her husband are currently using any modern method of family planning	Yes No	50 248
Prevalence of Gynecological Morbidity	Whether respondent reported a symptom of gynecological morbidity after marriage	Yes No	193 105
Treatment for Gynecological Morbidity	Whether respondent sought treatment for any of the reported symptoms of gynecological morbidity after marriage	Yes No	65 128
Prevalence of Obstetric Morbidity during Pregnancy	Whether respondent reported a symptom of obstetric morbidity during her last birth	Yes No	105 63
Treatment for Obstetric Morbidity	Whether respondent sought treatment for any of the reported symptoms of obstetric morbidity during her last birth	Yes No	60 45
Prevalence of Obstetric Morbidity after Delivery	Whether respondent reported any symptom of obstetric morbidity one week after the delivery	Yes No	63 104
Response Variable			
Attended School	Whether respondent ever attended school	Yes No	140 158
SLI	Standard of living index	Low Medium High	133 106 59
Distance from a Health Facility	Whether respondent lives in a village which is either 2-3 km or 6-7 km from a higher level health facility and 10-12 km from a higher level health facility	Near Far	195 103
Development of Tehsil	Whether respondent living in a tehsil is developed or backward	Less developed More developed	147 151
Autonomy Index	Woman's autonomy index	Low Medium High	117 173 8
Children Ever Born	Number of children ever born to a respondent	0 1 2 +	133 95 70
Spontaneous Abortion	Whether respondent had a spontaneous abortion in the past	Yes No	20 210
Knowledge of ANC	Whether respondent knows the type of antenatal care required during pregnancy	Yes No	104 194
Discussion of Family Planning with Husband	Whether respondent ever discussed about family planning with her husband	Yes No	110 188
Discussion of Family Size with Husband	Whether respondent ever discussed about family size with her husband	Yes No	117 181
Woman Approves of Family Planning	Whether respondent approves of use of family planning	Yes No	193 45
Husband Approves of Family Planning	Whether husband approves of use of family planning	Yes No	151 54
Discussed Symptoms of Gynecological Morbidity after	Whether respondent discussed any symptom of gynecological morbidity with someone	Yes No	85 108

Marriage			
Discussed Symptoms of Obstetric Morbidity during Pregnancy	Whether respondent discussed any symptom of obstetric morbidity with someone	Yes No	77 28
Menstrual Hygiene	Frequency of bath of respondent during menstruation	Daily Once in two days Once in three days or more	255 24 15

We have used several response variables as given in the Table above to analyse the utilization of different components of RCH services by adolescent women. The predictor variables selected are those based on the conceptual framework developed in the last chapter. The background characteristics of interest are adolescent woman's education, work status, standard of living index, children ever born and previous history of a spontaneous abortion. The standard of living index has been calculated adding the scores given to the availability of facilities and consumer durable in the household. These scores are similar to the scores given by the National Family Health Survey 1998-99 to calculate the Standard of Living Index. The scores are as follows:

Table 3.4: Indicators Used to Calculate Standard of Living Index by Category and Score

Indicator	Category	Score
Type of House	Pucca	4
	Semi-pucca	2
	Kachha	0
Main fuel used for cooking	LPG	2
	Kerosene	1
	Cow dung, Wood	0
Source of drinking water	Tube well	2
	Pipe	1
	Hand Pump	1
Type of toilet facility	Own toilet	2
	Open space	0
Ownership of livestock	Owns livestock	2
	Does not own livestock	0
Ownership of vehicle	Tractor, Jeep/Car	4
	Scooter/Motor cycle	3
	Bicycle, Bullock cart	2
	None	0

Based on these scores, all the households are classified into three categories: Low, Medium and High Standard of living.

Many variables may affect context, however, we have considered two variables: Woman's autonomy and Inter-spousal communication. Woman's autonomy index has been calculated adding the scores given to the indicators of a woman's autonomy. The scores are as follows:

Table 3.5: Indicators Used to Calculate Woman's Autonomy Index by Category and score

Who Takes the Following Decisions in the Household	Category	Score
What items to cook	Self Others	2 1
Obtaining health care for yourself	Self Others	2 1
Purchasing household goods	Self Others	2 1
Your going and staying with parents	Self Others	2 1

As in the case of standard of living index, all the households are classified into low, medium and high autonomy index. Another contextual variable is communication of symptoms of reproductive morbidity to either someone at home or a health worker. It also includes inter-spousal communication regarding children and family planning which is an important indicator of the context in which reproductive decisions are considered and made. In addition, husband's approval of family planning is also a contextual variable.

Among programmatic factors, distance from a health facility has been used to analyse the accessibility of services. As described above, the villages for this study are chosen according to their distance from a health facility. Thus, the variable is classified into two categories: near (2-3 and 6-7 km from a higher-level health facility) and far (10-12 km from a higher-level health facility).

Woman's perception of health is measured in terms of her knowledge and awareness about various aspects of reproductive health i.e. knowledge of antenatal care required during pregnancy.

II. Socio-Economic and Demographic Characteristic of Sample Population

Women's health seeking behaviour is generally influenced by a number of socio-economic and demographic factors. Modernizing influences such as education and exposure to mass

media are important catalysts for demographic and socio-economic change. Also, a woman status and autonomy determine their attitude and health seeking behaviour, especially in patriarchal societies (Jeffery and Basu 1996).

This section presents a profile of the socio-economic and demographic characteristics of respondents (ever-married women aged 13-19 years).

Table 3.6: Percentage Distribution of Adolescent Women According to their Socio-Economic Characteristics by Tehsil

Characteristic	Depalpur	Indore	Total	N
Religion				
Hindu	98.0	98.7	98.3	294
Muslim	2.0	0.7	1.3	3
Christian	-	0.7	0.3	1
Caste				
SC/ST	29.3	41.6	35.5	104
OBC	67.3	47.0	57.1	168
Others	3.4	11.4	7.4	22
Ever Attended School				
Yes	44.0	50.0	47	140
No	56.0	50.0	53	158
Husband Ever Attended School				
Yes	76.7	72.0	74.3	222
No	23.3	28.0	25.7	76
Woman's Occupation				
Agriculture & allied agricultural activities	45.4	45.3	45.3	136
Agricultural labourers	14.0	24.7	19.3	56
Household	40.7	28.0	34.3	102
Self employed	-	2.0	1.0	4
Husband's Occupation				
Agriculture & allied agricultural activities	57.3	41.4	49.3	147
Agricultural labourers	15.3	18.0	16.7	50
Non-agricultural labourers	10.4	11.3	10.7	32
Businessmen	5.3	6.7	6.0	18
Salaried	7.3	13.3	10.3	19
Self employed	4.7	2.7	3.7	23
Others	-	6.7	3.3	9
Mass Media Exposure				
Newspaper/Magazine	12.0	26.7	19.3	57
Radio	22.7	28.7	25.7	76
T.V	72.0	82.7	77.4	231
Cinema	2.0	2.7	2.3	7
Standard of Living Index				
Low	41.3	48.0	44.7	133
Medium	38.0	33.3	35.7	106
High	20.7	18.7	19.7	59
Women's Autonomy				
Low	44.0	34.0	39.1	117
Medium	50.7	65.3	58.2	173
High	5.3	0.0	2.7	8

Table 3.6 presents percentage distribution of ever married women aged 13-19 years by caste, religion, standard of living index, woman's and husband's education and occupation, mass media exposure and woman's autonomy. A majority of respondents are Hindus in both the tehsils. More than one-third of all respondents belonged to SC/ST, more than half belonged to Other Backward Classes and only 7.4 percent do not belong to SC, ST or OBC. Proportion of OBCs was found to be higher in Depalpur tehsil compared with Indore tehsil.

Educational level of the respondents and husbands show a wide gap in the level of literacy. A little less than half of the women have ever attended school compared to 74.3 percent of husbands. Interestingly, whereas the percentage of women who have ever attended school was higher in the Indore tehsil, a higher proportion of husbands is literate in the Depalpur tehsil.

Data show that one-third of respondents does not participate in work other than their regular household work. The highest proportion (45.3) of working women are employed in agriculture and allied activities. One-fifth of women is reported to be employed as agricultural labourers. Distribution of husband's occupation shows that at least half of the men are engaged in agriculture and allied activities. At least 16.7 percent have reported to be working as agricultural labourers and 10.7 percent as non-agricultural labourers. 10.3 percent of women have reported that their husbands are working in salaried occupation and 6.0 percent as businessmen. 3.7 percent of women have reported that their husband's are self-employed.

South Asian societies have traditionally placed high priority on preserving young women's chastity before marriage, which has important implications for their education, age at marriage, autonomy and mobility. Due to the widespread seclusion norms, adolescent girls are less likely to have exposure or physical access to the outside world (Bott and Jejeebhoy 2000). Data on women's exposure to mass media in our survey show that television has the greatest reach among adolescent women. A majority of them (77.4 percent) watch television 25.7 percent listen to radio either sometimes or regularly and 19.3 percent read a newspaper or magazine. Exposure to cinema or theatre is negligible. The pattern of exposure to each of the different forms of media does not vary by tehsil expect the fact the more women in Indore tehsil are exposed to any form of media.

Data show that around 19.7 percent of the households have high standard of living, 35.7 percent belong to medium and the largest number (44.7 percent) belongs to low standard of living. As regards women's autonomy, only 2.7 percent of women have a greater say in the household decisions. A majority of women (58.2 percent) have medium level of autonomy and 39.1 percent of women record low autonomy with regard to decisions in household matters. These findings suggest that women are not at all involved in the decisions about seeking health care for themselves. The real decision-makers continue to be the husband or mother-in-law. A study of Haryana and Punjab shows that even among educated women, if the health worker recommends a referral for an obstetric emergency, the husband, mother-in-law or community elders can override the decision (Das Gupta 1996). Similarly, in a study of adolescent women Kulkarni notes that in Maharastra and Madhya Pradesh fewer than one-third of adolescent women reported any involvement in decision-making about their own health care (Bott and Jejeebhoy 2000). The survey shows that newly married adolescent women also do not have any say in purchasing major household items and going and staying with parents or siblings. Thus, "lack of decision-making authority permeated all aspects of young women's lives –including food intake during pregnancy, workload, mobility and access to health care" (Bott and Jejeebhoy 2000).

Table 3.7: Percentage Distribution of Adolescent Women According to their Demographic Characteristics by Tehsil

Characteristic	Depalpur	Indore	Total	N
Marital Status				
Currently married	97.3	98.7	98.0	292
Separated/Deserted/divorced	2.0	0.7	1.3	4
Widowed	0.7	0.7	0.7	2
Age at Marriage				
Less than and equal to 13	56.7	49.3	53.0	157
14-16	41.3	44.0	42.6	128
17-19	2.0	6.7	4.33	13
Age at Cohabitation				
Less than and equal to 13	28.7	29.3	29.0	87
14-16	66.0	59.3	62.6	186
17-19	5.3	11.3	8.3	25
Age at First Delivery				
Less than and equal to 16	73.6	55.3	65.2	109
17-19	26.4	44.7	34.7	58
Ever Given Birth				
Yes	60.7	50.7	55.7	167
No	39.3	49.3	44.3	131

No. of Living Children				
0	42.0	11.3	31.3	72
1	31.3	56.3	40.0	92
2	21.3	25.0	22.6	52
3 and more	5.3	7.5	6.1	14
No. of Children Ever Born				
0	40.0	5.0	27.8	64
1	31.3	60.0	41.3	95
2	22.0	25.0	23.0	52
3 and more	6.7	10.1	7.8	18
Ever has Still Birth				
Yes	2.7	2.5	2.6	6
No	97.3	97.5	97.4	224
Ever had Spontaneous Abortion				
Yes	8.0	10.0	9.0	20
No	92	90.0	91.0	210
Ever Experienced Infant Mortality				
Yes	6.0	8.8	7.0	16
No	94.0	91.3	93.0	214

Table 3.7 presents demographic characteristics of the respondents including their marital status, age at marriage, age at cohabitation, age at first delivery, ever given birth, number of children ever born, number of children surviving and pregnancy wastage. Data reveals that 98.0 percent of respondents are currently married, 1.3 percent are separated or deserted and 0.7 percent are widowed. More than half of the women (53.0 percent) are married below age 13 years, 42.6 percent between ages 14 to 16 years and only 4.3 percent between 17-19 years. Inter-tehsil comparison shows that more women are married below age 13 years in Depalpur tehsil (56.7 percent) compared with Indore tehsil (49.3 percent). But in rural areas, formal marriage is not immediately followed by cohabitation. Cohabitation only starts after the gauna ceremony. Thus, there is a difference between age at marriage and age at consummation of marriage. Data show that only 29.0 percent of women began living with their husbands below age 13, 62.6 percent started cohabiting between ages 14 to 16 years and 8.3 percent between 17-19 years of age. Thus, more than 90 percent of adolescent girls started living with their husbands by age 16 years and out of these two-third delivered a baby before age 16. The percentage of women who became mothers before age 16 years is higher in Depalpur (73.6 percent) compared with Indore tehsil (55.3 percent). Overall, more than half of the ever-married women have given a live birth and the percentage of such women is higher in Depalpur. As regards the number of children ever born, 41.3 percent are reported to have become mothers of a child and 23.0 percent of two children. 7.8 percent of adolescent women reported three or more than three children ever born

Not all the pregnancies result in a live birth especially, among adolescent women who belong to high-risk category. Other possible outcomes are spontaneous abortion, induced abortion and still birth. Even when exposed to identical antenatal care and immunization and despite virtually identical weight and hemoglobin levels at 20 weeks of pregnancy, adolescent mothers experience poorer birth outcomes compared to older women (Aras et al., 1989). Our survey has found that 9.0 percent of women reported one or more spontaneous abortions and 2.6 percent of women have experienced still birth. Incidentally, none of the respondents reported an induced abortion this may due to the fact that an adolescent woman is expected to bear a child immediately after marriage and prove her fertility. Thus, due to the fear of social stigma they do not talk about any attempt to abort the foetus. Although there is not much difference in reporting of still birth, a higher percentage of women reported spontaneous abortions in Indore (10.0 percent) compared to Depalpur (8.0 percent). In addition, 7.0 percent of adolescent women also reported Infant mortality. This percentage is also higher for Indore tehsil (8.8 percent) as against (6.0 percent) in Depalpur tehsil.

Chapter IV: Maternal and Child Health and Family Planning Services

Promotion of maternal and child health has been one of the important objectives of the India's Family Welfare Programme since its inception. It is still an important component of RCH programme which seeks to integrate maternal and child health and fertility regulation interventions with reproductive health programmes. Studies suggest better pregnancy outcomes for women who receive antenatal care: they are less likely to die of maternal causes, experience stillbirth or perinatal mortality, or give birth to low birth weight babies (Bhatia 1993; Jejeebhoy 2000).

But the use of maternal and child health and family planning services is generally reported to be less among adolescent women. In a study of use of reproductive health services in Philippines, LeGrand and Mbacke (1993) contend that teenage women show poor health care behaviour. They found that teenagers in urban Sahel, especially those under age 18 are less likely to seek early prenatal care as compared with women aged 20 years or more. They also observed that children born to teenage women do not receive proper vaccination. Similarly, other studies have confirmed that teenage women are less likely to seek antenatal care and trained attendance at delivery compared with adult women (Adhikari and Amatya 1996; Sharma et al., 2000). Westley and Kantner (1996) found a direct relationship between women who use family planning and those who obtain prenatal and postpartum care. They concluded that adolescent women not only are less likely to use prenatal or postpartum services than other women but they also have low rates of contraception use.

The use of contraception among adolescent women between marriage and first pregnancy is also low (McCauley and Salter 1995). In Asia, in countries like India and Pakistan, fewer than 5 percent of married adolescent women use birth control methods (AGI 1998).) Use of contraception is low among young people compared with adults, even within marriage (MaCauley and Salter 1995). For young married couples this may be due to the desire to have a child immediately after marriage. It is only after the first birth that women begin using contraceptives to space the next birth. The most common reason cited for low levels of contraceptive use among young women is lack of knowledge about contraceptives (Saez 1994; Agyei and Epema 1992). But some of the studies have found that low contraceptive

prevalence rate for married women seem to reflect socio-economic and cultural factors (Mahmud and Islam 1995). Sendorwitz and Paxman (1985) believed that even when young adults know about contraceptives, few uses them as motivation or access to use it are lacking. Barker and Rich (1992) emphasised the role of negative attitudes about contraceptives as major hindrance in its use by young adults.

This chapter is divided into five broad sections: availability of RCH services at the health facilities, utilisation of maternal health services, child health services, family planning services and the type of provider. Bivariate analysis is used to probe the association between utilisation of maternal and child health and family planning services and background characteristics. Multivariate technique of logistic regression analysis has been used to assess the significant effect of background characteristics. The findings of the survey are also supplemented with case studies and FGDs with adolescent women and in-depth interviews with the providers.

I. Availability of RCH Services at the Health Facilities

Before we discuss the utilisation of services at the health facilities, we examine the availability of these services at health facilities. A structured questionnaire was used to collect this information from the health facilities studied (see Appendix II).

The block PHC in Indore tehsil as mentioned in Chapter-III, has 155 villages under its jurisdiction. A total of 23 persons are working in this PHC which is 15 kms from the Indore district. While the CHC in Depalpur tehsil has 175 villages under it, 33 people are working in this CHC and it is located at a distance of 45 kms from Indore district.

Among the physical facilities, both the block PHC as well as CHC has a pucca building and tubewell is the main source of drinking water. The block PHC in Indore tehsil reports regular supply of electricity but the CHC in Depalpur experiences frequent cuts in electricity. The PHC does not have a telephone connection but the CHC in Depalpur tehsil has a telephone facility available. The PHC has 6 beds whereas the CHC has 10 beds for the in-patients. The PHC does not have an ambulance or any other vehicle whereas the CHC has one ambulance. Both the PHC and the CHC have an operation theatre as well as a separate labour room.

Among maternal health services, pre-natal and post-natal care is provided at both the facilities. Delivery care, however, is limited to only normal delivery. Instrumental or caesarean delivery services as well as emergency obstetric care is not available at both the facilities. MTP services are also lacking at both the facilities and cases are referred to district hospital in Indore. Although both the PHC as well as CHC reported availability of vasectomy and laproscopy facilities, tubectomy is conducted only at the CHC in Depalpur. Diagnosis and treatment of RTIs and STDs is reported to be available at both the facilities. Regarding other services, both the facilities reported regular supply of contraceptives, iron and folic acid tablets, TT injections, ORS packets, vaccines for children and other essential drugs.

II. Utilisation of Maternal Health Services

In this section, knowledge of antenatal care during pregnancy and utilisation of antenatal care services during pregnancy for those women who are pregnant and during their last birth for those who are not currently pregnant have been examined. The section also includes utilisation of natal and post-natal services including breastfeeding practices by adolescent women.

4.1 Knowledge of Antenatal Care during Pregnancy

Better nutrition is an important component of antenatal care and knowledge and awareness are the preconditions for better care and utilisation of available resources. By definition, antenatal care (ANC) is the comprehensive care that women receive and provide for themselves throughout their pregnancy. It includes periodic, regular visits to health care provider, good nutrition, regular physical activity, awareness and monitoring of warning signs and avoidance of the use of unhealthy substance (WHO 1996).

Table 4.1: Percentage Distribution of Women by Knowledge of Antenatal Care

Knowledge	Percent
Women who know about ANC	35.0
At least one type of care	35.0
Two types of care	22.7
Three types of care	9.3

N= 298

There are many beliefs regarding the quantity as well as quality of food intake during different trimesters of pregnancy. The findings of our survey shown in Table 4.1 reveal that only 35.0 percent of the women have some knowledge about the care required during pregnancy (Table 4.1). 22.7 percent of women could recall at least two types of care and 9.3 percent named three types of care required during pregnancy.

During FGDs most of the women mentioned that good and nutritious food should be consumed during pregnancy. Knowledge of adolescent women regarding the food intake during pregnancy is clear in the following observations: A *17 year old woman remarked "one should eat green vegetables and light food during pregnancy such as dal, dalia and fruits which are easily digestible". Another woman added, "one should also have hot food like dryfruits, gur and ajwain".*

While FAO/WHO (1985) has recommended that throughout pregnancy a pregnant woman should eat more than she normally does, for some women pregnancy is no different from routine, thus, they eat what is available. Very few women take milk regularly. In general, consumption of milk products is very low. *An 18-year-old mother of a child narrated, " I never had milk during pregnancy. Being a daily wage earner I cannot afford good and nutritious food for me even during pregnancy". She further added, "even if we get two square meals everyday, it is enough for us, when we do not have money for vegetables we eat chappati even with chilli".* Women have also reported gender bias in the intra-household food distribution. In a family, women, especially newly married adolescent women (even during pregnancy), eat the left over after others complete their meals. These findings are similar to a study of married adolescent women in Bangladesh that found that young women were not given any extra food or particularly nutritious food during pregnancy. Moreover, they had little control over their own food intake (Chowdhary 2000).

Besides nutritional intake, women are also reported to be aware of the need for additional rest during pregnancy. *One young woman explained, "one should not lift heavy load".* But young mothers continue a heavy workload schedule even during pregnancy, especially during peak agricultural season. Most of the women rarely have the opportunity to reduce their physical activity during pregnancy. Some women also believe that regular health check ups, medicines and maintenance of personal hygiene are important at the time of pregnancy.

Table 4.2: Percentage Distribution of Women who have Knowledge of Antenatal Care by Background Characteristics

Characteristic	Percent
Attended School	
Yes	44.0
No	27.0
Chi Sq (sig) 9.412 (.002)***	
Exposure to Mass Media	
Ever exposed to Newspaper	53.4
Never exposed	30.6
Chi Sq (sig) 10.756 (.001)***	
Ever exposed to Radio	40.3
Never exposed	33.2
Chi Sq (sig) 1.260 (.262)	
Ever exposed to T.V	37.1
Never exposed	27.9
Chi Sq (sig) 1.926 (.165)	
Work Status	
Working	35.5
Not working	34.0
Chi Sq (sig) .072 (.789)	
Husband's Occupation	
Agricultural	33.8
Non-agricultural	37.1
Labourers	35.4
Chi Sq (sig) .242 (.886)	
SLI	
Low	34.3
Medium	35.5
High	35.6
Chi Sq (sig) .048 (.976)	
Development of Tehsil	
Less developed	26.0
More developed	44.0
Chi Sq (sig) 10.681 (.001)***	
Distance from a Health Facility	
Near	36.5
Far	32.0
Chi Sq (sig) .593 (.441)	
Autonomy Index	
Low	20.5
Medium	43.1
High	62.5
Chi Sq (sig) 18.523 (.000)***	
Children Ever Born	
0	14.9
1	48.4
2	49.1
3 +	32.2
Chi Sq (sig) 46.824 (.000)***	
Spontaneous Abortion	
Yes	20.0
No	40.5
Chi Sq (sig) 3.228 (.072)*	

*** Significant at .01 level **Significant at .05 level *Significant at 0.10 level

Table 4.2 presents percentage distribution of women having knowledge of antenatal care by background characteristics. The table show that a higher percentage of women who have ever attended school (44.0 percent) are aware of antenatal care compared with those who never attended a school (27.0 percent). As expected, knowledge of antenatal care is also positively linked with regular exposure to newspaper. 53.4 percent of women who regularly read a newspaper are aware of antenatal care as opposed to only 30.6 percent of women who never read a newspaper.

Levels of development and woman's autonomy index are positively linked with the awareness regarding the importance of antenatal care. A higher percentage of women living in Indore tehsil are aware (44.0 percent) of antenatal care required during pregnancy in relation to women in Depalpur tehsil (26.0 percent). Women who have higher autonomy in the household are more knowledgeable (62.5 percent) about antenatal care necessary for a pregnant woman compared with women with low autonomy (20.5 percent). As it is evident from the table knowledge of antenatal care also increases with the increase in number of children ever born. Interestingly, those who have a history of a spontaneous abortion are less aware of antenatal care (20.0 percent) compared with 40.5 percent of women who never had a spontaneous abortion. Economic variables such as the work status of woman, household standard of living index and husband's occupation do not significantly affect the level of awareness regarding antenatal care.

4.2 Utilisation of Antenatal Care

The RCH programme underlines that all pregnant women must receive basic, professional antenatal care. Ideally, antenatal care should monitor a pregnancy for signs of complications, detect and treat pre-existing and concurrent problems of pregnancy, and provide advice and counselling on preventive care, diet during pregnancy, delivery care, postnatal care and related issues (MOHFW 1998). The technical working group on Antenatal Care (WHO 1996) has also stressed the need for antenatal care for each and every pregnant woman. The committee has also suggested that pregnant women should have a minimum of four antenatal care visits (by 16 weeks, at 24-28 weeks, at 32 weeks and at 36-38 weeks). The Reproductive Health Programme in India includes the provision of a minimum of at least three antenatal check-ups for pregnant women (MOHFW 1997). In addition, the number of antenatal visits and the timing of first antenatal check up are important for the health of the mother as well as

outcome of pregnancy. For proper monitoring of the pregnancy, the first check up is expected to be done immediately on confirmation of pregnancy or at least before twenty weeks of gestation (MOHFW 2000).

This section explores the pattern of Utilisation of antenatal care by adolescent women during current pregnancy and their last birth. Women were asked whether they received antenatal check ups either at home or a health facility. In addition, the kind of care received and reasons for not going for antenatal check ups were also asked.

Table 4.3: Percentage Distribution of Women by Type of Antenatal Care Received during Current Pregnancy and their Last Birth

Item	Current Pregnancy	Last Birth
Received antenatal check up	40.4	54.2
No. of times (mean)	2.9	3.4
First check up received in which month (mean)	3.4	4.2
Type of ANC		
WT	57.1	50.5
HT	19.0	20.9
Blood pressure	52.4	69.2
Blood test	38.1	73.6
Urine test	47.6	68.1
Abdomen examined	66.7	85.7
Internal exam	47.6	61.5
X-ray	0.0	8.8
Sonogram/Ultrasound	19.0	41.8
Received IFA	51.9	70.8
Whether Consumed all	70.4	73.1
Received TT injection	59.6	89.3
No of times (mean)	1.52	2.32
	N=52	N=168

In our present study we find that only 40.4 percent of the adolescent women report at least one antenatal check up at the time of current pregnancy (Table 4.3). The average number of times they receive the check up is 2.9 (such a high average is due to the small number of cases of currently pregnant women and perhaps women who went for more checks frequently were at an advanced stage of their pregnancy) and on an average they receive the first antenatal check up in the 3rd month of the pregnancy. During the check ups, most of the women (66.7 percent) have reported only abdominal examination. In case of more than half of the women blood pressure is recorded (52.4 percent) and weight is measured (57.1 percent). A little less than half mention that urine test (47.6 percent) and internal examination

are conducted (47.6 percent). 38.1 percent of women reported that a blood test is also conducted and 19.0 percent of women have undergone sonogram/ultrasound test.

Table 4.3 also shows that 54.2 percent of the adolescent women have reported at least one antenatal check up at the time of their last birth. The average number of times they went for a check up is 3.4 and on an average they visited a health facility for the first time in the 4th month or beginning of second trimester of pregnancy. During the check ups as in the case of currently pregnant women, a majority (85.7 percent) of the women reported only abdominal examination. Other common components of antenatal check up are blood tests (73.6 percent), blood pressure check up (69.2 percent), and urine test (68.1 percent). 61.5 percent of women have reported internal examination and in the case of half of them weight has been measured. At least 41.8 percent of women have also recorded undergoing ultrasound or sonogram.

In addition to antenatal check ups, consumption of iron and folic acid (IFA) tablets and TT injection are also important components of antenatal care. An important cause of death in infancy is neo-natal tetanus, which can be prevented by two doses of tetanus toxoid vaccine given one month apart during early pregnancy (IIPS 2000). Most of the adolescent women (89.3 percent) received TT injections during last birth: in fact they interpret antenatal care as only obtaining TT injection. On an average most of the women received, as recommended, at least two tetanus toxoid injections. Among currently pregnant women 59.6 percent received TT injection at the time of survey. On an average, they received TT injection for 1.52 times.

Iron deficiency anaemia is also a major threat to safe mother hood and to the health of the infants as it contributes to low birth weight, lower resistance to infections, impaired cognitive development and decreased work capacity (IIPS 2000). The provision of iron and folic acid (IFA) tablets prevents pregnant women from nutritional anaemia and is an important part of safe motherhood services. Our survey shows that only half of the currently pregnant women received IFA tablets and out of those who received, only 70.4 percent actually consumed the tablets. Similarly, 70.8 percent of women during their last birth received IFA tablets but more than one fourth of the girls who received the tablets did not consume it.

Most women do not like IFA tablets due to complications attributed to them. The study shows that they believe that the tablets are "hot" and would increase appetite leading to a large baby. FGDs reveal that some women do not consume the tablets as they do not like

medicines and thus do not feel like having it. *A pregnant woman responded, " I don't like the tablets and I will not consume these tablets". Another woman added, "these tablets do not taste good so I throw them when I am fed up with them". A six months pregnant woman remarked, " these tablets smell bad".*

Moreover, most women are also not aware of the need of IFA tablets and suspect their purpose. During the FGDs one young woman remarked, " *these tablets are provided by the government (called it Sarkari Goli) and as we do not have trust in government medicines so we generally throw these tablets".* Results of this study correspond to a study in rural Maharastra, which shows that TT injection had higher acceptability than IFA tablets (Barua 2000).

Overall, only 29.8 percent of women during their last birth received full package of antenatal services including three check ups, iron and folic acid tablets and TT injections. A study in rural Maharastra also shows that the full package of services was not used by more than 80 percent of the pregnant women, as they did not believe that total antenatal care is necessary. In fact the women and their mothers-in-law believe that antenatal care could cause problems during pregnancy (Barua 2000). Data on currently pregnant women presented above may have truncation bias as these women may receive full package of antenatal care in the future. Thus, data are presented only for interest and not for any comparison purpose.

Table 4.4: Percentage Distribution of Women who received Full Package of Antenatal Care during their Last Birth by Background Characteristics

Characteristic	Percent
Attended school	
Yes	72.0
No	34.4
Chi Sq (sig) 23.481 (.000)***	
Exposure to Mass Media	
Ever exposed to Newspaper	69.0
Never exposed	47.5
Chi Sq (sig) 4.432 (.035)**	
Ever exposed to Radio	61.8
Never exposed	48.5
Chi Sq (sig) 1.908 (.167)	
Ever exposed to T.V	56.1
Never exposed	37.8
Chi Sq (sig) 4.425 (.035)**	
Work Status	
Working	44.2

Not working	65.5
Chi Sq (sig) 6.659 (.010)***	
Husband's Occupation	
Agricultural	62.7
Non-agricultural	63.6
Labourers	30.0
Chi Sq (sig) 16.782 (.000)***	
SLI	
Low	38.0
Medium	56.5
High	77.8
Chi Sq (sig) 13.848 (.001)***	
Development of Tehsil	
Less developed	54.9
More developed	46.8
Chi Sq (sig) 1.120 (.290)	
Distance from a Health Facility	
Near	55.9
Far	42.1
Chi Sq (sig) 2.850 (.091)*	
Autonomy Index	
Low	59.6
Medium	47.3
High	62.5
Chi Sq (sig) 2.397 (.302)	
Children Ever Born	
1	58.9
2	41.5
3 +	33.3
Chi Sq (sig) 6.547 (.038)**	
Spontaneous Abortion	
Yes	50.0
No	51.3
Chi Sq (sig) .009 (.926)	

*** Significant at .01 level **Significant at .05 level *Significant at 0.10 level.

The percentage distribution of women by Utilisation of full package of antenatal care (including three check ups, IFA tablets and TT injection) during last birth by background characteristics presented in Table 4.4 show that Utilisation increases with increase in number of women who have attended school and with exposure to mass media. 72.0 percent of women who have ever attended school have received full package of antenatal care compared with 34.4 percent who have not attended school. A higher percentage of women regularly exposed to newspapers and television have received full package of antenatal care services during their last birth. As expected, in case of economic status of household, 77.8 percent of women having a high standard of living have utilised antenatal care: these percentages for medium and low standard of living is 55.6 percent and 38.0 percent respectively. Husband's

occupation also influences Utilisation of antenatal care: only 30.0 percent of women whose husbands' are labourers have utilised full package of services as against 62.7 percent whose husbands' are in agriculture and 63.6 percent who are in non-agricultural occupations. Distance from a health facility is also an important determinant of antenatal care. 55.9 percent of women staying near a health facility has utilised antenatal care as compared with 42.1 percent of women who stay away from a health facility.

On the other hand, Utilisation of antenatal care is found to be negatively associated with a woman's work status and the number of children ever born. Less number of women engaged in activities aside from their housework (44.2 percent) have received antenatal care compared with 65.5 percent of women who are involved only in household work. This may be perhaps due to the fear of loss of wages among working women. Also, Utilisation of full package of antenatal care decreases with the increase in the number of children ever born: 58.9 percent of women having only one child received antenatal care compared with only 33.3 percent of mothers of three or more children.

Table 4.5: Percentage Distribution of Women by Reason for not receiving Antenatal Care

Reason	Current Pregnancy	Last Birth
Not necessary/ Not customary	22.6	49.4
Costs too much	6.5	5.2
No time/long waiting	29.0	-
Elders opposed	6.5	5.2
No one to accompany	25.8	14.3
Lack of knowledge	6.5	14.3
Staff was not available at health facility	3.2	5.2
Embarrassed to seek care	-	1.3
No transport/Facility far off	-	5.2

The percentage distribution of women by reasons for not receiving antenatal care is presented in Table 4.5. The most important reason for not receiving antenatal care among currently pregnant women is either long waiting at the health centres or constraints of time for visiting a health facility (29.0 percent). One-fourth of women mention that they have not sought antenatal care as there is no one to accompany them. Being young and newly married, women find it difficult to travel on their own. Moreover, neither they are familiar with the location of the health services nor they have the confidence of finding their way alone. *Santosh, who reported three spontaneous abortions before current pregnancy explained, "*

even for this pregnancy I did not receive any antenatal care as there is no one in the house to accompany me to a doctor/health centre"

22.6 percent of women do not consider the need to have a check-up and believe that it is non-customary to go to a health facility for antenatal care. 6.5 percent of women are also discouraged by family members to go for a check up, as they have not experienced any problem during pregnancy. Ignorance of family members towards the need for antenatal care is evident in the comment of a *17-year-old pregnant woman from a high caste, " I have not received any antenatal check ups so far. Neither iron and folic acid tablets nor TT injection as my in-laws are not interested in seeking antenatal care for me".* Lack of knowledge also accounts for another 6.5 percent of cases. *A nine months pregnant woman explained, " I do not have any knowledge about antenatal care required during pregnancy".* 6.5 percent of women have not sought antenatal care due to economic reasons.

Women who did not receive any antenatal care during their last birth were also asked about the reasons for the same. Most of the women do not feel the necessity for antenatal care, as they are confident about their health. Our survey shows that half of women did not consider antenatal care necessary during their last birth. Women also believe that it is not customary in their society to go for an antenatal check up during pregnancy. A study of adolescent women in rural Maharastra also shows that women believed more in traditional dietary restrictions rather than going for antenatal care (Barua 2000). Some women have also mentioned that there was no one to accompany them (14.3 percent) to the health facility. 14.3 percent of women did not receive it due to lack of knowledge regarding antenatal care. In addition, financial constraint (5.2 percent), opposition of elders in the family (5.2 percent) and non-availability of staff at the facilities (5.2 percent) are also reported as some of the reasons for not seeking services during last birth. Other studies have also shown that the in-laws did not allow girls even if they suffered from pregnancy complications such as oedema and bleeding (CWFP 1998).

4.3 Logistic Regression Analysis of Utilisation of Antenatal Care

Table 4.6 presents logistic regression analyses for Utilisation of antenatal care by women during their last birth. On the basis of correlation analysis, some of the highly correlated variables have been excluded in the regression analyses. The table of correlation matrix is

given in Appendix I. As can be seen from the table, woman's education is highly and positively correlated with their exposure to mass media. Thus, mass media exposure has been dropped in the multivariate analysis. Similarly, husband's occupation is highly and negatively correlated with standard of living index: women whose husband's are in agricultural and non-agricultural occupations are less likely to be in low standard of living. Husband's occupation is also positively and highly correlated with woman's education. Therefore, husband's occupation has been excluded in the multivariate analysis. Another variable, which is highly correlated, with other variables is a woman's work status. Woman's work status is highly and positively correlated with standard of living index and negatively with woman's education. Those women who are working generally belong to low standard of living and are also less likely to have attended school. This may be due to the fact that most of them are working as agricultural labourers to earn their livelihood. Thus, woman's work status is also not included in the multivariate analysis. The above mentioned variables have been excluded in all the multivariate analyses presented in this study.

Table 4.6: Logistic Regression Analyses of Women who received Full Package of Antenatal Care during their Last Birth

Variable	Odd Ratios	
	Model 1	Model 2
Attended School		
Yes		4.486***
No (r)		
SLI		
Low (r)		
Medium	2.140**	
High	6.347***	
Autonomy Index		
Low (r)		
Medium		.500*
High		.741
Distance from a Health Facility		
Near	2.306**	
Far (r)		
Development of Tehsil		
Less developed (r)		
More developed	.796	
Children Ever Born		
1	2.829*	
2	1.200	
3 + (r)		
Spontaneous Abortion		
Yes		1.318
No (r)		

Knowledge of ANC		
Yes		2.070**
No (r)		
-2 Log Likelihood	204.376	199.751
N	166	167

r: reference category ***p< 0.01 **p< 0.05 *p<0.10

Results of logistic regression do not deviate much from the bivariate analysis. Woman's education, standard of living index, distance from a health facility, knowledge of antenatal care and children ever born have emerged as important predictors of Utilisation of antenatal care. Woman's education has a direct and significant effect on the Utilisation of antenatal care. Those women who have ever attended school are 4 times more likely to receive antenatal care. As expected, standard of living index also has a significant positive effect on the Utilisation of antenatal care. Compared with women in low standard of living, women with medium standard of living are two times and those in high standard of living are six times more likely to seek antenatal care.

Distance from a health facility is significantly associated with the Utilisation of antenatal care suggesting that the distance of a user from a health facility is an important factor influencing service Utilisation. Relative to women who are living in villages, which are far from a health facility, women living in a village near a health facility are more likely to seek antenatal care. Knowledge about antenatal care is also found to be positively and significantly linked with the Utilisation of antenatal care: women who have knowledge of antenatal care are twice as likely to receive antenatal care services. Also, compared with three or more than three children, women with one child are more likely to seek antenatal care. This may be perhaps due to the fact that women are more careful at the time of their first birth. Contrary to our expectations, woman's autonomy is negatively related with the utilisation of antenatal care. Relative to women with low level of autonomy, women with medium autonomy are less likely to seek antenatal care.

4.4 Utilisation of Natal Care

An important thrust of the Reproductive Health Programme is to encourage deliveries under proper hygienic conditions under the supervision of trained health professionals as a majority of maternal deaths and much of chronic morbidity results from failure to get timely help for complications at the time of delivery (MOHFW 1998). WHO (1996) estimated that 4 million

neonatal deaths world-wide, of which 2.8 million occur during the first week of life is usually a result of poor pregnancy management and deliveries.

Table 4.7 Percentage Distribution of Women by Place of Delivery

Place of Delivery	Percent
Home	44.4
Institutional	55.6

N=167

Table 4.7 indicates that at least 44.4 percent of deliveries among adolescent women are conducted at home and 55.6 percent of deliveries are conducted at a health facility. These findings are also substantiated by other studies which show that a significant percent of adolescent women still deliver at home (CWFP 1998; Barua 2000).

Table 4.8: Percentage Distribution of Women by Assistance during Home Delivery

Type of Assistance	Percent
Doctor/ANM/Nurse	2.7
Trained dai	51.4
Untrained dai	31.1
Friends/Relatives	9.5
None	5.4

The findings of the study presented in Table 4.8 show that out of those deliveries, which are conducted at home, either a doctor/nurse or ANM attends only 2.7 percent. 51.4 percent of deliveries are conducted by a trained dai. Untrained persons assist the rest of the deliveries: 31.1 percent by untrained dai and 9.5 percent by friends or relatives. In 5.4 percent of the cases no one has been reported to be present at the time of delivery.

Table 4.9: Percentage Distribution of Women by Reason for not Delivering in a Health Facility

Reason	Percent
Not necessary/Not customary	50.0
Costs too much	1.4
No time to go	29.7
No transport	9.5
Family did not allow	5.4
Others	4.2

Those who delivered at home were asked about the reasons for not going to a health facility. Our survey show that half of the women feel that going to a health facility is not necessary/customary unless there is some complication (Table 4.9). *A comment from a mother of a one-year-old child illustrates adolescent women's attitude towards Utilisation of natal care, " we generally call dai and deliver at home. If there is no problem then why should we go to a hospital?"* 29.7 percent could not go as there was no time to go to a health facility and thus the delivery took place at home only. 9.5 percent of women have mentioned non-availability of transport. This is, especially true for women who are living in villages far away from health facilities and do not have any means of transportation. In 5.4 percent of cases women have not delivered in a health facility due to the opposition from family members. These findings are similar to a study on adolescent women in Bangladesh where women prefer to deliver at home and delivery is reported to be performed by grandmothers or TBAs. They were reluctant to use medical facilities as they had the fear that if they went to the hospital for delivery then doctors would perform caesarean delivery instead of a normal delivery (CWFP 1998).

Table 4.10: Percentage Distribution of Women who Delivered in a Health Facility by Background Characteristics

Characteristic	Percent
Attended School	
Yes	63.5
No	49.5
Chi Sq (sig) 3.297 (.069)*	
Exposure to Mass Media	
Ever exposed to Newspaper	51.7
Never exposed	56.5
Chi Sq (sig) .224 (.636)	
Ever exposed to Radio	64.7
Never exposed	53.4
Chi Sq (sig) 1.407 (.236)	
Ever exposed to T.V	56.6
Never exposed	53.3
Chi Sq (sig) .138 (.710)	
Work Status	
Working	58.9
Not working	49.1
Chi Sq (sig) 16.977 (.000)***	
Husband's Occupation	
Agricultural	73.0
Non-agricultural	48.5
Labourers	38.3
Chi Sq (sig) 16.977 (.000)***	

SLI	
Low	43.6
Medium	64.5
High	70.4
Chi Sq (sig) 8.943 (.011)**	
Development of Tehsil	
Less developed	59.3
More developed	51.3
Chi Sq (sig) 1.081 (.299)	
Distance from a Health Facility	
Near	61.8
Far	43.9
Chi Sq (sig) 4.907 (.027)**	
Autonomy Index	
Low	59.6
Medium	53.2
High	75.0
Chi Sq (sig) 1.781 (.410)	
Children Ever Born	
1	67.4
2	42.3
3 +	33.3
Chi Sq (sig) 12.674 (.002)***	
Spontaneous Abortion	
Yes	23.1
No	58.8
Chi Sq (sig) 6.215 (.013)**	

*** Significant at .01 level **Significant at .05 level *Significant at 0.10 level

Table 4.10 presents percentage distribution of women who delivered at a health facility by background characteristics. The findings show that increase in the percentage of educated women significantly increases institutional deliveries: 63.5 percent of women who ever attend school delivered in a health facility as opposed to 49.5 percent of women who never attended a school. Husband's occupation also significantly affects the likelihood of the delivery to take place in a health facility. A higher percentage of women whose husbands are in agricultural occupation (73.0 percent) and non-agricultural (48.5 percent) have delivered in a health facility compared with women whose husbands are labourers (38.3 percent). A higher percentage of working women has also delivered in health facility (58.9 percent) compared with non-working women (49.1 percent).

Similarly, a higher percentage of women with a high standard of living also deliver in institutions, as they can afford to spend on it. Distance of the user from the health facility affects the Utilisation of natal services at a health facility: 61.8 percent of women who are living in a village near a health facility delivered in a health facility compared with 43.9 percent of women living in a village far off from a higher level facility. Interestingly, as in

the case of antenatal care, percentage of women preferring institutional deliveries decreases with the number of children ever born. Pervious history of a spontaneous abortion is also negatively related with the Utilisation of institutional natal care services.

4.5 Logistic Regression Analysis of Utilisation of Natal Care

Results of logistic regression analyses for Utilisation of natal care is presented in Table 4.11.

Table 4.11: Logistic Regression Analyses of Women who Delivered in a Health Facility

	Odd Ratios	
Variable	**Model 1**	**Model 2**
Attended School		
Yes		1.628
No (r)		
SLI		
Low (r)		
Medium	2.871***	
High	3.584**	
Autonomy Index		
Low (r)		
Medium		.709
High		1.550
Distance from a Health Facility		
Near	3.134***	
Far (r)		
Development of Tehsil		
Less developed (r)		
More developed	.809	
Children Ever Born		
1	4.373**	
2	1.203	
3 + (r)		
Spontaneous Abortion		
Yes		.219**
No (r)		
-2 Log Likelihood	195.121	215.489
N	165	165

r: reference category ***p< 0.01 **p< 0.05 *p<0.10

As in the case of bivariate analysis, results of logistic regression also show that standard of living index, distance from a health facility and pregnancy outcome are important predictors of likelihood of a delivery to take place in a health facility.

As expected, relative to women with low standard of living, women with medium standard of living are two times and women with high standard of living are three times more likely to deliver in a health facility. Distance from a health facility has also emerged as an important factor determining the probability of a delivery to take place in a health facility. Women who are staying in a village near a higher level health facility are more likely to deliver in a health facility compared with women who are staying far off from a higher level facility. On the other hand, pregnancy outcome i.e. spontaneous abortion is inversely associated with the likelihood of a delivery to take place in a health facility. Probability of an institutional delivery also decreases with an increase in the number of children ever born. This again as in the case of antenatal care may be due to the fact that women are more conscious at the time of their first birth as compared with subsequent births.

4.6 Utilisation of Post Natal Care

The health of a mother and her newborn child not only depends on antenatal care but also on the care she and her infant receive during the first few weeks after the delivery. RCH programme recommended at least three post partum check ups, which are especially important, if the delivery takes place in non-institutional settings (MOHFW 1998).

The results of the study show that only 8.4 percent of women have received postnatal care within 42 days after the delivery. Similar findings were reported in a study of married adolescent women in Bangladesh where only 15 to 18 percent of the respondents reported that they went for post-natal check up (CWFP 1998).

Table 4.12: Percentage Distribution of Women who Received Post Natal Care by Background Characteristics

Characteristic	Percent
Attended School	
Yes	9.5
No	7.5
Chi Sq (sig) .200 (.654)	
Exposure to Mass Media	
Ever exposed to Newspaper	17.2
Never exposed	6.5
Chi Sq (sig) 3.585(.058)*	
Ever exposed to Radio	11.8
Never exposed	7.5
Chi Sq (sig) .636 (.425)	

Ever exposed to T.V	10.7
Never exposed	2.2
Chi Sq (sig) 3.044 (.081)*	
Work Status	
Working	11.6
Not working	1.8
Chi Sq (sig) 4.602 (.032)**	
Husband's Occupation	
Agricultural	14.9
Non-agricultural	6.1
Labourers	1.7
Chi Sq (sig) 7.804 (.020)*	
SLI	
Low	5.1
Medium	6.5
High	22.2
Chi Sq (sig) 8.110 (.017)**	
Development of Tehsil	
Less developed	7.7
More developed	9.2
Chi Sq (sig) .124 (.724)	
Distance from a Health Facility	
Near	9.1
Far	7.0
Chi Sq (sig) .210 (.647)	
Autonomy Index	
Low	12.8
Medium	6.3
High	12.5
Chi Sq (sig) 1.964 (.375)	
Children Ever Born	
1	10.5
2	7.7
3 +	0.0
Chi Sq (sig) 2.221 (.329)	
Spontaneous Abortion	
Yes	7.7
No	8.5
Chi Sq (sig) .010 (.920)	
Place of Delivery	
Home	1.4
Health facility	14.0
Chi Sq (sig) 8.555 (.003)***	

*** Significant at .01 level **Significant at .05 level *Significant at 0.10 level

The percentage distribution of women by Utilisation of post natal care and background characteristics presented in Table 4.12 show that mass media exposure, woman's work status, husband's occupation, standard of living index and place of delivery influences the Utilisation of post partum care. A higher percentage of women who are exposed to newspaper and television have received post partum care: 17.2 percent of women exposed to newspapers

sought post natal care compared with only 6.5 percent who were never exposed to a newspaper. Similarly, 10.7 percent of women exposed to television received postnatal care after the delivery in relation to only 2.2 percent who had never been exposed to television. A higher percentage of working women (11.6 percent) have received post-natal care compared with only 1.8 percent of women who are involved only in household activities. More women whose husband's are either in agricultural and non-agricultural occupations have sought post natal care as opposed to only 1.7 percent of women whose husband's are labourers. Utilisation of postnatal care also increases with an increase in the standard of living. 22.2 percent of women having a high standard of living utilised postnatal care compared with only 5.1 percent of women with low standard of living.

Interestingly, place of delivery has also emerged as an important factor which affects the Utilisation of postnatal care services. 14.0 percent of women who delivered at a health facility reported to have sought post partum services as opposed to only 1.4 percent of women who delivered at home.

Table 4.13: Percentage Distribution of Women by Reason for not Receiving Post Natal Care

Reason	Percent
Not necessary/ Not customary	34.2
Costs too much	2.6
No one to accompany	2.0
Lack of knowledge	57.9
Others	3.3

Our survey shows that the most important reason for not seeking postnatal care is the lack of knowledge regarding post partum care (Table 4.13). 57.9 percent of the women do not know that post-natal care is required after delivery or birth of the child. 34.2 percent feel that it is not necessary to go for post natal check ups, as they do not have any problem after the birth of the child. FGDs reveal that most women believe that the postnatal period does not require any medical care. Some pain and discomfort such as fever, pain in abdomen or vaginal discharge is a natural occurrence after childbirth and that these problems can be handled through home remedies. 2.6 percent of women have not sought post partum care due to lack of money and another 2.0 percent have reported that there was no one in the home to accompany them to a health facility.

4.7 Logistic Regression Analysis of Utilisation of Post Natal Care

Results of logistic regression analyses for Utilisation of post-natal care is presented in Table 4.14.

Table 4.14: Logistic Regression Analyses of Women who Received Post Natal Care

	Odd Ratios	
Variable	**Model 1**	**Model 2**
Attended School		
Yes		1.033
No (r)		
SLI		
Low (r)		
Medium	1.301	
High	5.400**	
Autonomy Index		
Low (r)		
Medium		.510
High		.805
Distance from a Health Facility		
Near	1.742	
Far		
Development of Tehsil		
Less developed (r)		
More developed	1.388	
Children Ever Born		
1	989.617	
2	722.624	
3 + (r)		
Spontaneous Abortion		
Yes		1.752
No (r)		
Place of delivery		
Health facility		12.084**
Home (r)		
-2 Log likelihood	85.350	84.215
N	165	165

r: reference category ***p< 0.01 **p< 0.05 *p<0.10

As in the case of bivariate analysis, results of logistic regression show that standard of living index and place of delivery are important predictors of Utilisation of post partum care. Standard of living index is positively and significantly linked to the Utilisation of postnatal care. In relation to women having a low standard of living, women with high standard of living are 5 times more likely to seek postnatal care. Place of delivery is also an important determinant of Utilisation of postnatal care. Women who delivered in a health facility are 12

times more likely to seek postnatal care as opposed to women who delivered at home. This may be perhaps due to the fact that an institutional delivery also increases their awareness regarding post partum care as they interact with health personnel and also other women who deliver in a health facility.

4.8 Breastfeeding Practices

The WHO and UNICEF recommend that infants should be given only breast milk for the first six months of their life. Similarly, the reproductive and child health programme of the government of India also recommends that infants should be exclusively breastfed from birth to age four months (IIPS 2000). Initiation of breastfeeding immediately after childbirth is also important because it benefits both the mother and the infant.

Table 4.15: Percentage Distribution of Women by Initiation of Breastfeeding

Item	Percent
Ever breastfed	92.2
Breastfed immediately	10.3
Average no. of hrs after breastfeeding started	4.04
Average no. of days after breastfeeding started	2.11

N=167

Our survey shows that although more than 90 percent of women breastfed their children, very few children were put to the breast immediately after birth (Table 4.15). Only 10.3 percent of women started breastfeeding immediately after birth. Those who started on the same day, on an average started after 4 hours of birth of a child. Most of the women reported that they start breastfeeding on an average two days after the delivery. During FGDs women have mentioned that it is customary to start breastfeeding only after 1-2 days of delivery. They believe that the breastfeeding should start at an auspicious occasion. *A young woman explained, "one should start breastfeeding at an auspicious occasion only after consulting a maharaj (for the well being of the child)".*

Lack of knowledge and ignorance characterise their breastfeeding practices: *One woman explained, "as my breast milk did not start, I fed the infant with tea for two days". Another woman added, "it is customary to feed the baby with black tea in the beginning rather than breast milk for 2-3 days after the birth". A young woman remarked, "the first two days' milk is not good for the child's health and the elders did not allow us to feed the baby with*

colostrum". Focus Group Discussions also reveal that women who had just delivered were not given anything to eat for three days after the delivery.

To sum up, our survey shows that knowledge of antenatal care among adolescent women is limited Moreover, even if women are aware of the importance of a nutritious diet during pregnancy, cultural and economic factors limit their access to better nutrition. The Utilisation of antenatal care is also poor among adolescent women. Overall, only 29.8 percent of women received full package of services during their last birth. Compared with antenatal care, Utilisation of natal care is somewhat better among adolescent women. 55.5 percent of deliveries are reported to be conducted at a health facility. 44.4 percent of the deliveries, however, are still conducted at home. Among the home deliveries, untrained persons or some relative and friends attend most of the births. Among all the components of maternal health services, Utilisation of post-natal care is the poorest among adolescent women. Only 8.4 percent of women sought post partum care. Although breastfeeding is found to be a universal practice, only 10.3 percent of adolescent women reported to have started breastfeeding immediately after birth.

III. Utilisation of Child Health Services

In this section, Utilisation of immunisation services and treatment seeking for short-term morbidity for children under 5 years of age has been examined.

4.9 Immunisation

Vaccination of children against six serious but preventable diseases (tuberculosis, diphtheria, pertussis, tetanus, poliomyelitis and measles) is an important component of child health care system and reproductive and child health programme in India. Children born to adolescent women who were less than 5 years of age were asked whether the child had received any vaccination. But data were collected only for the last birth of a woman. If any vaccination had been received, the mother was asked whether the child had received a vaccination against tuberculosis (BCG), diphtheria, whooping cough (Pertussis) and tetanus (DPT), Poliomyelitis (Polio) and measles. For DPT and Polio, information was also obtained on the number of doses of the vaccine given to the child.

Table 4.16: Percentage Distribution of Women by Awareness of Immunisation

Item	Percent
Knowledge of significance of vaccination	98.7
Knowledge about a source of vaccination	99.4

N= 156

Data in Table 4.16 show that almost all the women know about the significance of vaccination against the childhood diseases. Knowledge about a source of vaccination is also universal among adolescent women.

Table 4.17: Percentage Distribution of Women by Type of Vaccination Received for their Last Birth

Item	Percent
Ever received vaccination	85.3
BCG	97.0
DPT	
0 Dose	7.5
1	11.3
2	7.5
3	73.7
Polio	
0 Dose	2.3
1	6.0
2	12.8
3	78.9
Measles	67.7
Vitamin A	69.2
Fully Immunised (12-60 months)	84.3

Data on immunisation of children by type of vaccination are presented in Table 4.17. Data show that 85.3 percent of women have reported that they received at least a vaccination against childhood diseases for their last birth. As can be seen from the table, 97.0 percent of women have reported that their children are immunised against BCG. In 73.7 percent and 78.9 percent of cases children have received all the three doses of DPT and Polio respectively. 67.7 percent of women have immunised their children against Measles and 69.2 percent reported to have received Vitamin A. Overall, 84.3 percent of women have reported that their children (of one year or above) are fully immunised against all the childhood diseases including BCG, three doses of DPT, three doses of polio and measles.

Table 4.18: Percentage Distribution of Women who received any Vaccination for their Last Birth by Background Characteristics

Characteristic	Percent
Attended school	
Yes	93.0
No	78.8
Chi Sq (sig) 6.148 (.013)**	
Exposure to Mass Media	
Ever exposed to Newspaper	96.6
Never exposed	82.7
Chi Sq (sig) 3.616 (.057)*	
Ever exposed to Radio	87.9
Never exposed	84.6
Chi Sq (sig) .229 (.632)	
Ever exposed to T.V	87.7
Never exposed	78.6
Chi Sq (sig) 2.043 (.153)	
Work Status	
Working	87.7
Not working	80.0
Chi Sq (sig) 1.617 (.203)	
Husband's Occupation	
Agricultural	97.1
Non-agricultural	90.3
Labourers	67.9
Chi Sq (sig) 21.822 (.000)***	
SLI	
Low	76.4
Medium	89.8
High	100.0
Chi Sq (sig) 9.809 (.007)***	
Development of Tehsil	
Less developed	86.2
More developed	84.1
Chi Sq (sig) .141 (.707)	
Distance from a Health Facility	
Near	88.7
Far	78.0
Chi Sq (sig) 3.082 (.079)*	
Autonomy Index	
Low	85.7
Medium	83.8
High	100.0
Chi Sq (sig) 1.556 (.459)	
Children Ever Born	
1	88.1
2	83.0
3+	76.5
Chi Sq (sig) 1.770 (.413)	
Spontaneous Abortion	
Yes	83.3
No	85.3
Chi Sq (sig) .034 (.853)	

*** Significant at .01 level **Significant at .05 level *Significant at 0.10 level

The percentage distribution of women who received vaccination for their last birth by background characteristics is presented in Table 4.18. The Table shows that Utilisation of vaccination is influenced by woman's education, exposure to newspaper, husband's occupation, standard of living index and distance from a health facility. 93.0 percent of women who have ever attended school received a vaccination for their last child compared with 78.8 percent of women who never attended a school. Regular exposure to newspaper is obviously related to the educational status of women. Data in the table show that as in the case of education, 96.6 percent of women who are regularly exposed to newspaper have immunised their last child against at least one of the childhood diseases as opposed to 82.7 percent of women who are never exposed to a newspaper.

Immunisation against major childhood diseases also increases with an increase in the standard of living: immunisation is universal among women belonging to high standard of living compared with 76.4 percent of women in the low standard of living. Similarly, more than 90 percent of women whose husband's are involved in agricultural and non-agricultural occupations have immunised their children compared with 67.9 percent of whose husbands' are working as labourers. Distance from a health facility has also emerged as an important determinant of Utilisation of immunisation. A higher percentage of women living in a village near a health facility have immunised their last birth (88.7 percent) in relation to women who are living far off from a health facility (78.0 percent).

Table 4.19: Percentage Distribution of Women by Reason for not Receiving Immunisation

Reason	Percent
Child too young	69.6
Ignorant about immunisation	8.7
Place or time not known	4.3
No facility nearby	4.3
Child unwell	4.3
Vaccine not available	8.7

At least 14.7 percent of women reported that they had not immunised their last child against any of the childhood diseases (Table 4.19). The most common reason for non-vaccination is reported to be recent births among adolescent women. Although BCG, first dose of DPT and Polio vaccinations are given within 18 months of birth of a child, 69.6 percent of women consider their child too young to be immunised. 8.7 percent of women are ignorant of vaccination. Women have also complained about the non-availability of vaccines (8.7

percent) at the health facility. Other reasons for non-vaccination include place or time not known, no facility nearby and child unwell at the time of vaccination.

4.10 Logistic Regression Analysis of Utilisation of Immunisation

Table 4.20 presents results of logistic regression analyses for the Utilisation of vaccination among women for their last birth.

Table 4.20: Logistic Regression Analyses of Women who received a Vaccination for their Last Birth

	Odd Ratios	
Variable	**Model 1**	**Model 2**
Attended School		
Yes		3.450**
No (r)		
SLI		
Low (r)		
Medium	3.091**	
High	3671.778	
Autonomy Index		
Low (r)		
Medium		.868
High		503.303
Distance from a Health Facility		
Near	3.242**	
Far (r)		
Development of Tehsil		
Less developed (r)		
More developed	1.084	
Children Ever Born		
1	2.169	
2	1.438	
3+ (r)		
Spontaneous Abortion		
Yes		1.119
No (r)		
-2 Log Likelihood	110.669	120.966
N	154	154

r: reference category ***p< 0.01 **p< 0.05 *p<0.10

As in the case of bivariate analysis, education, standard of living index and distance from a health facility are important predictors of immunisation against childhood diseases. Women who have ever attended school are 3 times more likely to immunise their child against at least one of the childhood diseases. Relative to those who have low standard of living, women in

medium standard of living are more likely to seek immunisation. As regards distance from a health facility, women living in a village which is near a health facility are three times more likely to immunise their child compared with those living far off from a health facility suggesting that distance of a user from a health facility is an important determinant of Utilisation of services.

4.11 Treatment Seeking for Short-Term Morbidity

This section discusses the prevalence and treatment seeking for short-term morbidity for children aged less than 5 years. In order to collect information on short-term morbidity, 30 days recall period has been used in the survey. A woman was first asked about her last birth, if the last birth was not ill in the last month, information about next to last birth have been collected. Thus, the information was only collected for one child.

Table 4.21: Percentage Distribution of Women by Prevalence of Short-Term Morbidity among their Last Birth

Nature of Morbidity	Percent
Cold and Cough	45.6
Fever	29.1
Pneumonia	3.9
Diarrhoea	12.6
Skin problem	2.9
Indigestion	2.9
Others*	3.0

N-106

*Others include swelling, burns and vomiting.

Data on nature of morbidity in Table 4.21 show that cold and cough, fever and diarrhoea are the most commonly reported problems. 45.6 percent of women reported that their child was suffering from cold and cough. 29.1 percent of women reported fever and 12.6 percent diarrhoea during the last one month of the survey period. Diarrhoea is the second most important killer of children under age 5 (IIPS 2000). In addition, Pneumonia, skin diseases and indigestion are other problems reported by women during last one month of the survey. Generally, reporting of morbidity is affected by the seasonality factor in a year, however, in this study prevalence of short-term morbidity data were collected during January and August which is only indicative of the prevalence of short-term morbidity.

Table 4.22: Percentage Distribution of Women by Knowledge of Source of Treatment and Treatment Seeking for Short-Term Morbidity for their Last Birth

Item	Percent
Knowledge of a source of treatment	98.1
Did not seek treatment	16.0

As can be seen from Table 4.22 knowledge of a source of treatment for short-term morbidity among women is almost universal. In 98.1 percent of cases, women know of a source to seek treatment for short-term illness. Data show that in 84.0 percent of cases women have sought treatment for any of the reported symptoms of morbidity for their last birth.

Table 4.23: Percentage Distribution of Women who Sought Treatment for Short-term Morbidity for their Last Birth

Characteristics	Percent
Attended School	87.7
Yes	78.3
No	
Chi Sq (sig) 1.653 (.199)	
Exposure to Mass Media	
Ever exposed to Newspaper	87.5
Never exposed	82.3
Chi Sq (sig) .364 (.546)	
Ever exposed to Radio	95.7
Never exposed	80.0
Chi Sq (sig) 3.176 (.075)*	
Ever exposed to T.V	84.4
Never exposed	80.0
Chi Sq (sig) .188 (.665)	
Work Status	
Working	84.1
Not working	82.4
Chi Sq (sig) .048 (.826)	
Husband's Occupation	
Agricultural	89.4
Non-agricultural	91.3
Labourers	69.7
Chi Sq (sig) 6.751 (.034)	
SLI	
Low	79.2
Medium	83.8
High	94.4
Chi Sq (sig) 2.221 (.329)	
Development of Tehsil	
Less developed	85.0
More developed	81.4
Chi Sq (sig) .236 (.627)	

Distance from a Health Facility	
Near	84.2
Far	81.5
Chi Sq (sig) .108 (.743)	
Autonomy Index	
Low	86.7
Medium	83.1
High	71.4
Chi Sq (sig) .957 (.620)	
Children Ever Born	
1	86.9
2	77.4
3+	80.0
Chi Sq (sig) 1.415 (.493)	
Spontaneous Abortion	
Yes	77.8
No	84.0
Chi Sq (sig) .234 (.629)	

*** Significant at .01 level **Significant at .05 level *Significant at 0.10 level

Percentage distribution of women who sought treatment for their last child for any short-term morbidity is presented in Table 4.23. Data in the table show that treatment seeking is only significantly influenced by exposure to radio. 95.7 percent of women who are regularly exposed to radio sought treatment for short-term morbidity in relation to 80.0 percent of women never exposed to radio. Other factors do not seem to influence the treatment seeking for short-term morbidity.

Table 4.24: Percentage Distribution of Women by Reason for not Seeking Treatment

Reason	Percent
Problem not considered serious	41.2
Costs too much	23.5
No time/long waiting	23.5
Medicine not available	5.9
No transport	5.9

In only 16.0 percent of the cases of short-term child morbidity, women have not sought any treatment. As it is evident from Table 4.24 the most common reason for not seeking treatment is non-seriousness of the illnesses. 41.2 percent of women have not considered the symptoms as serious enough to be treated. 23.5 percent of women have mentioned that they could not afford the cost of treatment. Similarly, 23.5 percent of women have expressed paucity of time to seek treatment for their last birth. Other reasons for not seeking treatment include non-availability of medicines at the health facility and lack of transport to reach a health facility.

4.12 Logistic Regression Analysis of Treatment Seeking for Short-Term Morbidity

Results of logistic regression analyses for treatment seeking of short-term morbidity are presented in Table 4.25.

Table 4.25: Logistic Regression Analyses of Treatment Seeking for Short Term Morbidity for Last Birth

	Odd Ratios	
Variable	**Model 1**	**Model 2**
Attended School		
Yes		2.062
No (r)		
SLI		
Low (r)		
Medium	1.336	
High	4.591	
Autonomy Index		
Low (r)		
Medium		.685
High		.301
Distance from a Higher Level Health Facility		
Near	1.375	
Far (r)		
Development of Tehsil		
Less developed (r)		
More developed	.810	
Children Ever Born		
1	1.616	
2	.812	
3+ (r)		
Spontaneous Abortion		
Yes		.801
No (r)		
-2 Log Likelihood	87.463	89.062
N	102	102

r: reference category ***p< 0.01 **p< 0.05 *p<0.10

None of the predictors significantly influences treatment seeking for short-term morbidity among children less than 5 years of age.

To sum up, as compared with maternal health services, utilisation of child health services is better among adolescent women. Knowledge of immunisation is found to be universal and as a result 85.5 percent of children are fully immunised against all the childhood diseases. As in the case of immunisation, knowledge about a source of treatment for short-term morbidity is

also universal among adolescent women. Our survey shows that more than 80 percent of women reported that their children received treatment for an illness during last one month of the survey.

IV. Utilisation of Family Planning Services

Contraception is an integral component of reproductive health because of its significant health benefits for women. Generally knowledge about contraception is universal among adolescent women. But there is a wide gap between knowledge and the use of contraception. Less than 10 percent reported using any method of contraception in India (8.2 percent), Pakistan (6.2 percent) and Nepal (6.5 percent) (UNFPA 1998; IIPS 2000).

This section provides an appraisal of the awareness and current use of various methods of family planning. Information on only modern methods of family planning has been collected in the survey. The section also explores future use of contraception among adolescents including their preferred methods.

4.13 Knowledge of Family Planning Methods

Table 4.26: Percentage Distribution of Women by Knowledge of Modern Contraceptive Methods

Method	Knowledge of Contraceptive Methods		
	Spontaneous	Probed	Both
Condom	14.3	42.3	56.6
Pills	51.0	33.7	84.7
IUD	25.3	42.7	68.0
Male Sterilization	2.3	66.3	68.6
Female Sterilization	18.7	73.0	91.7
Injection	9.3	17.7	27.0

N=298

The findings indicate that knowledge of family planning methods is nearly universal among the adolescent women. Data in Table 4.26 show that more than 90 percent of the women are aware of female sterilization. However, women had relatively low levels of knowledge about spacing methods. Among the spacing methods, pills are the most commonly known method (84.7 percent) followed by IUD (68.0 percent) and Condom (56.6 percent). 68.6 percent of women also know about male sterilization but most of the women could recall male

sterilization only after probing. Women could name pills more spontaneously compared to any other method. 27.0 percent of women also know about injections. Findings of this study corresponds to a study of married adolescents in Bangladesh which shows that the contraceptive knowledge was almost universal and the most commonly known methods were pills and female sterilization. But awareness regarding male sterilization was found to be very low (Chowdhury and Sultana 2000).

Table 4.27: Percentage Distribution of Women by Knowledge of a Source of Modern Contraceptives

Method	Percent
Condom	62.9
Pills	77.6
IUD	75.5
Male Sterilization	89.8
Female Sterilization	87.6
Injection	59.3

Data from the survey presented in Table 4.27 show that more than 85 percent of women know about a source of male and female sterilization. Knowledge of source of spacing methods, however, is not as universal as the terminal methods. 77.6 percent of adolescent women know about a source of pills and 75.5 percent about IUD. 62.9 percent could recall the source of obtaining condoms. 59.3 percent of women have reported that they know about a source of injections.

4.14 Use of Family Planning Methods

Although the knowledge of contraceptives as well as the knowledge about the source of contraceptive methods is high, the practice of contraception among adolescent women is low.

Table 4.28: Percentage Distribution of Women by Current Use of Modern Methods

Method	Percent
Condom	9.8
Pills	27.5
IUD	7.8
Male Sterilization	-
Female Sterilization	54.9
Injection	-
Any method	17.0

The findings of the study indicate that only 17.0 percent of women are currently using any modern method of family planning (Table 4.28). Among the current users, more than half of the women (54.9 percent) is using female sterilization. Incidentally, none of the respondents reported to be using male sterilization or injection. Among the spacing methods, pills are the most widely used method (27.5 percent). 9.8 percent of women are using condoms and 7.8 percent have reported IUD. Overall, 23.3 percent of adolescent women have ever used any method of family planning. A study in rural Maharastra also shows that use of contraception among married adolescent women is as low as 18.0 percent (Barua 2000). On the other hand, in Bangladesh 41.0 percent of adolescent women had ever used a method of contraception (Chowdhury and Sultana 2000).

Table 4.29: Percentage Distribution of Women by Source of Motivation of Current use of Contraception

Source	Percent
Self	31.4
Husband	23.5
Health Worker	23.5
Friends/Relatives	17.6
Magazines/media	3.9

Women do not adopt family planning on their own; someone motivates them to adopt it. Data in Table 4.29 show that most commonly reported sources of motivation to use modern methods of contraception are health workers or husbands (23.5 percent). 17.6 percent are also reported to be motivated by friends and relatives to use contraception. Only 3.9 percent of women are motivated by the mass media or magazines to use a method. 31.4 percent of women reported that they themselves decided to adopt a modern method of family planning.

Table 4.30: Percentage Distribution of Women who are Currently using Contraception by Background Characteristics

Characteristic	Percent
Attended school	
Yes	13.5
No	20.1
Chi Sq (sig) 2.343 (.126)	
Exposure to Mass Media	
Ever exposed to Newspaper	16.1
Never exposed	20.7
Chi Sq (sig) .694 (.405)	
Ever exposed to Radio	16.6
Never exposed	18.2
Chi Sq (sig) .103 (.749)	

Ever exposed to T.V	22.1
Never exposed	15.5
Chi Sq (sig) 1.595 (.207)	
Work Status	
Working	18.3
Not working	14.6
Chi Sq (sig) .660 (.417)	
Husband's Occupation	
Agricultural	16.9
Non-agricultural	12.9
Labourers	20.7
Chi Sq (sig) 1.662 (.436)	
SLI	
Low	17.2
Medium	15.9
High	18.6
Chi Sq (sig) .209 (.901)	
Development of Tehsil	
Less developed	19.3
More developed	14.7
Chi Sq (sig) 1.158 (.282)	
Distance from a Health Facility	
Near	20.0
Far	11.0
Chi Sq (sig) 3.827 (.050)**	
Autonomy Index	
Low	10.3
Medium	20.7
High	37.5
Chi Sq (sig) 7.811 (.020)**	
Children Ever Born	
0	0.7
1	13.7
2	54.7
3 +	44.4
Chi Sq (sig) 88.872 (.000)***	
Spontaneous Abortion	
Yes	15.0
No	22.4
Chi Sq (sig) .585 (.444)	
Discussed Contraception with Husband	
Yes	42.3
No	2.1
Chi Sq (sig) 80.195 (.000)***	
Discussed Family Size with Husband	
Yes	38.1
No	3.3
Chi Sq (sig) 61.579 (.000)***	
Woman Approves Family Planning	
Yes	26.4
No	0.0
Chi Sq (sig) 34.066 (.000)***	
Husband Approves Family Planning	
Yes	33.1
No	0.7
Chi Sq (sig) 55.939 (.000)***	

*** Significant at .01 level **Significant at .05 level *Significant at 0.10 level

Percentage distribution of women currently using contraception by background characteristics presented in Table 4.30 shows that woman's autonomy has emerged as an important factor affecting current use of contraception by adolescent women. Only 10.3 percent of women having low autonomy are currently using contraception in relation to 37.5 percent of current users of contraception with high level of autonomy in the household. Current use of contraception also increases with an increase in the number of children ever born to a woman: only 0.7 percent of women with no child and 13.7 percent of women with one child are current users compared with 54.7 percent of women with two children. Distance from a health facility also affects use of contraception. 20.0 percent of women living in a village near a health facility are current users of contraception as against only 11.0 percent who are living far away from a health facility.

Husband-wife communication regarding the contraceptives as well as family size significantly increases the current use of contraception among adolescent women. 42.3 percent of women who ever discussed about contraception with their husbands are current users of contraception as against 2.1 percent of those who never discussed. Similarly, 38.1 percent of women who discussed about their family size with their husbands are current users of contraception as opposed to 3.3 percent of women who never discussed with their husbands. Woman's and husband's approval of family planning methods is also positively related to the use of contraception. 26.4 percent of women who approved of family planning and 33.1 percent of women whose husbands approve of family planning are current users of contraception.

Table 4.31: Percentage Distribution of Women by Reason for Currently not using a Method

Reason	Percent
Not necessary	34.9
Pregnant/Breastfeeding	28.1
Wants a child	17.3
Wants a son	8.4
Other members/husband opposed	3.6
Knows no method	2.4
Others	5.2

Those women who were not using any method at the time of survey were asked about the reason for not using the same. Among those who are currently not using, 34.9 percent of women think that it is not necessary to use contraception immediately after marriage (Table 4.31). 17.3 percent expressed their desire to have a child and 8.4 percent wanted a son.

3.6 percent of women are not using any contraception due to opposition from either husband or other family members in the household. Most of the adolescent girls remained unprotected from pregnancy, as their in-laws do not allow newly wed girls to use contraceptives immediately after marriage. During FGDs *one woman remarked "elders do not allow us to use contraception immediately after marriage and if they come to know that we are using them and then if anything happens to us or if we fall ill, we are blamed that this happened due to the use of Pills/IUD". Another woman added, " we want to use some contraceptive but our family members do not allow us to use any method."*

During an in-depth interview an LHV responded, " adolescent women use contraceptives such as Copper-T but without informing their family members. In some of the cases only husbands know about it". One elderly woman (while her daughter-in-law was being interviewed) said, " if my daughter is not able to prove her fertility within two years of marriage, she will be deserted by her husband".

The survey shows that 2.4 percent of women do not have any knowledge about contraception. FGDs reveal that non-availability of spacing methods such as pills and lack of knowledge about contraceptives are also reasons for non-Utilisation of contraception by women. A comment from a 17 year old woman demonstrates their lack of knowledge about contraceptives, *"I have neither heard of nor even seen pills, copper –T or any other method of family planning"*. Lack of education is also an important deterrent to contraceptive uptake among adolescent women. *An ANM remarked, "due to lack of education adolescent women are not able to understand the advantages of spacing methods and are also unable to overcome the misconceptions about the methods".*

FGDs reveal that misconceptions regarding contraceptives among the respondents is also one of the main obstacles for not using a family planning method before first birth. Women believe that use of a family planning method immediately after marriage would cause infertility and even uterine cancer. *16 year old Kanchan explained, " I do not believe in Pills/IUD as they are not good for our health. Pills decompose the stomach"*. Their lack of knowledge and ignorance characterises their misbeliefs regarding contraception: *"IUD goes inside the stomach and decomposition takes place". " If one takes pills then it affects the uterus and a woman has to undergo an operation". "Pills/IUD are hot". "If I use pills/IUD immediately after marriage then I will not be able to bear a child".* Providers are also of the

opinion that misconceptions are a major hindrance in seeking contraception. *An ANM remarked, " they are worried about the side effects and have certain misconceptions regarding the use of family planning methods".*

Unlike findings from our survey, a study of married adolescents in Bangladesh found that a very small proportion of adolescents believed that contraceptives can impair their reproductive capacity instead most of them were not using contraception due to the desire to have a child. For some women menstruation was yet to start and some were not using due to husband's disapproval, lack of knowledge, breastfeeding and religious sentiments (Chowdhury and Sultana 2000). The results of the present study show that 28.1 percent of women are currently not using a contraceptive method as they were either pregnant or breastfeeding the child.

4.15 Logistic Regression Analysis of Current Use of Contraception

Table 4.32 presents results of logistic regression analyses for current use of family planning methods among women.

Table 4.32: Logistic Regression Analyses of Women who are Currently Using a Modern Method of Family Planning

	Odd Ratios		
Variable	**Model 1**	**Model 2**	**Model 3**
Attended School			
Yes		.487*	.379***
No (r)			
SLI			
Low (r)			
Medium	1.143		
High	2.134		
Autonomy Index			
Low (r)			
Medium		.586	1.031
High		1.115	1.666
Distance from a Health Facility			
Near	2.358**		
Far (r)			
Development of Tehsil			
Less developed (r)			
More developed	1.102		
Children Ever Born			
0	.000		
1	.139***		
2 + (r)			

Spontaneous Abortion			
Yes		.593	
No (r)			
Discussed FP with Husband			
Yes		36.449***	
No (r)			
Husband Approves FP			
Yes			86.546***
No (r)			
-2 Log Likelihood	168.350	166.168	194.904
N	230	229	298

r: reference category ***p< 0.01 **p< 0.05 *p<0.10

Results of logistic regression show that as in the case of bivariate analysis distance from a health facility, children ever born, inter-spousal communication and husband's approval are significantly linked with the current use of contraception. Women living near a health facility are more likely to use contraception. Compared with a woman who had two or more children, woman with only one child is less likely to use contraceptives which may be perhaps due to either desire to have another child or desire to have a son. Discussion of family planning with husband significantly increases the percentage of current users among adolescent women suggesting that inter-spousal communication is an important factor influencing use of contraception among women. Husband's approval of family planning is also an important predictor of current use of family planning among adolescent women. Women whose husbands approve of family planning are more likely to be the current users of contraception. After controlling the effects of other variables, woman's education also emerged as significant predictors of current use of contraception. Contrary to our expectations, women who have ever attended school are 60 percent less likely to be current users of contraception. This may be due to their desire to finish their family size as soon as possible.

4.16 Future Use of contraception

All adolescent women who were not using any contraception at the time of the survey were asked about their future intentions to use family planning methods.

Table 4.33: Percentage Distribution of Women by Intention to use a Modern Method

Item	Percent
Intend to use	41.4
Does not intend to use	16.9
Don't know	40.6
N.A	1.2

N = 248

As can be seen from Table 4.33 the survey shows that 41.4 percent of current non-users of any method intend to use a method in the future. 16.9 percent do not intend to use any method and 40.6 percent are unsure about their intentions. On the other hand, 72 percent of married adolescent women in Bangladesh expressed their desire to use a contraception method (Chowdhury and Sultana 2000).

Table 4.34: Percentage Distribution of Women by Preferred Methods in the Future

Method	Percent
Condom	1.9
Pills	35.9
IUD	10.7
Male Sterilization	1.0
Female Sterilization	49.5
Injection	1.0

The most preferred method intended to use is female sterilization after completing the family size (Table 4.34). This may be perhaps due to the misconceptions associated with the use of spacing methods. *One young woman remarked, " I prefer to go for sterilization rather than using any other contraceptive".* 35.9 percent of women have expressed their desire to use pills followed by IUD (10.7 percent). Only 2.9 percent of women have mentioned male methods as their preferred methods for the future: 1.9 percent of women would like to use condom and only 1.0 percent intends to use male sterilization.

To sum up, the study shows that almost all the married adolescents are aware of family planning methods but the use of contraception is found to be low. Only 17.0 percent of currently married adolescent women in the present survey have reported to be using any modern method of family planning. Use of spacing methods among the current users is poor. More than half of the current users has used female sterilization. Among the spacing methods, pills are the most commonly used method followed by condoms and IUD. Most of the current non-users (41.4 percent) intend to use contraception in the future, which also shows potential demand for contraceptives among adolescents.

V. Type of Provider

In our survey we also collected data on the type of provider for various services and also on various indicators of quality of care for public and private facilities. The choice of public or

private provider among adolescent women varies with the different components of RCH programme. For antenatal care and child health services women prefer private providers while for natal care, post natal care, immunisation and family planning a higher percentage of women seek treatment from government providers (Table 4.35).

Table 4.35: Utilisation of Maternal and Child Health and Family Planning Services by the Type of Provider

	Type of Service					
Type of Provider	**Antenatal Care**	**Natal Care**	**Post-Natal Care**	**Immunisa-tion**	**Treatment of Short-Term Morbidity**	**Family Planning**
Public	48.4	58.1	64.2	94.2	14.5	74.5
Private	51.6	41.9	35.7	5.7	69.7	2.0
Others*	-	-	-	-	15.8	23.5

* Others include chemist shop, home remedy and faith healer.

Although in the case of antenatal care there is not much difference in the use of public and private services, a slightly higher percentage of adolescent women have used private services (51.6 percent) compared with public services (48.4 percent). For natal care and post natal care services women have more trust in public providers. In the case of child health services, more than 90 percent of women prefer government services for immunisation while they have more trust in private providers (69.7 percent) in the case of treatment seeking of short-term morbidity for their children. For treatment of short-term morbidity women also relied on chemist shops and home remedies. In the case of family planning services, women prefer government services. 23.5 percent of women also obtained contraception directly from the chemist shop.

Quality of services is considered to be integral to the overall reproductive health needs of individual clients (Foo and Koenig 2000). But most of the research on quality of care until now is focussed on the service providers (ICMR 1991). Only recently a few studies have been undertaken to examine user's perspective (Koenig 1992). The most common reason given by adolescent women for choosing a private facility is effective treatment and better quality services whereas public providers are generally chosen due to their convenient location, near or within the village.

Table 4.36: Indicators of Quality of Care by Type of Services (in percent)

Indicator	Antenatal Care		Natal Care		Immunisation		Treatment of Short-Term Morbidity	
	Public	Private	Public	Private	Public	Private	Public	Private
Average time to reach the facility (in minutes)	30.2	58.6	37.4	73.8	16.0	40.0	32.3	27.3
Doctor Available	88.6	89.4	83.3	94.9	71.8	100.0	84.6	90.3
Timings Convenient	95.5	93.6	96.3	97.4	98.6	100.0	100.0	98.4
Satisfaction from health personnel	81.8	93.6	79.6	97.4	96.3	100.0	76.9	98.4
Privacy maintained	86.4	89.4	98.1	100.0	-	-	-	-
Cleanliness	88.6	97.9	79.6	97.4	95.8	100.0	92.3	98.4

Data show that although on an average private facilities are located at far away places compared with public health providers. Women have expressed more satisfaction with private providers (Table 4.36). In the case of antenatal care, on an average it takes an hour to visit private providers compared with government facilities. More than 90 percent of women visiting private providers have also expressed their satisfaction from the time and attention given by the health personnel. Similarly, a higher percentage of women visiting private providers have reported that the privacy was adequate during the abdominal check up and internal examinations during antenatal check ups. Around 98 percent of women have also mentioned that the private facilities maintained cleanliness. The survey found that in private facilities, more women are advised on diet, delivery care and breastfeeding during antenatal check ups. Similarly, 72.3 percent of women in private facilities during antenatal visits have been advised to go to a health facility for delivery compared with only half of the women in public health facilities.

Similarly, with regard to natal care, although public facilities are located at a distance of only about half an hour, women find quality of care in private facilities much better than which they consider in public facilities. More than 90 percent confirm availability of health personnel and convenience of timings at private facilities. 97.4 percent of women expressed their satisfaction from the time and attention given by health personnel in public facilities as compared with only 79.6 percent in private facilities. A similar pattern can be observed with regard to cleanliness in private facilities. Almost all the women have reported that emergency services needed for delivery are available in private facilities.

The survey shows that private facilities for children are located near by as compared with government facilities. In case of child health services also including immunisation and treatment of short term morbidity, women have expressed more satisfaction with private services due to availability of doctor, better working hours of the clinic, attitude and behaviour of health care providers and cleanliness in relation to government services. Thus, although adolescent women have indicated some satisfaction with the government services, private sector services have received consistently higher ratings than public sector on the availability of the health personnel and satisfaction with respect to time and attention provided by the health personnel.

Summary

The findings of the study show that in the rural set up the importance of safe motherhood among adolescent women has not yet been realised. Utilisation of maternal health services among adolescent women is much lower compared to all women in the reproductive ages. The findings from the Rapid Household Survey conducted in Indore district in 1999 shows that at least 79.1 percent of women received one antenatal check up (as against 54.2 percent in our survey) and 30.9 percent received full package of antenatal care. Similarly, 62.3 percent of deliveries were conducted in health facility among all women of reproductive ages (MOHFW 2000) (as opposed to 55.6 percent reported in our survey).

The survey shows that the most common reason for not receiving maternal health services is that most of the women do not consider it necessary to seek these services. One of the reasons for not going to a health facility for antenatal care or delivery is not necessary or non-customary to go to a health facility. Women also do not seek antenatal care, as generally there is no one to accompany them to a health facility. The main reason for not seeking antenatal care reported by currently pregnant women is long waiting at the health centres.

Lack of knowledge is also reported as one of the deterrent in not seeking timely antenatal care. Most women only understand TT as antenatal care. Although women received IFA tablets, they did not use the tablets. The reasons for not using these tablets range from low acceptance to the poor quality of tablets. Women are also not aware of seeking post-natal care after the birth of a child. Moreover, if they do not experience any problem, they prefer not to go to a health facility. Similarly, lack of knowledge and ignorance also characterise their

breastfeeding practices. Adolescent women reported that they start breastfeeding only 1-2 days after the birth due to superstitious beliefs suggesting that they are unaware about the importance of colostrum and the benefits of breastfeeding both for mother and the child.

Lack of time and non-availability of transport are also some of the reasons for not delivering in a health facility. Some women have also mentioned that the family members do not allow them to go to a health facility for delivery. Results of logistic regression show that woman's education, standard of living index, distance from a health facility and knowledge are important predictors of maternal health services.

As compared with maternal health services, utilisation of child health services is better among adolescent women. The findings of our survey reveal that the Utilisation of child health services among adolescent women is even better compared to the Utilisation of child health services by women of all reproductive ages. Data from the Rapid Household Survey conducted in the Indore district in 1999 show that even among all women of reproductive ages only 68.9 percent of children were found to be fully immunised as compared with 85.5 percent of children in our survey. For those children who did not receive any vaccinations, reasons for not seeking immunisation include child too young, ignorance and non-availability of vaccines at the health facilities. Similarly, treatment seeking for short-term morbidity is also satisfactory among adolescent women. Most common reason for not seeking treatment is found to be non-seriousness of illness followed by financial constraint and lack of time/long waiting at the medical facility. Multivariate analyses of Utilisation of child health services, especially immunisation is significantly influenced by education, standard of living index and distance from a health facility.

Utilisation of family planning services among adolescent women is found to be low. Compared with all women in the reproductive ages where at least 65.1 percent of women were found to be current users of contraception in the Indore district (MOHFW 2000), only 17.0 percent of adolescent women in our survey are current users of contraception. Such a low Utilisation of family planning among adolescent women is, especially due to the expectation from a married adolescent woman to prove her fertility immediately after marriage. Women also do not use any method, as they do not consider it necessary to use it immediately after marriage. Moreover, some of the women expressed their desire either to have a child or a son. Opposition from elders, misconceptions regarding the use of

contraceptives, lack of knowledge and non-availability of methods are also other reasons for non-use of contraception. Results of logistic regression show that distance and inter-spousal communication and husband's approval are important predictors of the use of contraception methods.

Chapter V: Reproductive Morbidity and Treatment Seeking

In addition to maternal and child health and family planning services, treatment of reproductive tract infections is also an important component of the RCH programme. The World Health Organization Technical Group has defined reproductive morbidity as any condition or dysfunction of the reproductive tract, or any morbidity, which is a consequence of reproductive behaviour including pregnancy, abortion, childbirth or sexual behaviour. Prevalence of reproductive morbidity, thus, is determined by a number of factors. Use of contraception, especially IUD, female sterilization, and abortion procedures increase the risks of RTIs (Gittlesohn et al., 1994; Bhatia and Cleland 1995; Gogate et al., 1998). Obstetric experiences of women and certain routine procedures during gynecological examinations may also lead to contracting RTIs. An association between Pelvic Inflammatory Diseases (PID) among women and husbands' extramarital sexual relations has been well documented (Ooman 2000). Lack of menstrual and personal hygiene is also associated with RTIs. In addition, socio-economic and cultural factors influence RTIs. Studies have shown a strong association between women's livelihood, work and their reproductive health. (Ooman 2000).

Generally women with symptoms of reproductive morbidity do not seek treatment due to existing taboos and inhibitions regarding sexual and reproductive health. They hesitate to discuss their reproductive health problems, especially due to shame and embarrassment (Bang and Bang 1989; Oomman 2000). Even if they seek treatment, a majority of women seek health care from quacks or unqualified private practitioners resulting in serious implications for their health. Untreated infections can not only lead to PID, ectopic pregnancy, infertility and cervical cancer but also foetal loss, health problems in new born and increased risk of HIV transmission. In addition to health consequences, women experience emotional distress related to gynecological morbidity (Mamdani 1999).

As most of these illnesses progress to a chronic state and remain with the women for the rest of their lives, the importance of early detection and management becomes evident. In this chapter we have examined adolescent women's treatment seeking behaviour for reproductive morbidity. The study adheres to the WHO (1992) classification of reproductive morbidity into gynecological, obstetric and contraceptive morbidity. The chapter is divided into these three sections. The section on gynecological morbidity, which includes health problems

outside pregnancy, is divided into two parts where prevalence of gynecological morbidity and treatment seeking behaviour have been studied before and after marriage considering that the health seeking behaviour of adolescent women differs before and after marriage. Obstetric morbidity refers to ill health related to pregnancy. In this section, problems and health seeking behaviour of women during pregnancy, delivery complications and problems experienced after delivery have been examined. Contraceptive morbidity includes problems experienced by women due to the use of contraception. The study also attempts to probe the association of the existing socio-economic and demographic factors with prevalence and treatment seeking of such morbidity. Cross tabulation has been done to examine the effect of the background characteristics on prevalence of morbidity and utilization of services. To assess the significant effect of background characteristics, logistic regression has been used. We also elaborate findings of our survey with case studies and FGDs with adolescent women and in-depth interviews with the health providers.

I. Gynecological Morbidity

Recognition of gynecological morbidity as an important health problem began with the famous study of Bang and Bang (1989) in Gadchiroli district of Maharashtra. The study found that 92 percent of all women were suffering from one or more gynecological or sexual diseases. Gynecological 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). But little is known about the prevalence of gynecological morbidity, especially among adolescent women. A recent study of young married women aged 16-22 years in a rural community in Tamil Nadu reports a very high level of morbidity. The study shows that more than half of the women were suffering from at least one or more RTIs. Clinical examination also confirmed STIs among majority of them (Joseph et al., 2000). Reddy et al., (2000) surveyed 274 adolescent school going girls in Tirupati town of Andhra Pradesh to study awareness and perception about menarche, and menstrual problems. 200 of the 232 post menarcheal girls reported at least one problem experienced before menstruation. These include backache during menstruation, bad odour of menstrual blood, profuse menstrual bleeding, calf muscle pain, tiredness and irritability during menstruation. Kulkarni and Adhikari in a study of adolescent women in India and

Nepal report relatively high rates of gynecological morbidity, especially in the settings where girls have limited access to adequate health care (Bott and Jejeebhoy 2000).

In the following sections we examine the nature of gynecological morbidity and the treatment seeking both before and after marriage with respect to the number of episodes reported.

5.1 Prevalence of Gynecological Morbidity before Marriage

Reproductive health problems are not only restricted to married women, unmarried women also experience gynecological problems. But unmarried women more than married women do not discuss these problems with anyone due to the fear of social stigma attached to such problems. As most of the public sector services are generally targeted towards adult married women, unmarried adolescents often do not seek health services due to the fear that the services are not confidential, inability to pay, prerequisite of parental/partner approval and negative or insensitive attitude of health providers (Mamdani 1999).

Table 5.1: Percentage Distribution of Women by Prevalence of Gynecological Morbidity before Marriage

No. of Problems Reported	Percent
At least one	20.7
None	79.3

N=298

The present survey shows that around one-fifth of the women have reported at least one symptom of gynecological nature before marriage (Table 5.1). These symptoms include white discharge, menstrual disorders including irregular menstruation and excessive bleeding, lower backache and lower abdominal pain not related to menstruation. None of the respondents reported itching or irritation and burning sensation before marriage.

Table 5.2: Percentage Distribution of Morbidity Episodes among Women before Marriage

Nature of Morbidity	Percent
Vaginal discharge	46.6
Menstrual disorders	22.7
Lower backache	12.5
Lower abdominal pain	13.6
Burning sensation	-
Itching/irritation	-
Mean number of episodes	**1.4**

N=88

As can be seen in Table 5.2, among the reported symptoms of gynecological morbidity, white discharge is the most common problem reported by women. 46.6 percent of the reported episodes are of white discharge. 22.7 percent of the episodes are reported to be menstrual disorders, especially irregular menstruation. 13.6 percent of the episodes are of lower abdominal pain and 12.5 percent of lower backache. The mean number of reported symptoms before marriage is 1.4 per woman.

Table 5.3: Mean Duration of Morbidity among Women before Marriage

Nature of Morbidity	Mean (months)
Vaginal discharge	28.4
Menstrual disorders	19.6
Lower backache	23.1
Lower abdominal pain	29.0
Burning sensation	-
Itching/irritation	-

Table 5.3 shows that the mean duration of different types of gynecological morbidity varies with the nature of morbidity. The highest mean duration of morbidity is observed for lower abdominal pain (29.0 months) and vaginal discharge (28.4 months). Women suffered from lower backache, on an average for nearly 2 years. The least duration observed among the gynecological morbidity is for menstrual disorders, which lasted for more than a year and a half.

5.2 Consultation of Symptoms of Gynecological Morbidity

Women suffer from reproductive morbidity due to their 'culture of silence'. They are reluctant to discuss their problems with either anyone at home or with a health provider (Patel and Khan 1996). In the survey we also collected information on whether women consulted their gynaecological symptoms with anyone in or outside the household. From our survey we find that a large proportion of women did not discuss symptoms of gynaecological morbidity with anyone. In 56.0 percent of the episodes of white discharge women did not discuss it with anyone (Table 5.4). Similarly, in the case of lower abdominal pain, 41.7 percent of cases women suffered in silence. However, menstrual disorders and lower backache were not discussed in only a little less than one-third of the episodes.

Table 5.4: Consultation of Symptoms of Gynecological Morbidity among Women (in percent)

Nature of Morbidity	Did not Discuss	Discussed with Mother
Vaginal discharge	56.0	44.0
Menstrual disorders	30.0	70.0
Lower backache	27.3	72.7
Lower abdominal pain	41.7	58.3
Burning sensation	-	-
Itching/irritation	-	-

It is interesting to note here that unmarried women discussed their difficulty only with their mothers. In nearly three-fourths of the cases, women consulted their mothers when they had menstrual and lower backache problems (Table 5.4). In 58.3 percent of cases women reported that they confided with their mothers when they experienced lower abdominal pain. However, in the case of vaginal discharge, a fewer episodes were discussed with their mothers.

In order to understand why women were suffering in silence, as mentioned, FGDs were held. FGDs reveal that women considered it too embarrassing to talk about these problems before marriage. The women found that none of the other women were discussing about these illnesses and they also believed that they too should not discuss with others their gynaecological problems. When they found that they could not carry out their day-to-day work with ease due to the gynaecological reasons, they approached their mothers and mentioned the problems they faced. A study of married adolescent women in rural Maharastra also shows that problems like burning urination and menstrual disorders, especially when occurred before marriage were mainly confided by these women to their mothers (Barua 2000).

5.3 Knowledge of Source of Treatment and Treatment Seeking for Gynecological Morbidity

When a woman suffers from any problem, she will try to seek treatment if she has knowledge about where it can be sought. With this in view women were asked where treatment could be sought if they suffered from any of the gynecological symptoms. The survey has shown that only 48.4 percent of the women knew about a source of treatment for any gynecological symptom before marriage. As shown in Table 5.5 women who experience menstrual

disorders and lower backache had better knowledge about a source of treatment compared with women who reported vaginal discharge and lower abdominal pain. In more than half of the episodes of menstrual problems and lower backache women were aware of a source of treatment. However, in the case of episodes of white discharge and lower abdominal pain, only one-third of women had knowledge about a health facility to seek treatment.

Table 5.5: Knowledge about Source and Treatment Seeking for Gynecological Morbidity among Women (in percent)

Nature of Morbidity	Knowledge about Treatment Source	Did not Seek Treatment
Vaginal discharge	36.6	82.9
Menstrual disorders	55.0	75.0
Lower backache	54.5	63.6
Lower abdominal pain	33.3	50.0
Burning sensation	-	-
Itching/irritation	-	-

The women who reported any symptom of gynecological morbidity were asked whether they sought treatment for the symptoms. The survey shows that treatment seeking before marriage with regard to gynecological problems was poor. Only 30.0 percent of women sought treatment for any symptom of gynecological morbidity. Treatment seeking by the nature of morbidity in Table 5.5 shows that white discharge recorded the highest number of untreated cases. In 82.9 percent of episodes, women who reported this problem did not seek any treatment. Similarly, 75.0 percent cases of the episode of menstrual disorders suffered without any treatment. In case of lower backache also in 63.6 percent of the cases no treatment was sought. For lower abdominal pain, however, in at least half of the episodes women sought some treatment.

Table 5.6: Reason for not Seeking Treatment among Women (in percent)

Nature of Morbidity	Reason for not Seeking Treatment					
	Not Serious	Embarrass-ment	Cost	Long Waiting	Facility Far Off	Did not know the Source
Vaginal discharge	26.5	61.8	5.9	2.9	0.0	2.9
Menstrual disorders	20.0	33.3	33.3	0.0	6.7	6.7
Lower backache	85.7	0.0	14.3	0.0	0.0	0.0
Lower abdominal pain	66.7	16.7	16.7	0.0	0.0	0.0
Burning sensation	-	-	-	-	-	-
Itching/irritation	-	-	-	-	-	-

Those women who did not seek treatment were asked about the reasons for the same. Table 5.6 shows that the reason for not seeking treatment varies with the nature of morbidity. The most common reason for not seeking treatment, especially for white discharge and menstrual disorders is embarrassment to seek treatment. Data in Table shows that in 61.8 percent of cases women did not seek treatment for vaginal discharge due to embarrassment. Similarly, in 33.3 percent of cases women suffering from menstrual disorders found it embarrassing to seek treatment. Embarrassment to seek medical help is also reflected in the findings of the case studies conducted with adolescent women: *Hema, a 17 years old women who was suffering from white discharge and irregular menstruation for 3 years remarked, "initially I felt embarrassed to discuss it with anyone at home but then mentioned it to my mother. My mother considered my symptoms as non-serious. The symptoms have continued even after marriage. But I am conscious telling this to my husband or mother-in-law"*

In case of women suffering with lower abdominal pain and lower backache in 66.7 and 85.7 percent of the episodes they consider it a normal phenomenon and something that does not requires serious medical attention. In 26.5 percent of the cases of vaginal discharge adolescent women considered it normal to have it. Around one-fifth of the women having them considered episodes of menstrual disorders as non-serious. Such a feeling was common in rural areas and case studies also substantiate these findings. *An adolescent woman suffering from white discharge, irregular menstruation and lower backache explained, "when I mentioned about these symptoms to my mother she thought that I was pretending to be ill. I was not aware of these illnesses as I thought everybody has it".*

In addition, lack of economic resources is also an important factor, which influences treatment seeking behaviour. In one third of the episodes of menstrual disorders, women did not seek any treatment due to financial constraints. In 16.7 percent of cases of lower abdominal pain and 14.3 percent of cases of lower backache, women could not seek any treatment due to economic reasons. In 5.9 percent of cases of vaginal discharge also women reported financial reasons for not seeking treatment. *A 16 years old pregnant girl mentioned that, "I was suffering from white discharge, itching in the vaginal area, irregular menstruation, lower backache and lower abdominal pain before marriage. My mother could not provide treatment for all the symptoms due to financial constraints. Even after marriage all the symptoms continued. When I discussed these symptoms with my husband one year after the marriage he was not concerned and told me that it was not possible to seek treatment due to lack of money".* Other reasons for not seeking

treatment before marriage included distance from a health facility, lack of knowledge of source of treatment and long waiting at health facilities.

5.4 Prevalence of Gynecological Morbidity after Marriage

As the survey was conducted among married women we were able to analyse data both on gynecological morbidity before and after marriage for the married women. The occurrence of marriage among women appears to change their status. The change in the status that occurs is in terms of their sexual behaviour and a better understanding of the gynecological problems that face a woman.

Table 5.7: Percentage Distribution of Women by Prevalence of Gynecological Morbidity after Marriage

No. of Problems Reported	Percent
At least one	64.7
None	35.3

N=298

As can be seen from Table 5.7 around two-thirds of women reported at least one symptom of gynecological morbidity after marriage. As most of the women have reported multiple symptoms, it indicates a very high prevalence of gynecological morbidity among married adolescent women compared with unmarried women (Table 5.8). This percentage is higher than 37.9 percent of women aged 15-19 years who reported any gynecological problem in the NFHS-2 and also 39.2 percent of adolescent women who reported any reproductive health problem in the RHS conducted in the Indore district (IIPS 2000; MOHFW 2000). The mean number of reported symptoms per woman after marriage is 1.7, which is higher than that of 1.4 before marriage.

Table 5.8: Percentage Distribution of Women by Prevalence of Gynecological Morbidity Before and After Marriage

Marriage Status	Percent
Before marriage	20.7
After marriage	64.7

N=298

After marriage not only is there an increase in morbidity but adolescent women also perceive the problems better. Perhaps their access to information on reproductive health increases.

Also, as women tend to have children, due to the experience of bearing children, their awareness regarding reproductive health issues also improves. Moreover, greater gender injustice in the distribution of food, health care and other resources in their marital home may affect health of women. Although less clearly understood, women's work, autonomy in making reproductive choices and their relative status in the family and community also have an influence on their health.

Table 5.9: Percentage Distribution of Morbidity Episodes among Women after Marriage

Nature of Morbidity	Percent
Vaginal discharge	36.9
Menstrual disorders	20.9
Lower backache	17.5
Lower abdominal pain	12.6
Burning sensation	6.4
Itching/irritation	5.2
Mean number of episodes	**1.7**

N=325

Our survey shows that, out of those who reported any gynaecological morbidity, in 36.9 percent of cases adolescent women reported to be suffering from white discharge (Table 5.9). Around 20.9 percent of the illness episodes are of menstrual disorders including irregular menstruation and excessive bleeding. 17.5 percent of the episodes are of lower backache and 12.6 percent of lower abdominal pain not related to menstruation. Unlike in the case of women before marriage, married women are also able to identify symptoms like itching/irritation and burning sensation. 5.2 percent of episodes are reported to be of itching/irritation including sores in the vaginal area and 6.4 percent of burning sensation while urination.

Table 5.10: Mean Duration of Morbidity among Women after Marriage

Nature of Morbidity	Mean (in months)
Vaginal discharge	32.8
Menstrual disorders	22.5
Lower backache	18.7
Lower abdominal pain	23.6
Burning sensation	32.1
Itching/irritation	35.2

In the case of before marriage, mean duration of different types of gynaecological morbidity varies with the nature of morbidity. Table 5.10 shows that women suffered from itching/irritation, on an average for nearly 3 years. Vaginal discharge and pain or burning while urination persisted for more than 2 years. Menstrual disorders and lower abdominal pain continued for around 2 years and the least duration was observed for lower backache (18.7 months). Compared with the mean duration of gynaecological morbidity before marriage, mean duration of vaginal discharge and menstrual disorders is higher among married women.

Table 5.11: Percentage Distribution of Women suffering from any Gynecological Morbidity after Marriage by Background Characteristics

Characteristic	Percent
Attended School	
Yes	61.0
No	67.9
Chi Sq (sig) 1.571 (.210)	
Mass Media Exposure	
Ever exposed to Newspaper	55.2
Never exposed	66.9
Chi Sq (sig) 2.837 (.092)*	
Ever exposed to Radio	64.9
Never exposed	64.6
Chi Sq (sig).003 (.954)	
Ever exposed to T.V	64.7
Never exposed	64.7
Chi Sq (sig).000 (.994)	
Work Status	
Working	66.0
Non-working	62.1
Chi Sq (sig).440 (.507)	
Husband's Occupation	
Agricultural	63.5
Non-agricultural	60.0
Laborers	70.7
Chi Sq (sig) 2.073 (.355)	
SLI	
Low	67.9
Medium	59.8
High	66.1
Chi Sq (sig) 1.773 (.412)	
Development of Tehsil	
Less developed	63.3
More developed	66.0
Chi Sq (sig) .233 (.629)	
Distance from a Health Facility	
Near	65.5
Far	63.0
Chi Sq (sig) .182 (.669)	

Autonomy Index	
Low	58.1
Medium	67.8
High	87.5
Chi Sq (sig) 4.767 (.092)*	
Children Ever Born	
0	61.9
1	70.5
2	60.4
3 +	64.7
Chi Sq (sig) 2.837 (.586)	
Spontaneous Abortion	
Yes	95.0
No	62.9
Chi Sq (sig) 8.366 (.004)*	

*** Significant at .01 level **Significant at .05 level *Significant at .10 level

The percentage distribution of women with self-reported symptoms of gynecological morbidity by background characteristics (Table 5.11) shows that reporting of symptoms is significantly influenced by exposure to mass media, woman's autonomy in the household and experience of spontaneous abortion. Reporting of gynecological morbidity increases with an increase in a woman's autonomy in the household decision making. 58.1 percent of women who have little autonomy in the household have reported a symptom compared with 87.5 percent of women with high autonomy. A higher percentage of women (95.0 percent) with a previous history of a spontaneous abortion have reported gynecological morbidity in relation to 62.9 percent of women who did not report a spontaneous abortion. A study of married adolescent women in Tamil Nadu also found that RTIs were more common among women who had a greater number of pregnancies and had two or more children (Joseph et al., 2000). A negative relationship between exposure to newspaper and gynecological morbidity, however, is unexpected. The relationship between other factors and reporting of gynecological problems among married adolescent women is not significant.

5.5 Consultation of Symptoms of Gynecological Morbidity

Even after marriage, most of the women endured their gynecological problems in silence. As in the case of before marriage, in case of married women also we collected data on consultation of gynecological problems either within or outside the household. Data show that women are more hesitant to discuss their problems in their husband's home after marriage as compared with before marriage. Perhaps newly married women face constraints in expressing the problems immediately after marriage.

Table 5.12: Consultation of Symptoms of Gynecological Morbidity among Women (in percent)

Type of Morbidity	Discussed	Discussed with*				
		Husband	Mother	Mother-in-law	Sister-in-law	Doctor/ Health Worker
Vaginal discharge	38.3	52.2	30.4	26.1	8.7	10.9
Menstrual disorders	64.7	59.1	29.5	54.5	11.4	2.3
Lower backache	66.7	42.1	36.8	39.5	5.3	5.3
Lower abdominal pain	51.2	52.4	28.6	57.1	4.8	0.0
Burning sensation	76.2	50.0	31.2	37.5	12.5	12.5
Itching/irritation	64.7	63.6	9.1	45.5	18.2	0.0

* the percentage does not add up to 100 due to multiple responses.

Table 5.12 shows that as in the case of before marriage, vaginal discharge is the least commonly discussed gynecological morbidity even after marriage. In only 38.3 percent of cases, women have discussed about white discharge. In half of the cases, women have consulted someone regarding lower abdominal pain. In around one-third of cases women have not discussed about itching, menstrual disorders and lower backache.

Before marriage women confided to only in their mothers, however, after marriage in her husband's household they can interact with a large number of persons. Table 5.12 shows that in addition to their mothers, after marriage women discuss their problems with their husbands, mothers-in-law, sisters-in-law and even with health personnel. Data show that women prefer to discuss these problems with their husbands. In each of the reported symptoms of gynecological morbidity more than half of the women have discussed these problems with husbands. For lower backache, although husband has been consulted in 42.1 percent of cases, women have also talked to their mothers-in-law or their mothers. The next most important person to be consulted is mother-in-law followed by the mother. In the case of vaginal discharge, however, more women have discussed with their mothers (30.4 percent) compared with mother-in-law (26.1 percent).

Unmarried women never considered the possibility of discussing their health problems with a doctor or a health worker but married women have done so. During FGDs a woman reported that " *we discuss our problems with ANMs but do not receive any treatment*". On the other hand, an ANM during an in-depth interview remarked, "*women do contact us for gynecological problems but we are not in position to provide any help to them except*

referring them to higher-level facilities, as we do not get any medicines for the treatment of gynecological problems".

5.6 Knowledge of Source of Treatment and Treatment Seeking for Gynaecological Morbidity

Although after marriage women are more hesitant in discussing their gynaecological problems, the survey shows that women are more knowledgeable about the source of treatment after marriage as opposed to before marriage. This may be perhaps due to the fact that women's access to informal networks of information increases after marriage. Our survey shows that more than half of the women have knowledge about a source of treatment for any gynaecological morbidity. Such knowledge is higher in case of episodes of burning sensation (81.0 percent), itching/irritation (64.7 percent) and lower backache (64.9 percent). Similarly, in the case of menstrual disorders and lower abdominal pain in half of the cases women know about a health facility to seek treatment. Awareness has been limited, however, in the case of white discharge where in only 30.8 percent of cases women have reported knowledge about a source of treatment.

Table 5.13: Knowledge about Source of Treatment and Treatment Seeking for Gynecological Morbidity among Women (in percent)

Nature of Morbidity	Knowledge about a Source of Treatment	Did not Seek Treatment
Vaginal discharge	30.8	86.7
Menstrual disorders	50.0	72.1
Lower backache	64.9	71.9
Lower abdominal pain	46.3	70.7
Burning sensation	81.0	47.6
Itching/irritation	64.7	41.2

Treatment seeking after marriage for gynecological morbidity reveals that only one third of women have sought treatment for any gynecological symptom after marriage, which is slightly better than treatment seeking before marriage (30.0 percent). As in the case of before marriage, episodes of white discharge record the highest number of untreated cases (86.7 percent). As shown in Table 5.13 in more than 70 percent of cases women suffering with menstrual disorders, lower backache and lower abdominal pain each have not sought any treatment. In case of episodes of burning sensation and itching/irritation, however, more than

half of the women have sought some treatment. Poor treatment seeking behaviour of adolescent women is also substantiated by other studies (Joseph et al., 2000; Barua 2000).

Table 5.14: Percentage Distribution of Women by Knowledge of Source of Treatment and Treatment Seeking for Gynecological Morbidity after Marriage by Background Characteristics

Characteristic	Percent Know a Source of Treatment	Percent Sought Treatment
Attended School		
Yes	64.0	45.3
No	42.6	24.1
Chi sq (sig)	8.753 (.003)***	9.726 (.002)***
Mass Media Exposure		
Ever exposed to Newspaper	65.6	50.0
Never exposed	49.4	30.2
Chi sq (sig)	2.825 (.093)*	4.680 (.031)**
Ever exposed to Radio	60.0	44.0
Never exposed	49.3	29.9
Chi sq (sig)	1.701 (.192)	3.330 (.068)*
Ever exposed to T.V	57.3	35.3
Never exposed	34.1	27.3
Chi sq (sig)	7.364 (.007)***	.992 (.319)
Work Status		
Working	50.8	27.7
Non-working	54.7	45.3
Chi sq (sig)	.264 (.608)	5.976 (.014)**
Husband's Occupation		
Agricultural	52.1	31.9
Non-agricultural	52.4	47.6
Laborers	51.7	25.9
Chi sq (sig)	.005 (.998)	5.383 (.068)*
SLI		
Low	41.8	23.1
Medium	56.3	39.1
High	69.2	48.7
Chi sq (sig)	8.927 (.012)**	9.380 (.009)***
Development of Tehsil		
Less developed	48.4	41.1
More developed	55.6	26.3
Chi sq (sig)	.989 (.320)	4.760 (.029)**
Distance from a Health Facility		
Near	51.1	38.2
Far	54.0	23.8
Chi sq (sig)	.136 (.712)	3.937 (.047)**
Autonomy Index		
Low	39.7	25.0
Medium	57.6	37.3
High	71.4	42.9

Chi sq (sig)	6.669 (.036)**	3.247 (.197)
Children Ever Born		
0	36.1	28.9
1	59.7	35.8
2	68.8	37.5
3 +	75.0	41.7
Chi sq (sig)	16.093 (.001)***	1.543 (.674)
Spontaneous Abortion		
Yes	57.9	15.8
No	55.3	37.9
Chi sq (sig)	.045 (.832)	3.558 (.059)*

*** Significant at .01 level **Significant at .05 level *Significant at .10 level

The percentage distribution of women suffering with any gynecological morbidity by their knowledge about the source of treatment, their seeking treatment and background characteristics is presented in Table 5.14. The bivariate analysis shows an expected pattern of socio-economic differentials in knowledge of source of treatment and treatment seeking. Women who have ever attended school and who are regularly exposed to television and newspaper are more aware of the source of treatment. Table 5.14 shows that 64.0 percent of women who have ever attended school are more aware of source of treatment compared with 42.6 percent of women who never attended a school. This relationship is statistically significant at .01 level. Standard of living and a woman's autonomy in the household are also positively linked with awareness of source of treatment. Only 41.8 percent of women who belong to low standard of living have knowledge about a source of treatment as opposed to 69.2 percent having a high standard of living. Similarly, 39.7 percent who have a low autonomy index are aware relative to 71.4 percent having a high degree of autonomy in household matters. These relationships are significant at .05 level. Knowledge of source of treatment also increases with an increase in the number of children ever born. As women tend to have more number of children, perhaps, due to experience of bearing children, their knowledge of source of treatment increases.

In the case of seeking treatment also, women who have ever attended school and those exposed to mass media report better treatment for gynecological morbidity. 45.3 percent of women who ever attended a school sought treatment compared with 24.1 percent who have never been to a school. Similarly, 44.0 percent of women who listened to radio regularly and 50.0 percent who read a newspaper regularly sought treatment in relation to only 29.9 percent who never listened a radio and 30.2 percent who never read a newspaper. As expected, treatment seeking among women is also positively linked with standard of living index, as

those women who have high standard of living are able to afford the treatment. The influence of economic factors on treatment seeking is also confirmed by the effect of husbands' occupation. Only 25.9 percent of women whose husband's are laborers have sought treatment in relation to 47.6 percent of women whose husband's are in non-agricultural occupations and 31.9 percent of women whose husbands are in agriculture and allied activities. A woman's work status also influences her treatment seeking. The table shows that a higher percentage of non-working women (45.3 percent) have sought treatment with respect to working women (27.7 percent) which may be perhaps due to the fear of loss of wages as most of them are working as agricultural laborers. Treatment seeking is also influenced by distance from a health facility: 38.2 percent of women living near a health facility have sought treatment compared with 23.8 percent living far away from a health facility. Contrary to our expectations, level of development is found to be negatively related to the seeking treatment: a higher percentage of women living in less developed tehsil (41.1 percent) have sought treatment compared with more developed Indore tehsil (26.3 percent) and this relationship is significant at .05 percent level. Also, women who have experienced a spontaneous abortion in the past report poor treatment (15.8 percent) in relation to those who have not reported any spontaneous abortion (37.9 percent).

Table 5.15: Reason for not Seeking Treatment among Women (in percent)

Nature of Morbidity	Reason for not Seeking Treatment					
	Not Serious	Embarrass -ment	Cost	Long Waiting	Family/ Mother-in-law	No One to Accompany
Vaginal discharge	15.4	57.7	15.4	4.8	2.9	3.8
Menstrual disorders	28.6	34.7	20.4	6.1	6.1	4.1
Lower backache	48.8	2.4	39.0	4.9	4.9	0.0
Lower abdominal pain	31.0	20.7	37.9	3.4	6.9	0.0
Burning sensation	20.0	20.0	50.0	0.0	10.0	0.0
Itching/irritation	42.9	57.1	0.0	0.0	0.0	0.0

In the survey, women were asked reasons for their not seeking treatment and this data are presented in Table 5.15. The Table shows that embarrassment is the most commonly reported reason for not seeking treatment, especially in the case of vaginal discharge, menstrual disorders and itching/irritation. In more than half of the cases of vaginal discharge and itching/irritation women are abashed to seek treatment. Similarly, in more than one-third of the cases of menstrual disorders women do not seek treatment due to embarrassment. During

FGDs adolescent women's remarks also reveal that embarrassment influences their health seeking behaviour. *A 16 year old young woman said, " its too embarrassing to go for treatment. I can suffer but I will not seek treatment for such problems". Another woman added, "we are embarrassed to discuss these problems such as white discharge and menstrual problems as nobody talks about these illnesses unlike other common problems such as backache".*

Data in Table 5.15 also shows that financial constraint is also a major hindrance in seeking treatment. In 50.0 percent of cases, women suffering from burning sensation did not seek treatment due to financial reasons. In more than one-third of cases of lower backache and lower abdominal pain women are not able to seek treatment as they lack economic resources. In 20.4 percent and 15.4 percent of cases of menstrual disorders and vaginal discharge women have suffered due to economic reasons. *A 17 years old woman who was also suffering from white discharge, irregular menstruation, lower backache, lower abdominal pain and had blisters in the vaginal area narrated, "no one in my family is interested in my treatment due to the cost factor and they told me that they would get all the aliments treated together when they have money".*

Similarly, 19 years old Madhu who was suffering from burning sensation for 6-7 months said, although I told my husband only two days after I started experiencing the problem, I did not receive any treatment due to financial constraints. My husband expressed concern for treatment but is not interested in treatment of my problems because women, especially daughters-in-law get least priority in the family with regard to health seeking ".

Even daughters-in-law of households with good standard of living reported financial constraint as a reason for not seeking treatment. A case study reveals that in such families financial constraints are only for women. *A daughter –in – law of a big pucca house in one of the sampled villages who was five months pregnant at the time of interview reported two spontaneous abortions before the present pregnancy. After both the abortions she suffered from lower abdominal pain, vaginal discharge and weakness. Although she discussed this with her mother-in-law, she did not receive any treatment as the mother-in-law viewed the symptoms as normal. She was suffering from white discharge even before marriage. But before marriage she did not discuss this with anyone due to embarrassment. Now, even after marriage she continued suffering from white discharge for last three years. In addition, for*

last six months she reported to be suffering from lower backache and lower abdominal pain due to her pregnancy. She told this to her mother-in-law but neither her in-laws nor her husband were interested in her treatment. According to them, they did not have money for it. When the woman was asked that had it been her husband, would he have got treatment? She replied that "daughters-in- laws get least priority when it comes to health care".

Women's perception of seriousness of illness is also an important factor influencing their treatment seeking behaviour. Generally women or mothers-in-law do not consider reproductive health problems serious. They perceive these problems as a part of womanhood and thus do not consider some symptoms so serious as to be treated. In 48.8 percent of cases women with lower backache do not consider the problem as serious enough to be treated. In 42.9 percent of cases, women are suffering from itching /irritation due to ignorance. Similarly, in 31.0 percent of cases of lower abdominal pain and 28.6 percent of cases of menstrual disorders, women have not sought treatment, as they do not consider the problem as serious enough to require medical attention. Similarly, in the case of vaginal discharge (15.4 percent) and burning sensation (20.0 percent) women mention non-seriousness of illness as a reason for not seeking treatment.

18 years old Reena who was suffering from lower abdominal pain for four years said, when I discussed it with my mother-in-law, she considered it non-serious and said, " you are suffering from pain because you sit on the wet floor". 16 years old, Durga was suffering from white discharge for five years ever since she started living with her husband, she said, " I did not tell anybody about it as I thought that it happens to all women after marriage".

A study of adolescent women in rural Maharastra also observed that most women do not talk about white discharge, as they believe that these problems are an integral part of a woman's life. Only a third of the girls surveyed ever discussed these problems either with a husband, mother or a friend. The study found that girls preferred to confide in their husbands rather than mothers-in-law but the husbands did not see the need as serious and left it to the girls to handle it (Barua 2000). The present study found that in some cases, even parents are not interested in seeking treatment for their daughters. *16 years old Meenakshi was suffering from irregular menstruation since her marriage for the last one year. Her mother said, " as we do not need a child from her so why should we seek treatment? Her-in-laws need a child so they should get her treated".*

During FGDs as well as in the case studies, an important reason for non-utilization of reproductive health services is reported to be women's limited mobility. Lack of decision making in the household also made it difficult for them to seek services, especially in rural areas where health services are not readily available or accessible (Mensch et al., 1998). Most of the women do not know where to seek treatment for gynecological problems. Even if they know, as mentioned above, they are dependent on a male member of the household to accompany them. *During an in-depth interview an ANM explained, "women generally do not talk about these problems, moreover, they are unable to travel alone for seeking treatment. They are dependent on somebody to take them to the doctor, especially when there is no health facility in the village".*

Being accompanied with males is also one of the reason they are not able to describe their symptoms to the doctor/other health personnel. *A Staff Nurse at the CHC reported that "the adolescent women suffering from reproductive health problems are generally accompanied with their fathers-in-law or brothers-in-law who actually report the problem".* Being adolescent and newly married there is a further disadvantage for these women. They do not speak at all in the front of the doctor. Only the males accompanying them are supposed to talk. *An ANM stationed at the health centre remarked, "adolescent women generally come with their fathers-in-laws who talk about their reproductive health problems".* Therefore, it is quiet possible that the symptoms are not communicated properly to the doctor/health personnel and there are also very high chances of the disease not getting diagnosed correctly.

5.7 Logistic Regression Analyses of Prevalence of Gynecological Morbidity and Treatment Seeking

In order to control the effect of other variables, logistic regression analyses have been used. Table 5.16 and 5.17 present logistic regression analyses results for prevalence of gynecological morbidity and treatment seeking for gynecological morbidity respectively.

Table 5.16: Logistic Regression Analyses of Prevalence of Gynecological Morbidity after Marriage

	Odds Ratio	
Predictor Variable	**Model 1**	**Model 2**
Attended School		
Yes		.828
No (r)		
SLI		
Low (r)		
Medium	.787	
High	1.080	
Autonomy Index		
Low (r)		
Medium		1.851**
High		7.240*
Distance from a Higher Level Health Facility		
Near	1.090	
Far (r)		
Development of Tehsil		
Less developed (r)		
More developed	1.245	
Children Ever Born		
0	1.091	
1	1.449	
2 + (r)		
Spontaneous Abortion		
Yes		12.733**
No (r)		
Frequency of Bath during Menstruation		
Daily		.145*
Once in two days		.177
Once in three or more days (r)		
-2 Log Likelihood	292.760	270.752
N	230	229

r: reference category ***p< 0.01 ** p< 0.05 *p<0.10

As given in Table 5.16 a woman's autonomy index is a significant predictor of reporting of gynecological problems. Relative to women who have low level of autonomy in the household decision making, women with medium autonomy are twice as likely and women with high autonomy are 7.2 times more likely to report a symptom of gynecological morbidity. As shown in the bivariate analysis, pregnancy wastage also influences reporting of gynecological morbidity. Women who have had experienced a spontaneous abortion in the past are 12.7 times more likely to report gynecological morbidity. Such a high value of odds ratio is perhaps due to a few cases of spontaneous abortions reported among women.

Lack of menstrual hygiene has also emerged as an important predictor of gynecological morbidity. Compared with women who take bath once in three or more days during their menstrual periods, women who take bath daily are less likely to report gynecological morbidity. This finding is substantiated by other studies which have also shown that good personal and menstrual hygiene are protective of women with self reported RTIs (Bhatia and Cleland 1995; Kaufman et al., 1996; Oomman 2000). In the present study a large percentage of adolescent women reporting white discharge may be indicative of an association between endogenous infection, menstrual and personal hygiene and prevalence of reproductive morbidity among adolescent women.

Table 5.17: Logistic Regression Analyses of Treatment of Gynecological Morbidity after Marriage

	Odds Ratio	
Predictor Variable	**Model 1**	**Model 2**
Attended School		
Yes		2.369**
No (r)		
SLI		
Low (r)		
Medium	1.724	
High	2.374*	
Autonomy Index		
Low (r)		
Medium		.795
High		1.043
Distance from a Health Facility		
Near	2.088*	
Far (r)		
Development of Tehsil		
Less developed (r)		
More developed	.453*	
No. of Children Ever Born		
0	.569	
1	.984	
2 + (r)		
Spontaneous Abortion		
Yes		.382
No (r)		
Discussed about Gynecological Symptoms		
Yes		3.260***
No (r)		
-2 Log Likelihood	182.660	172.907
N	151	150

r: reference category ***p< 0.01 ** p< 0.05 *p<0.10

Results in Table 5.17 show that as in the case of bivariate analysis, woman's education, standard of living index, level of development and distance from a health facility significantly influence treatment seeking for gynecological morbidity. Women who have ever attended school are more likely to seek treatment for symptoms of gynecological morbidity: those women who attend school are more than twice as likely to seek treatment. Contrary to our expectations, level of development is negatively related with utilization of services. Women living in the more developed tehsil of Indore district are less likely to seek treatment as opposed to women living in Depalpur tehsil.

Distance from a health facility has also emerged as an important predictor. Relative to women who stay far away, women staying near a health facility are more likely to seek treatment. Discussion of symptoms also significantly influences treatment seeking. Women who discuss their symptoms of gynecological morbidity with either someone at home or with a health worker have a higher chance of seeking treatment.

To sum up, the study shows a high prevalence of gynecological morbidity among adolescent women. A comparison of symptoms of gynecological problems before and after marriage shows that only one-fifth of women reported any problem before marriage as against two-thirds of women after marriage suggesting that the reporting and incidence of gynecological morbidity increases after marriage. A significant proportion of adolescent women suffer from white discharge and menstrual disorders before marriage whereas in addition to these a higher percentage of women reported lower backache, itching/irritation or sores in vaginal area and also burning sensation after marriage. Most women do not discuss about their symptoms of gynecological problems. Their knowledge about the source of treatment is limited but women are less aware of the source of treatment before marriage compared with after marriage, especially in the case of lower backache and lower abdominal pain. A majority of women do not seek treatment of morbidity till it becomes serious. Overall, a lower percentage of women (30.6 percent) sought treatment before marriage compared to 33.5 percent after marriage.

II. Obstetric Morbidity

Pregnancy and childbirth related complications or obstetric morbidity i.e. "morbidity in a woman who has been pregnant (regardless of site or duration of pregnancy) from any cause

related to or aggravated by the pregnancy or management but not from accidental or incidental causes" are the leading cause of death for women in the reproductive age in many developing countries (WHO 1996).

Complications of pregnancy such as anaemia, spontaneous abortions and eclampsia are significantly higher among adolescent mothers (Mamdani 1999). As adolescent women are not physically fully developed, pregnancy and motherhood expose them to acute health risks during pregnancy and childbirth. A study in rural Maharastra reveals that 64 percent, 47 percent and 24 percent of females aged 14, 15 and 18 years respectively were reported to be at obstetric risk (Jejeebhoy 2000). In addition, pregnancy at an early age also damages reproductive tract, increases the risk of maternal mortality, pregnancy complications, peri-natal and neo-natal mortality and low birth weight (Jejeebhoy 2000). Other studies on the obstetric morbidity have also shown that pregnant teens are also more likely to suffer from malnutrition, pregnancy-induced hypertension, eclampsia, anaemia and other complications of pregnancy than are women of age 20 or above which also raises the risk of dying from pregnancy complications (Ramachandran 1989; Mishra and Dawn 1986; CWFP 1998).

In this section on obstetric morbidity, problems experienced by adolescent women during pregnancy, delivery complications and post partum complications have been examined with respect to their health seeking behaviour.

5.8 Prevalence of Obstetric Morbidity during Pregnancy

In this section, problems of currently pregnant women and those who experienced these problems during last birth have been examined separately assuming there is a difference in the treatment seeking. First, we describe the nature of morbidity out of the total number of episodes reported and in the following sections we discuss the treatment seeking behaviour of women. Bivariate and multivariate analyses have been conducted only for women who experienced problems during their last birth due to few cases of currently pregnant women.

Our survey shows that 59.6 percent of currently pregnant women suffered from an obstetric problem. In the case of last birth such problems were reported by 62.5 percent of women. These problems include weakness, dizziness, nightblindness/blurred vision, anemia and swelling of hands and feet.

Table 5.18: Percentage Distribution of Morbidity Episodes among Women who are Currently Pregnant and during their Last Birth

Nature of Morbidity	Currently Pregnant	Last birth
Weakness	32.9	28.2
Night blindness/Blurred vision	20.0	21.3
Dizziness	20.0	18.0
Anemia	11.4	18.0
Swelling of hands and feet	14.3	13.1
Others	1.4	1.3
Mean number of episodes	**2.3**	**2.9**
	N=70	N=305

Among currently pregnant women, 32.9 percent of the episodes are reported to be of weakness (Table 5.18). In 20.0 percent of cases women have suffered from some vision problems such as night blindness or blurred vision. One-fifth of women has reported dizziness during current pregnancy. 14.3 percent of cases are of swelling of hands and feet and in 11.4 percent of cases women have reported anaemia. On an average a pregnant woman reported 2.3 episodes of obstetric morbidity.

The nature of morbidity among women during their last birth also shows a similar pattern of morbidity as in the case of currently pregnant women. 28.2 percent of cases are of weakness. 21.3 percent of episodes are reported to be of night blindness or blurred vision. In 18.0 percent of episodes women reported to have experienced dizziness and anemia each. In 13.1 percent of episodes women have suffered from swelling of hands and feet. The mean number of morbidity reported by women during their last birth is 2.9 which is high compared with currently pregnant women.

Table 5.19: Percentage Distribution of Women by Obstetric Problems Reported during their Last Birth by Background Characteristics

Characteristic	Percent
Attended School	
Yes	66.7
No	59.1
Chi Sq (sig) 1.004 (.316)	
Mass Media Exposure	
Ever exposed to Newspaper	65.5
Never exposed	61.9
Chi Sq (sig) .136 (.712)	
Ever exposed to Radio	64.7
Never exposed	61.9
Chi Sq (sig).088 (.766)	

Ever exposed to T.V	60.2
Never exposed	68.9
Chi Sq (sig) 1.070 (.301)	
Work Status	
Working	61.9
Non-working	63.6
Chi Sq (sig) .045 (.832)	
Husband's Occupation	
Agricultural	56.0
Non-agricultural	69.7
Laborers	66.7
Chi Sq (sig) 2.526 (.283)	
SLI	
Low	68.4
Medium	59.7
High	51.9
Chi Sq (sig) 2.672 (.263)	
Development of Tehsil	
Less developed	64.8
More developed	59.7
Chi Sq (sig) .462 (.497)	
Distance from a Health Facility	
Near	66.7
Far	54.4
Chi Sq (sig) 2.423 (.120)	
Autonomy Index	
Low	59.6
Medium	62.5
High	87.5
Chi Sq (sig) 2.304 (.316)	
Children Ever Born	
0	-
1	55.8
2	75.5
3 +	61.1
Chi Sq (sig) 5.653 (.059)*	
Spontaneous Abortion	
Yes	92.9
No	59.7
Chi Sq (sig) 6.005 (.014)*	

*** Significant at .01 level **Significant at .05 level *Significant at .10 level

The percentage distribution of women who reported obstetric morbidity during their last birth by background characteristics (Table 5.19) shows that reporting of obstetric problems is only significantly linked with the pregnancy outcomes i.e. number of children ever born and spontaneous abortion. Reporting of obstetric problems increases with an increase in the number of children ever born: 55.8 percent of women who had given birth to only one child reported obstetric problems compared with 75.5 percent of women with two children and 61.1 percent of women with more than two children. A higher percentage of women who

experienced spontaneous abortions (92.9 percent) have reported obstetric problems as opposed to those who did not report (59.7 percent). This relationship is statistically significant at .05 percent level. Studies have shown that complications of abortion (induced as well as spontaneous) ranked highest among all obstetric and gynecological problems, even superceding cervical cancer and all other complications of pregnancy (Ba-Thike 1997).

5.9 Consultation of Symptoms of Obstetric Morbidity during Pregnancy

Communication of symptoms of reproductive morbidity is essential for utilization of services. Keeping this in mind, information on whether women discussed their symptoms of obstetric morbidity with anyone in or outside the household was collected. Our survey shows that unlike the case of gynecological morbidity, women are less reluctant to talk about obstetric problems with anyone at home or with a health worker. Out of those who experienced any problem, in case of currently pregnant women only 35.5 percent have not discussed their symptoms with anyone. Out of those who reported to have discussed, a majority (45.0 percent) of them have consulted either their mother or mother-in-law/sister-in-law. 35.5 percent of women have discussed with their husbands and 10.0 percent have talked to a health worker.

Table 5.20: Percentage Distribution of Women by Consultation of Symptoms of Obstetric Morbidity during Current Pregnancy and Last Birth

Item	Current Pregnancy	Last birth
Discussed	64.5	73.3
Discussed with*		
Husband	35.0	33.8
Mother	45.0	39.0
Mother-in-law/Sister-in-law	45.0	30.0
Doctor/Health worker	10.0	24.7

* the percentage does not add up to 100 due to inclusion of multiple response

N=31 N=105

In relation to currently pregnant women, a higher percentage of women (73.3 percent) who had problems during last birth discussed about obstetric problems (Table 5.20). A majority of women during last birth preferred to discuss with their mothers (39.0 percent). This is perhaps due to the custom of going to the natal home for the first delivery. The second most important person to be consulted is husband followed by mother-in-law/sister-in-law. Unlike the case of gynecological morbidity, more women reported having consulted a health worker

problems during pregnancy. Data show that 24.7 percent of women have obstetric problems with a health worker during last birth. It is quite possible nen get an opportunity to communicate their obstetric problems to the health workers during their antenatal visits to a health facility or a health workers' visit at home.

5.10 Knowledge of Source of Treatment and Treatment Seeking for Obstetric Morbidity during Pregnancy

It is well known that knowledge about a source of treatment facilitates treatment seeking. Data from our survey shows that relative to gynecological morbidity, women having obstetric problems are more aware of a source of treatment. 77.4 percent of currently pregnant women have knowledge about a source of treatment. However, women during last birth had better knowledge about a health facility (81.0 percent) compared with currently pregnant women.

Table 5.21: Percentage Distribution of Women by Knowledge about Source of Treatment and Treatment Seeking for Obstetric Morbidity

Item	Current Pregnancy	Last Birth
Knowledge about source of treatment	77.4	81.0
Did not seek treatment	67.7	43.0
	N=31	N=105

Data are also collected on whether women who suffered from any obstetric morbidity sought treatment for any symptom. The survey shows that even treatment seeking for obstetric morbidity is better than the gynecological morbidity. 57.0 percent of women during last birth have sought treatment for a symptom of obstetric morbidity (Table 5.21). Treatment seeking is reported to be poor, however, in the case of currently pregnant women where only 32.3 percent have sought treatment for any obstetric symptom.

Table 5.22: Percentage Distribution of Women by Knowledge of Source of Treatment and Treatment Seeking for Obstetric Morbidity during their Last Birth by Background Characteristics

Characteristic	Percent Know a Source of Treatment	Percent Sought Treatment
Attended School		
Yes	84.0	66.0
No	78.2	49.1
Chi Sq (sig)	.575 (.448)	3.058 (.080)*

Mass Media Exposure		
Ever exposed to Newspaper	89.5	68.4
Never exposed	79.1	54.7
Chi Sq (sig)	1.092 (.296)	1.205 (.272)
Ever exposed to Radio	100.0	86.4
Never exposed	75.9	49.4
Chi Sq (sig)	6.549 (.010)***	9.704 (.002)***
Ever exposed to T.V	86.5	63.5
Never exposed	67.7	41.9
Chi Sq (sig)	4.978 (.026)**	4.154 (.042)**
Work Status		
Working	80.0	55.7
Non-working	82.9	60.0
Chi Sq (sig)	.124 (.725)	.175 (.676)
Husband's Occupation		
Agricultural	83.3	66.7
Non-agricultural	91.3	69.6
Laborers	72.5	40.0
Chi Sq (sig)	3.606 (.165)	7.805 (.020)**
SLI		
Low	72.2	48.1
Medium	89.2	67.6
High	92.9	64.3
Chi Sq (sig)	5.584 (.061)*	3.718 (.156)
Development of Tehsil		
Less developed	74.6	61.0
More developed	89.1	52.2
Chi Sq (sig)	3.551 (.060)*	.825 (.364)
Distance from a Health Facility		
Near	78.4	64.9
Far	87.1	38.7
Chi Sq (sig)	1.077 (.299)	6.103 (.013)**
Autonomy Index		
Low	89.3	64.3
Medium	78.6	52.9
High	71.4	71.4
Chi Sq (sig)	1.930 (.381)	1.692 (.429)
Children Ever Born		
1	83.0	58.5
2	85.0	60.0
3 +	54.5	45.5
Chi Sq (sig)	5.504 (.064)*	.776 (.678)
Spontaneous Abortion		
Yes	92.3	53.8
No	79.3	57.6
Chi Sq (sig)	1.241 (.265)	.066 (.797)

*** Significant at .01 level **Significant at .05 level *Significant at .10 level

The percentage distribution of women who know about a source of treatment for obstetric problems and their treatment seeking by background characteristics is presented in Table 5.22. The results show that knowledge of source of treatment is significantly influenced by

the standard of living, level of development, mass media exposure and number of children ever born. Knowledge of source of treatment increases with an increase in the standard of living of a woman. Only 72.2 percent of women having low standard of living are aware of a source compared with 92.9 percent with a high standard of living. As expected, a higher percentage of women in the better developed Indore tehsil (89.1 percent) are aware of a source of treatment as opposed to 74.6 percent of women living in Depalpur tehsil. Knowledge about a source of treatment also increases with regular exposure to mass media such as radio and television. A majority of women exposed to radio and television have knowledge about a source of treatment for obstetric morbidity compared with those who are never exposed. Contrary to our expectations, awareness regarding source of treatment decreases with an increase in the number of children ever born.

In case of treatment seeking also the bivariate analysis shows an expected pattern of socio-economic differentials. Distance of user from a health facility, woman's education, husband's occupation and mass media exposure have emerged as important determinants of treatment seeking. A higher percentage of women living near a health facility sought treatment (64.9 percent) compared with those living far off from a higher level facility (38.7 percent). Women regularly exposed to radio and television report better treatment in relation to those who are never exposed. Also, a higher percentage of women who have attended school have sought treatment (66.0 percent) compared with those who have never been to a school (49.1 percent). The influence of economic factors on treatment seeking is confirmed by the effect of husband's occupation. 66.7 percent and 69.6 percent of women whose husbands are involved in agricultural and non-agricultural activities other than laborers have sought treatment compared with only 40.0 percent of women whose husbands are working as laborers.

Table 5.23: Percentage Distribution of Women by Reason for not Seeking Treatment

Reasons	Currently Pregnant	Last Birth
Not serious	47.6	64.4
Costs too much	33.3	17.8
No time/long waiting	14.3	2.2
Family/Mother-in-law	4.8	11.1
No one to accompany	-	2.2
Facilities/medicines not available	-	2.2

Among the reasons for not seeking treatment, in current pregnancy as well as last birth the most common reason is that problem is not considered serious by the women (Table 5.23). 47.6 percent of currently pregnant women and 64.4 percent of women at the time of last birth have not sought any treatment, as they do not consider the problem serious enough to be treated. Women perceive obstetric problems as normal symptoms of pregnancy until it hinders their day-to-day activities. *A 16 years old mother of a four-month-old female child who suffered from blurred vision, convulsions and weakness during last pregnancy said, "I discussed this with my mother-in-law, but did not receive any treatment as she viewed these symptoms, as not serious enough to be treated or requiring medical attention". Lalitha, a 18 years old girl, who was 9 months pregnant and was experiencing convulsions and swelling of hands and feet mentioned, "I discussed this with my mother, but did not receive any treatment as she believed that these problems were normal at the time of pregnancy".*

Women also expressed their inability to seek treatment due to the cost of treatment. 33.3 percent of currently pregnant women and 17.8 percent of women during their last birth have not sought any treatment due to lack of money. *A girl from a high caste Rajput family, who was pregnant at the time of the survey was suffering from pregnancy complications such as blurred vision, swelling of hands and feet, weakness and lower abdominal pain responded, "I discussed this with my husband and sister-in-law but no one in the family is interested that I seek treatment due to economic reasons".*

In the case of currently pregnant women, long waiting time at the health clinics is a constraint in seeking treatment. 14.3 percent of women have not sought treatment due to this reason. 4.8 percent of currently pregnant women reported that family members are not interested in seeking treatment for them. 11.1 percent of women during their last birth also reported that their husbands or other family members are opposed to medical care, for any obstetric problems. Other reasons reported by women during their last birth include no one to accompany them to and non-availability of medicines at health facility.

5.11 Logistic Regression Analyses of Prevalence of Obstetric Morbidity and Treatment Seeking during Pregnancy

Results of logistic regressions are presented in Table 5.24 and Table 5.25.

Table 5.24: Logistic Regression Analyses of Prevalence of Obstetric Morbidity

	Odds Ratio	
Predictor Variable	**Model 1**	**Model 2**
Attended School		
Yes		1.301
No (r)		
SLI		
Low (r)		
Medium	.650	
High	.487	
Autonomy Index		
Low (r)		
Medium		1.344
High		5.682
Distance from a Health Facility		
Near	1.547	
Far (r)		
Development of Tehsil		
Less developed (r)		
More developed	.772	
Children Ever Born		
1	1.002	
2	2.357	
3 + (r)		
Spontaneous Abortion		
Yes		10.439**
No (r)		
Received Full Package of ANC		
Yes		.636*
No (r)		
-2 Log Likelihood	208.406	206.317
N	166	167

r: reference category ***p< 0.01 ** p< 0.05 *p<0.10

The odds ratios in Table 5.24 show that as in the case of bivariate analysis, pregnancy wastage significantly influences reporting of obstetric problems. Women who have had a spontaneous abortion in the past are more likely to report obstetric problems. A high value of odds ratio as given in the table may be due to few cases of spontaneous abortion. As expected, utilization of antenatal care is another significant predictor of obstetric morbidity. Women who have utilized a full package of antenatal care are less likely to report obstetric problems.

Table 5.25: Logistic Regression Analyses of Treatment for Obstetric Morbidity among Women during their Last Birth

	Odds Ratio		
Predictor Variable	**Model 1**	**Model 2**	**Model 3**
Attended School			
Yes		1.314	1.577
No (r)			
SLI			
Low (r)			
Medium	3.406**		
High	3.429*		
Autonomy Index			
Low (r)			
Medium		.800	.642
High		1.839	2.122
Distance from a Health Facility			
Near	4.953***		
Far (r)			
Development of Tehsil			
Less developed (r)			
More developed	1.104		
Children Ever Born			
1	1.882		
2	1.648		
3 + (r)			
Spontaneous Abortion			
Yes		.950	.607
No (r)			
Discussed Obstetric Symptoms			
Yes			24.455***
No (r)			
Received Full Package of ANC			
Yes		.163***	
No (r)			
-2 Log Likelihood	126.481	121.426	103.855
N	104	105	105

r: reference category ***p< 0.01 ** p< 0.05 *p<0.10

In Table 5.25, the effects of predictor variables on treatment seeking for obstetric morbidity during pregnancy have been estimated. The table shows that standard of living index, distance from a health facility, discussion of obstetric symptoms and utilization of antenatal care are important predictors. Better standard of living increases the probability of seeking treatment. Relative to women with low standard of living, women with medium and high standard of living are 3 times more likely to seek treatment.

Distance from a health facility has emerged as an important predictor. Compared with women, who reside in villages located at a far away place from a health facility, women

staying in village near a health facility are 4 times more likely to seek treatment. Discussion of obstetric problems with any family member or health personnel also significantly increases the utilization of services. Women who have ever discussed their problems with someone are more likely to seek treatment. Finally, those women who received full package of antenatal care are 84.0 percent less likely to seek treatment for obstetric problems. A reason for this could be that those who sought antenatal care either experience less number of obstetric problems as shown in Table 5.24 or do not perceive the need to seek treatment for obstetric symptoms. But this relationship requires further investigation.

5.12 Prevalence of Obstetric Complications during Delivery

Due to lack of knowledge, negative attitude and restrictions of the family towards health seeking behaviour, adolescent women are found to experience adverse pregnancy outcomes and serious complications during delivery (CWFP 1998). In this section, complications of delivery including other delivery characteristics among women have been examined. These include type of delivery, birth weight of infants born to women and size of the infant at birth.

Table 5.26: Nature of Complications among Women during Delivery

Nature of Complication	Percent
Obstructed labour	45.5
Prolonged labour (More than 12 hours)	54.5

N=101

The survey shows that at the time of delivery 37.7 percent of women have suffered from some complication. Out of the total reported episodes of complications, 45.5 percent of women reported obstructed labour and 54.5 percent complained of prolonged labour during delivery which continued for more than twelve hours (Table 5.26).

Table 5.27: Percentage Distribution of Women by Type of Delivery and other Characteristics of the Infant Born

Item	Percent
Type of delivery	
Normal	91.6
Caesarian	8.4
Birth Weight	
Weighted at birth	29.9
Less than 2.5 kg	24.0

2.5 kg or more	56.0
Don't Know	20.0
Size at Birth	
Large	9.0
Average	59.9
Small	13.8
Very small	17.4

N=167

As can be seen from Table 5.27 8.4 percent of children to adolescent women are delivered by caesarian section. Low birth weight and infections are generally associated with more than 60 percent of the neonatal deaths (Khanna and Bhatt 1991). Low birth weight is also a result of low calorie intake. In the present study in only 29.9 percent of cases, infants are reported to be weighted at the time of birth. Among those who are weighed, one-fourth are less than 2.5 kg. 56.0 percent of women reported that their child weighted more than 2.5 kg and in 20.0 percent of cases women did not know the weight of the infant at the time of birth. Since babies delivered at home are not weighted, as asked in the NFHS, women were also asked about the size of each baby at birth (large, average, small and very small). 31.2 percent of women reported that their infants were either small or of very small size. 59.9 percent of women believed that they gave birth to an infant of average size and 9 percent reported that their child was large in size at the time of birth.

5.13 Prevalence of Obstetric Morbidity after Delivery

In this section, problems faced by adolescent women after delivery have been examined. The survey shows that 37.7 percent women reported at least one symptom of obstetric morbidity one-week after the delivery. These symptoms include fever, lower abdominal pain, excessive bleeding, dizziness/severe headache and vaginal discharge. Description of morbidity episodes is presented in Table 5.28. Data show that 25.0 percent of the episodes are reported to be of lower abdominal pain. In 22.2 percent of cases women complained of fever. In 20.4 percent of cases women are suffering from excessive bleeding and dizziness or headache. 12.0 percent of episodes are of vaginal discharge. On an average, a woman reported 1.7 problems one week after the delivery.

Table 5.28 Percentage Distribution of Morbidity Episodes among Women who have Delivered

Nature	Percent
Lower abdominal pain	25.0
Fever	22.2
Excessive bleeding	20.4
Dizziness/severe headache	20.4
Vaginal discharge	12.0
Mean number of episodes	**1.7**

N=108

Similar problems after delivery have also been reported in a study in rural Maharastra where 24.0 percent of the girls who delivered reported some post partum complications (Barua 2000).

Table 5.29: Percentage Distribution of Women by Obstetric Morbidity after Delivery by Background Characteristics

Characteristic	Percent
Attended School	
Yes	43.2
No	33.3
Chi Sq (sig) 1.723 (.189)	
Mass Media Exposure	
Ever exposed to Newspaper	37.9
Never exposed	37.7
Chi Sq (sig) .001 (.980)	
Ever exposed to Radio	35.3
Never exposed	38.3
Chi Sq (sig) .107 (.743)	
Ever exposed to T.V	36.1
Never exposed	42.2
Chi Sq (sig) .530 (.466)	
Work Status	
Working	38.4
Non-working	36.4
Chi Sq (sig) .065 (.799)	
Husband's Occupation	
Agricultural	35.1
Non-agricultural	33.3
Laborers	43.3
Chi Sq (sig) 1.285 (.506)	
SLI	
Low	42.3
Medium	37.1
High	25.9
Chi Sq (sig) 2.308 (.315)	
Development of Tehsil	
Less developed	45.1
More developed	28.9

Chi Sq (sig) 4.574 (.032)*	
Distance from a Health Facility	
Near	39.1
Far	35.1
Chi Sq (sig) .256 (.613)	
Autonomy Index	
Low	36.2
Medium	36.0
High	75.0
Chi Sq (sig) 4.899 (.086)*	
Children Ever Born	
0	-
1	34.7
2	38.5
3 +	50.0
Chi Sq (sig) 1.528 (.466)	
Spontaneous Abortion	
Yes	46.2
No	37.3
Chi Sq (sig) .403 (.526)	

*** Significant at .01 level **Significant at .05 level *Significant at .10 level

Percentage distribution of women who experienced problems after delivery by background characteristics (Table 5.29) shows that only level of development and woman's autonomy in the household are important determinants of reporting post partum complications. A higher percentage of women experienced such problems in the less developed tehsil (45.1 percent) compared with more developed tehsil (28.9 percent). Reporting of post partum complications also increases with an increase in a woman's autonomy in the household matters. The table shows that 36.2 percent of women who reported obstetric problems after delivery have low level of autonomy compared with 75.0 percent of women having high autonomy index. Other factors do not seem to significantly influence the reporting of post partum complications.

5.14 Consultation of Symptoms of Obstetric Morbidity after Delivery

Communication of symptoms of obstetric morbidity after delivery is much better than in the case of gynaecological problems as well as obstetric problems during pregnancy. Our survey finds that among those who reported any obstetric problem after delivery, more than 80 percent of women have discussed it with either someone at home or health personnel (Table 5.30). Out of those who have discussed, at least half of the women have consulted their mothers. Only 18.9 percent of women reported to have consulted their mothers-in-law and 7.5 percent have

discussed with their husbands. The percentage of women who discuss their obstetric problems after delivery with their husbands is low compared with women who discussed gynaecological morbidity and/or obstetric morbidity during pregnancy. This may be perhaps due to the custom of delivering the first baby in natal home. This could also be one of the reasons for a higher percentage of women reported to have consulted someone regarding their obstetric problems after delivery. Most of the women reported that they feel more comfortable in discussing their problems with their mothers in their natal homes.

Table 5.30: Percentage Distribution of Women by Consultation of Symptoms of Obstetric Morbidity after Delivery

Item	Percent
Discussed	84.1
Percent Discussed with*	
Husband	7.5
Mother	50.9
Mother-in-law/Sister-in-law	18.9
Doctor/health worker	30.1
Friend/neighbour	1.9

* the percentage does not add up to 100 due to inclusion of multiple response
N=63

A higher percentage of women (30.0 percent) have discussed their obstetric problems after delivery with a doctor or a health worker. This may be perhaps true for those women who deliver in a health facility. As in a health facility they are already in contact with health personnel, women are able to express their problems after delivery to them. This is also substantiated by data from our survey, which shows that more than one third of women who talked to a health worker regarding obstetric problems after delivery, delivered in a health facility.

5.15 Knowledge of Source of Treatment and Treatment Seeking for Obstetric Morbidity after Delivery

Information was also collected on knowledge regarding a source of treatment for obstetric morbidity. Out of those who experienced any such problems, 79.4 percent of women know about a source of treatment for post partum complications.

Table 5.31: Percentage Distribution of Women by Knowledge of Source of Treatment and Treatment Seeking for Obstetric Morbidity

Item	Percent
Knowledge about a source of treatment	79.4
Did not seek treatment	36.5

N=63

Not only communication of symptoms and knowledge of source of treatment is better reported among women with obstetric morbidity after delivery, treatment seeking for post partum complications is also more satisfactory among adolescent women (Table 5.31). The study shows that at least 63.5 percent of women have sought treatment for any symptom of obstetric morbidity after delivery which is higher than 32.3 percent of women who sought treatment for any gynecological morbidity and 57.0 percent of women who sought treatment for any obstetric morbidity during their last birth. These findings show that the reporting of symptoms/problems increases with a woman's change in the status from marriage to pregnancy and from pregnancy to childbirth. Women are reluctant to share their gynecological problems but they are more comfortable in sharing their obstetric problems, especially after childbirth.

Table 5.32: Percentage Distribution of Women by Knowledge of Source of Treatment and Treatment Seeking for Obstetric Problems after Delivery by Background Characteristics

Characteristic	Percent Know a Source of Treatment	Percent Sought Treatment
Attended School		
Yes	84.4	75.0
No	74.2	51.6
Chi Sq (sig)	.997 (.318)	3.715 (.054)*
Mass Media Exposure		
Ever exposed to Newspaper	90.9	81.8
Never exposed	76.9	59.6
Chi Sq (sig)	1.084 (.298)	1.931 (.165)
Ever exposed to Radio	100.0	91.7
Never exposed	74.5	56.9
Chi Sq (sig)	3.854 (.050)**	5.076 (.024)**
Ever exposed to T.V	84.1	70.5
Never exposed	68.4	47.4
Chi Sq (sig)	1.990 (.158)	3.051 (.081)*
Work Status		
Working	74.4	55.8
Non-working	90.0	80.0
Chi Sq (sig)	2.024 (.155)	3.445 (.063)*
Husband's Occupation		

Agricultural	80.8	80.8
Non-agricultural	90.9	90.9
Laborers	73.1	34.6
Chi Sq (sig)	1.554 (.460)**	16.269 (.000)***
SLI		
Low	69.7	45.5
Medium	95.7	87.0
High	71.4	71.4
Chi Sq (sig)	5.878 (.053)*	10.285 (.006)***
Development of Tehsil		
Less developed	82.9	70.7
More developed	72.7	50.0
Chi Sq (sig)	.909 (.340)	2.655 (.103)
Distance from a Health Facility		
Near	74.4	67.4
Far (r)	90.0	55.0
Chi Sq (sig)	2.024 (.155)	.912 (.340)
Autonomy Index		
Low	88.2	70.6
Medium	75.0	57.5
High	83.3	83.3
Chi Sq (sig)	1.340 (.512)	2.008 (.366)
Children Ever Born		
1	81.8	69.7
2	70.0	55.0
3 +	88.9	55.6
Chi Sq (sig)	1.667 (.435)	1.396 (.498)
Spontaneous Abortion		
Yes	83.3	33.3
No	78.9	66.7
Chi Sq (sig)	.064 (.801)	2.602 (.107)
Place of Delivery		
Home	70.0	50.0
Institutional	87.9	75.8
Chi Sq (sig)	3.067 (.080)*	4.498 (.034)**

*** Significant at .01 level **Significant at .05 level *Significant at .10 level

Percentage distribution of women who know about a source of treatment of any obstetric problem after delivery and their treatment seeking by background characteristics is presented in Table 5.32. The table shows that awareness regarding a health facility for obstetric problems is positively related to regular exposure to radio. Almost all women who know a source are exposed to radio compared with 74.5 percent who were never exposed to radio. The knowledge of source of treatment increases with an increase in the standard of living of women. 95.7 percent of women with medium standard of living and 71.4 percent with high standard of living have knowledge of source of treatment in relation to only 69.7 percent of women having low standard of living. Husband's occupation also influences awareness regarding source of treatment: 80.8 percent of women whose husband's are in agricultural

occupations and 90.9 percent in non-agricultural occupations have knowledge of a source of treatment for obstetric complications compared with 73.1 percent of women whose husbands are working as laborers.

Knowledge about a source of treatment is also significantly correlated with the place of delivery. Women who deliver in a health facility (87.9 percent) are more aware of source of treatment compared with women (70.0 percent) who deliver at home. This is perhaps due to the fact that at a health facility, during antenatal care visits and also after delivery women are informed about diet, delivery care, new born care as well as breastfeeding practices. Moreover, the fact that a woman delivered in a health facility makes her more informed about a source of treatment. At the time of antenatal care, she also observes those who delivered and gets an opportunity to talk to them. Also, during the process of delivery, she interacts with health staff, which improves her knowledge.

As regards treatment seeking, a woman's education is also positively linked with her treatment seeking. 75.0 percent of women who have ever attended school have sought treatment compared with 51.6 percent of women who never attended school. Exposure to mass media, especially radio and television also leads to reporting better treatment. Women who are regularly exposed to these means of communication show better treatment seeking behaviour. A woman's work status also significantly influences her treatment seeking for obstetric problems. But non-working women report better treatment than working women.

Treatment seeking for obstetric morbidity after delivery is found to be positively and significantly linked with the standard of living index. A higher percentage of women in the medium (87.0 percent) and high standard of living (71.4 percent) have sought treatment for obstetric problems compared with those with a low standard of living (45.5 percent). Similarly, husband's occupation is also an important factor affecting treatment seeking. A higher percentage of women whose husbands' are in agriculture and non-agricultural occupations have sought treatment compared with those women whose husbands' are laborers. Finally, place of delivery is an important determinant of utilization of services for obstetric morbidity. A higher percentage of women who delivered in a health facility sought treatment for obstetric problems after delivery (75.8 percent) compared with women who delivered at home (50.0 percent).

Table 5.33 Percentage Distribution of Women by Reasons for not Seeking Treatment

Reasons	Percent
Not serious	60.9
Embarrassment	4.3
Costs too much	26.1
Family/Mother-in-law	4.3
Did not know the source	4.3

The reasons for not seeking treatment for obstetric problems after delivery are broadly similar to the reasons given for obstetric problems during current pregnancy or last birth. The most common reason for not seeking treatment is that the problem is not considered serious (Table 5.33). Most women believe that these problems are generally associated with the birth of a child and there is no need for seeking medical care. 60.9 percent of women do not consider the obstetric complications after delivery as serious enough to be treated. 26.1 percent of the women reported financial constraint as a reason for not seeking treatment. *One woman during FGDs said, " my in-laws say that she is someone else' daughter so we should not be bothered about seeking treatment for her".* Other reasons are lack of knowledge about the source (4.3 percent), embarrassment to seek treatment (4.3 percent) and lack of interest of family members (4.3 percent) to seek treatment. *A comment from a young woman illustrates the dependence of adolescent women on other members of the family to seek health care, " we cannot take decision ourselves. We are dependent on our elders to decide whether we should seek treatment".*

5.16 Logistic Regression Analysis of Reporting of Obstetric Morbidity after Delivery

Table 5.34 presents results of logistic regressions for obstetric morbidity reported after delivery. Due to less number of cases, regression analysis for treatment seeking for obstetric morbidity after delivery has not been included in this study.

Table 5.34: Logistic Regression Analyses of Reporting of Obstetric Morbidity after Delivery

	Odds Ratio		
Predictor Variable	**Model 1**	**Model 2**	**Model 3**
Attended School			
Yes		1.784	1.598
No (r)			
SLI			
Low (r)			
Medium	.735		
High	4.29*		

Autonomy Index			
Low (r)			
Medium		1.0009	1.027
High		5.353**	5.605**
Distance from a Health Facility			
Near	1.015		
Far (r)			
Development of Tehsil			
Less developed (r)			
More developed	.475		
Children Ever Born			
1	.608		
2	.647		
3 + (r)			
Spontaneous Abortion			
Yes		1.758	1.552
No (r)			
Received Full Package of ANC			
Yes		1.494	
No (r)			
Place of Delivery			
Home (r)			
Institutional			.701
-2 Log Likelihood	210.080	211.241	211.405
N	165	165	165

r: reference category ***p< 0.01 ** p< 0.05 *p<0.10

The table shows that reporting of such problems is significantly associated with standard of living index and woman's autonomy. Women with high standard of living are less likely to report a problem compared with women having low standard of living. This may perhaps be due to the fact that women with high standard of living are more likely to seek treatment thus, their reporting of problem is also less compared with women in low standard of living. As in the case of gynaecological and obstetric morbidity during pregnancy, woman's autonomy positively influences reporting of obstetric morbidity after delivery. Relative to women with low level of autonomy, women with high autonomy are more likely to report an obstetric problem.

To sum up, a significant percent of adolescent women reported pregnancy-related complications. A hospital-based study in Mumbai corroborates these findings that adolescents experience more complications compared to women aged 20-29 years in the antenatal and intra-natal period (Pachauri and Jamshedji 1993). A higher percentage of women with last birth (62.5 percent) reported obstetric symptoms during pregnancy compared with currently pregnant women (59.6 percent). The results of our survey show that

a higher percentage of women have discussed their problems during last birth (73.3 percent) compared with currently pregnant women (64.5 percent). This is perhaps due to the fact that most of the currently pregnant women were at an initial stage of their pregnancy when they just started experiencing the problems. Similarly, only 32.3 percent of women have sought treatment for problems experienced during current pregnancy compared with 57.0 percent of women during their last birth.

As regards obstetric complications during delivery, our survey shows that a significant number of women (37.7 percent) faced complications at the time of delivery such as prolonged labor and obstructed labor. Even one week after the delivery, more than one-third of women have reported a problem. Unlike in the case of gynecological morbidity and morbidity during pregnancy, in the case of women suffering from complications after delivery, more than 80 percent of women have discussed about their problems. Also, after delivery not only women become more knowledgeable about a source of treatment, at least two-thirds of women have sought treatment for a post partum complication.

III. Contraceptive Morbidity

Although the use of contraception prevents unwanted pregnancy and in some cases protects against sexually transmitted diseases, it may also raise the risk of infections, resulting in contraceptive morbidity. Therefore, the choice of contraceptives is often influenced by the fear of side effects and perception of morbidity during its use (IIPS 2000) Bang and Bang (1989) found negative effects of contraceptive use on the reproductive health of women. They found that out of 82 women who had undergone sterilization, around 66 percent reported some gynecological diseases. Similarly, Bhatia and Cleland (1995) also found that sterilized women were more likely to report gynecological symptoms. Empirical studies have found that menstrual irregularities, white discharge, anemia, weakness and other illnesses are common side-effects of some specific contraceptives (Bhat and Halli 1995). Adolescent women are more vulnerable to such infections. A study of contraceptive morbidity in India found that a higher proportion of younger women suffer from problems associated with sterilization (Rani et al., 1997). This section focuses on the reported problems of contraceptive use and treatment seeking for contraceptive morbidity among adolescent women.

5.17 Prevalence of Contraceptive Morbidity

As mentioned in Chapter IV, 17.0 percent of women are current users and 23.0 percent of women have ever used any method of family planning. Data from our survey presented in Table 5.35 shows that out of those who have ever used any contraception, 40.0 percent of women have reported a problem after the use of contraception. These symptoms include weakness or dizziness, headache, bodyache, irregular or no menstruation, excessive bleeding, abdominal pain/cramps and white discharge.

Table 5.35: Percentage Distribution of Morbidity Episodes among Women after the Use of Contraception

Nature of Morbidity	Percent
Weakness/Dizziness	21.4
Headache/Backache/Bodyache	17.9
No menstruation/irregular	16.1
White discharge	16.1
Abdominal pain/Cramps	14.3
Excessive bleeding	8.9
Others*	5.4

*Others include breast tenderness, pain in stitches and convulsions
N=56

The percentage distribution of episodes by nature of morbidity is presented in Table 5.36. Among the problems due to use of contraception, 21.4 percent of episodes are of weakness or dizziness. Women have also reported headache, body ache or backache (17.9 percent). 16.1 percent of women have reported to be suffering from either irregular or no menstruation after the use of contraception. 14.3 percent of women have reported lower abdominal pain or cramps and 16.1 percent have reported white discharge due to the use of contraceptives. 8.9 percent of cases are reported to be of excessive bleeding. Few women have also reported breast tenderness, pain in stitches after sterilization and convulsions.

Table 5.36: Percentage Distribution of Women Reporting Contraceptive Morbidity by Background Characteristics

Characteristic	Percent
Attended School	
Yes	30.0
No	47.5
Chi Sq (sig) 2.188 (.139)	

Mass Media Exposure	
Ever exposed to Newspaper	28.6
Never exposed	42.9
Chi Sq (sig) .952 (.329)	
Ever exposed to Radio	41.2
Never exposed	39.6
Chi Sq (sig) .013 (.909)	
Ever exposed to T.V	33.3
Never exposed	57.9
Chi Sq (sig) 3.480 (.062)*	
Work Status	
Working	40.8
Non-working	38.1
Chi Sq (sig) .045 (.831)	
Husband's Occupation	
Agricultural	31.3
Non-agricultural	46.2
Laborers	48.0
Chi Sq (sig) 1.893 (.388)	
SLI	
Low	50.0
Medium	36.4
High	25.0
Chi Sq (sig) 2.955 (.228)	
Development of Tehsil	
Less developed	46.3
More developed	31.0
Chi Sq (sig) 1.658 (.198)	
Distance from a Health Facility	
Near	42.0
Far (r)	35.0
Chi Sq (sig) .292 (.589)	
Autonomy Index	
Low	18.8
Medium	39.6
High	100.0
Chi Sq (sig) 12.014 (.002)***	
Children Ever Born	
0	0.0
1	34.8
2	50.0
3 +	30.0
Chi Sq (sig) 4.094 (.251)	
Spontaneous Abortion	
Yes	40.0
No	41.3
Chi Sq (sig) .003 (.956)	

*** Significant at .01 level **Significant at .05 level *Significant at .10 level

The percentage distribution of women who reported problems due to the use of contraceptives by background characteristics show that women's reporting of contraceptive

morbidity significantly increases only with an increase in a woman's autonomy in the household matters. (Table 5.36). Relative to women with low autonomy (18.8 percent), a majority of women having high degree of autonomy in household decision making report contraceptive problems. Exposure to television is negatively related to the reporting of symptoms of contraceptive morbidity. A higher percentage of women (57.9 percent) who are never exposed to television reported contraceptive morbidity compared with 33.3 percent of women who are regularly exposed to television.

5.18 Consultation of Symptoms of Contraceptive Morbidity

Consultation of symptoms of contraceptive morbidity with either anyone at home or health personnel is comparable with communication of symptoms of gynecological morbidity and obstetric morbidity during pregnancy but is poor than communication of symptoms of obstetric morbidity after delivery. Table 5.37 shows that 67.9 percent of women have discussed their symptoms of contraceptive morbidity with either someone at home or health personnel.

Table 5.37: Percentage Distribution of Women by Consultation of Symptoms of Contraceptive Morbidity

Item	Percent
Discussed	67.9
Discussed with*	
Husband	36.8
Mother	36.8
Mother-in-law	21.0
Sister-in-law	5.2
Doctor/Health worker	10.5
Sister	10.5

* the percentage does not add up to 100 due to inclusion of multiple response
N=28

Among those who have discussed, an equal percentage of women (36.8 percent) have discussed with husband and mother. 21.0 percent of women have consulted their mother-in-law. 10 5 percent of women also reported to have discussed contraceptive morbidity with sister and 5.2 percent with sister-in-law. Unlike in the case of gynecological morbidity, 10.5 percent of women have discussed their problems with either a doctor or health personnel.

5.19 Knowledge of Source of Treatment and Treatment Seeking for Contraceptive Morbidity

More than 80 percent of women know about a source where treatment could be obtained for any symptom of contraceptive morbidity (Table 5.38). Women have reported better knowledge about a source of treatment in the case of contraceptive morbidity, but only 28.6 percent have sought treatment for the problem they are suffering with after the use of any method of contraception. Thus, treatment seeking for contraceptive morbidity is the poorest among all the three morbidity.

Table 5.38: Percentage Distribution of Women by Knowledge of Source of Treatment and Treatment Seeking

Item	Percent
Knowledge of a source of treatment	82.1
Did not seek treatment	71.4

N=28

Table 5.39: Percentage Distribution of Women by Reason for not Seeking Treatment

Reasons	Percent
Not serious	50.0
Embarrassment	10.0
Costs too much	30.0
No time/long waiting	5.0
Stopped using pills	5.0

Regarding the reasons for not seeking treatment, most women (50.0 percent) consider the symptoms as normal or non-serious and therefore do not perceive as requiring treatment (Table 5.39). *One young woman remarked, " I ignore symptoms of contraceptive morbidity due to use of sterilization as I had no other option but to use it".* 30.0 percent of women mentioned financial constraint as a reason for not seeking treatment. 10.0 percent of women are embarrassed to seek treatment for contraceptive side-effects. *An ANM remarked, "they are not able to talk about these problems with us".* 5.0 percent of women have reported that they have no time to go for treatment. Another 5.0 percent stopped using contraception altogether, to get rid of the symptoms, which they developed after the use of the method.

To sum up, the incidence of infection of reproductive tract due to contraceptive use is a cause of concern, especially among adolescent women who already have as shown in chapter IV,

misconceptions regarding contraceptives. Our survey reports that 40.0 percent of adolescent women who ever used modern contraceptives are suffering from at least one symptom of contraceptive morbidity. One-third of women have not discussed about their problems with anyone. Among those who have discussed, most of them prefer to discuss the symptoms either with their husbands or mothers. Although the knowledge of source of treatment is universal, only 28.6 percent of women have sought treatment for any problem experienced after the use of contraception. These findings show that among all the three types of morbidity, treatment of contraceptive morbidity is the poorest among adolescent women.

IV. Type of Provider

As in the case of maternal and child health and family planning services, the choice of public or private provider among adolescent women also varies with the treatment seeking for different types of reproductive morbidity. For gynecological, obstetric and post partum complications women prefer private providers while for contraceptive complications a higher percentage of women seek treatment from government providers (Table 5.40).

Table 5.40: Treatment Seeking for Reproductive Morbidity by the Type of Provider

Type of Provider	Type of Service			
	Gynecological Morbidity	Obstetric Morbidity		Contraceptive Morbidity
		During Pregnancy	After Delivery	
Public	16.5	41.5	35.0	62.5
Private	68.2	55.7	55.0	37.5
Others*	15.3	2.8	10.0	-

*Others include chemist shop, home remedy and faith healer

In the case of gynecological morbidity, those women who have sought treatment 68.2 percent are dependent on private providers. In only 16.5 percent of cases treatment has been sought from government providers. In 5.0 percent of cases medicines are bought directly from chemist shop. Similarly, in 5.0 percent of cases, women rely on home remedy. Few cases of treatment from a faith healer are also reported (3.5 percent). On the other hand, a study of married adolescent women in Tamil Nadu reports that of those who sought treatment, 21 percent used home remedies but more than half visited unqualified private practitioners (Prasad et al 1999).

As in the case of gynecological morbidity, for problems experienced during pregnancy more women sought treatment from private providers (55.7 percent) compared with public providers (41.5 percent). Even for complications experienced after delivery women prefer to visit private providers (55.0 percent) as opposed to public providers (35.0 percent). For symptoms after delivery they have also reported visiting a traditional practitioner such as a vaid or hakim (2.5 percent), dai (2.5 percent) or utilizing a home remedy (2.5 percent). Some women also brought medicines directly from a chemist shop (2.5 percent).

Unlike gynecological and obstetric morbidity, in the case of contraceptive morbidity women have more trust in government services (62.5 percent) compared with private providers (37.5 percent) to seek treatment for symptoms of contraceptive morbidity. The most common reason given by adolescent women for choosing a private facility is effective treatment and better quality services whereas public providers are generally chosen due to their convenient location, near or within the village.

Summary

Adolescent women have problems before marriage and same problems starting from their menarche, continue through all their lives even after marriage. As regards gynecological problems, 64.7 percent of women have reported a symptom of gynecological morbidity in the present survey. This percentage is much higher then percentage of all women in Indore district where only 36.3 percent of women reported any symptom of RTI (MOHFW 2000). Results of logistic regression show that reporting of gynecological morbidity is significantly influenced by woman's autonomy, previous history of a spontaneous abortion and maintenance of menstrual hygiene. Most of the adolescent women do not discuss about the symptoms of gynecological problems due to embarrassment before marriage. Those who do, most of them confided only in their mothers. Even after marriage around two-thirds of women do not discuss about their problems.

During a Focus Group Discussion, an adolescent women described this dynamic as, *"we first discuss our problems with mothers-in-laws or sisters-in-laws who then communicate this to our fathers-in-law/brothers-in-law and ultimately either fathers-in-law/brothers-in-law or husbands accompany us to the doctor"*. Some women mention that they generally first talk about their symptoms with whoever is in their age group or is closer to them. Thus, in fact

there is a chain of communication of symptoms of gynecological morbidity adolescent women are suffering with.

Communication of Gynecological Problems

Woman ⟶ mother-in-law/sister-in-law ⟶ father-in-law/brother-in-law/ husband

Also, they discuss about it only when it becomes serious and hinders their day to day activities. *A 17-year-old focus group discussant stated, "if we inform our in-laws in the beginning, they think that we are pretending to be ill, they believe us only when it becomes serious". Another woman remarked, "we discuss about these problems with others only when it becomes serious".*

Overall, a lower percentage of women (30.6 percent) sought treatment before marriage compared to 33.5 percent after marriage. In case of all women in the reproductive ages at least 39.0 percent sought treatment for any symptom of RTI in the Indore district (MOHFW 2000). The treatment seeking by nature of morbidity shows that more women have sought treatment for only lower abdominal pain and lower backache before marriage. After marriage, episodes of white discharge record the highest number of untreated cases followed by menstrual disorders, lower backache and lower abdominal pain. Generally, women attribute different reasons for not seeking treatment to different symptoms of gynecological morbidity. They do not seek treatment, especially for white discharge due to social stigma attached to such problems. Most women suffering from lower abdominal pain and lower backache consider it normal and not as serious to be treated. Women also do not seek treatment due to financial constraints. The need for male relatives or husband's accompaniment also delays seeking medical treatment for adolescent women. Moreover, women ignore symptoms as they accept them as a part of their gynecological ill health and reproductive life. Also, as a daughter-in-law, a woman's illness is found to be low on the family priority list. Results of logistic regression show that woman's education, standard of living index, distance from a health facility, level of development and consultation of symptoms with someone are significant predictors of treatment seeking.

In case of obstetric morbidity, a significant number of women have reported obstetric symptoms either during current pregnancy or their last birth. Multivariate analysis reveals that utilization of full package of antenatal care and previous history of a spontaneous abortion are significant predictors of reporting of obstetric morbidity during pregnancy. Unlike in the case of gynecological morbidity, women are less hesitant to consult about their obstetric problems with either someone at home or with a health worker. Also, more women have reported to consult a health worker for obstetric problems. Relative to gynecological morbidity, women are more knowledgeable about source of treatment with respect to obstetric morbidity. Even treatment seeking for obstetric morbidity is better compared with gynecological morbidity. Treatment seeking, however, for obstetric morbidity is poor among adolescent women when compared with women of all reproductive ages (69.0 percent) who sought treatment for any pregnancy complication in the Indore district (MOHFW 2000). A common reason for not seeking treatment is reported to be non-seriousness of the symptoms followed by financial constraints. Some of the currently pregnant women also did not seek treatment due to long waiting and lack of time to visit a health facility. Husbands' or other family member's opposition also played an important role in treatment seeking behaviour of obstetric morbidity during pregnancy. Results of logistic regression show that standard of living index, distance from a health facility, discussion of symptoms and utilization of antenatal care significantly influences treatment seeking for obstetric problems during last birth.

37.7 percent of women also reported complications during delivery. When we compared our results with that of RHS conducted in the Indore district, this percentage is much higher with respect to women of all reproductive ages where only 18.0 percent reported some complication at the time of delivery (MOHFW 2000). Similarly, 24 percent of babies among adolescent women in our survey are found to be below 2500 gms/ 2.5 kg as compared to only 13 percent for women of all reproductive ages (MOHFW 2000).

More than one-third of women have also reported post-partum complications. Results of logistic regression show that standard of living index and woman's autonomy significantly influences reporting of obstetric problems. As compared with gynecological morbidity and obstetric morbidity during pregnancy, women suffering from post partum complications are not only less reluctant to talk about the problems and are more aware of the source of treatment but also show better treatment seeking behaviour. The findings of the study show

that obstetric problems appear to have lesser stigma attached to them because of the fact that when women become pregnant and also give birth to a child they are less hesitant to discuss such problems. Not being pregnant and having gynecological problems is confidential as women experience shame in revealing innermost details of the bodies.

At least two-thirds of women have sought treatment for any problem experienced one week after the delivery. The percentage of adolescent women who sought treatment for post delivery complications as reported in our survey (63.5 percent), however, is lower compared with women of all reproductive ages where as RHS conducted in Indore district shows that 59.0 percent of women sought treatment for such problems (MOHFW 2000). The most common reason for not seeking treatment is non-seriousness of symptoms, as women believe that such problems are generally associated with the birth of a child. Some women also do not seek treatment due to cost of treatment.

A significant percent of adolescent women also reported a problem after the use of modern contraceptives (40.0 percent). This percentage is high compared with 21.7 percent of women of all reproductive ages in Indore district who reported some contraceptive side-effects due to either sterilization, insertion of IUD or consummation of Pills (MOHFW 2000). Thus, it appears that adolescent women have a higher problem of use of contraception. As in the case of gynecological morbidity, women do not discuss their problems with anyone at home or a health worker. Treatment seeking for contraceptive morbidity is the poorest. Most of the women consider the symptoms as non-serious or do not seek treatment due to economic factor. Some are also embarrassed to seek treatment. At least 5 percent have not sought treatment due to no time or long waiting hours and some stopped using the contraceptive methods to get rid of the problems altogether.

Chapter VI: Conclusion

According to an estimate there are around 200 million adolescents in India aged 15-24 years. It is expected that this age group will continue to grow and is likely to reach over 214 million by 2020. Projections also estimate a significant increase in the adolescent pregnancies and births over the next 20 years (Gupta 2003). However, despite that adolescent form such a large segment of the population, policies and programmes in India have focused little attention on adolescents. Following ICPD Cairo recommendations, Government of India launched Reproductive and Child Health Programme (RCH) in 1997 which prioritized adolescent health and made it a component of RCH package which consists of maternal and child health and family planning services. Treatment of RTIs/STD is also an important component of this package. But the needs of adolescent women are still integrated with the needs of adult women and the programmes in this field are still at an early stage of development. Even after the implementation of the RCH programme there is no clear definition of a strategic approach and activities required to provide adolescent health care. Moreover, very few programmes have been able to distinguish between the special reproductive health needs of married and unmarried adolescents (Gupta 2003). Married adolescents are more vulnerable because of serious reproductive health risks associated with early marriage, early sexual activity and early child bearing. Postponing marriage would be one way to curb teenage childbearing but for those who are already married and have begun childbearing, some of the health risks associated with adolescent childbearing can be avoided if the reproductive health services are appropriately utilised.

The present study aimed to examine the availability and utilisation of RCH services by adolescent women in rural Madhya Pradesh. An attempt has also been made to study the factors that influence utilisation of these services by adolescent women. In this study we have tested hypotheses discussed in Chapter-III and the findings of the study based on the survey as well as qualitative tools like Focus Group Discussions and Case Studies reveal that none of the hypotheses can be rejected. The study has identified three major constraints in utilisation of services by adolescent women: lack of reproductive health cognisance, conventional disposition of women and programmatic factors. Lack of reproductive health cognisance i.e. lack of awareness and judgement regarding health is a major hindrance in health seeking among adolescents. This is, especially true among adolescent women as a result of lack of education, as

they are married young. Adolescent women are generally poorly informed regarding their sexual and reproductive health. Moreover, their low educational attainment, limited sex education and inhibited attitudes towards sex accentuate this ignorance (Jejeebhoy 2000). Lack of knowledge and awareness is also related to conventional disposition of women, which also plays an important role in determining their health-seeking behaviour: women by their nature are disposed to these social and traditional roles. Among the programmatic factors, lack of access to health care, poor quality of delivery system and its inadequate response to adolescent women's need are important factors influencing utilisation of reproductive health care services. The study also aimed to identify the nature of services that are required by this sub-group of the population. The results of this study point to several potential target areas for policy and research aimed at improved sexual and reproductive and child health services for adolescent women.

Studies have consistently found that adolescents have limited knowledge on various aspects of sexual and reproductive health. They generally know little about reproductive health and have incorrect information or misconceptions about fertility and contraception (Nare et al., 1996; Gupta 2003). Results of our survey also show that adolescent women have limited information on risks of adolescent child bearing. Only 41.0 percent of women know that teenage childbearing is detrimental to the health of the mother as well as the child. 21.0 percent of women could record two risks associated with adolescent childbearing and 12.7 percent have recalled three such risks. Generally women reported that adolescent childbearing is detrimental to the health of mother and child, it causes weakness in both and can even cause death of mother and child. Few women also reported the adolescent childbearing results in anemia among women and frequency of spontaneous abortion increases. Among the most important risks recalled by women was that it causes weakness in mother and child. Some women believed that a child borne to an adolescent woman is generally weak and is more prone to diseases such as typhoid and pneumonia. Adolescent women are also found to be ill informed about the physiological changes accompanying pregnancy, danger signals of pregnancy, antenatal care and post natal care required after delivery. Lack of knowledge also characterizes their breastfeeding practices.

Women who are adequately informed about reproductive health may be better able to exercise options favoring improved health status (DHS 2003). Multivariate analysis presented in chapter -IV in the study clearly shows that women who have greater knowledge of antenatal care are

also more likely to use full package of antenatal care services. Utilization of antenatal care is also found to be significantly related to less reporting of obstetric problems during pregnancy.

An increase in the awareness regarding antenatal care would not only increase utilization of full package of antenatal care but also reduce the burden of obstetric morbidity among adolescent women. Thus, the providers should reach beyond the health facilities to encourage young women and their families to seek prenatal and obstetric care.

Our survey also shows that the lack of knowledge about post natal care is the most important factor for not obtaining post partum services. Results of multivariate analysis shows that an increase in the institutional deliveries also increases the likelihood of receiving postnatal care among adolescent women. It is quite possible that if women deliver in a health facility they become more aware of the services available as well as the significance of utilization of services. Place of delivery has also emerged as an important determinant of treatment seeking for obstetric problems after delivery. Results of the study show that those women who deliver in a health facility are more likely to seek treatment for obstetric problems after delivery. Therefore, measures are also needed to increase the use of professional delivery care to reduce infant as well as maternal mortality and morbidity among adolescent women.

Studies have also shown that adolescents have limited knowledge of HIV/AIDS, especially its mode of transmission (Gupta 2003). Our survey, however, shows that adolescents have better knowledge of HIV/AIDS. Overall, 60.3 percent of women have heard of HIV/AIDS. Most of the respondents who are aware of HIV/AIDS reported that it gets transmitted by sexual intercourse and contaminated needles. At least one-third of women knew a mode of transmission of the disease. 13.7 percent knew two modes of transmission and 2.7 percent knew at least three modes of transmission of HIV/AIDS. Perhaps mass media exposure is successful in creating the awareness about HIV/AIDS but yet some women still have certain misconceptions regarding transmission of AIDS. Women believe that a person can get AIDS by sharing the food/drink or utensils or clothes of an AIDS patient. Some women also believe that the disease is transmitted through unhygienic conditions, other person's blood, menstruating woman, mosquitoes and someone's touch or breath. Thus, mass media messages should be directed towards these women so that misconceptions can be removed. However, knowledge of RTIs among adolescent women is found to be disturbingly low. Only 11.3 percent of women are aware of a RTI. This

emphasizes on the need to raise awareness of RTIs/STIs and expand services for prevention and treatment for young women.

The study also reveals that adolescent women have misconceptions regarding utilization of family planning methods. As shown in chapter IV, women generally did not want to use contraception immediately after marriage, as some of them believed that it would cause infertility. Even providers are of the view that misconceptions regarding methods of family planning, especially spacing methods is a major hindrance in utilization of contraception among adolescent women. *An ANM remarked, "it is very difficult to encourage adolescent women to adopt contraceptives as they have to prove their fertility immediately after marriage and they prefer to go for female sterilization as soon as they finish their family size rather for spacing methods. Moreover, they are also worried about the side effects and have certain misconception regarding the use of family planning methods. As they are uneducated they do not understand the importance of spacing methods".*

FGDs with adolescent women also revealed that women are generally found to be ill informed about personal and menstrual hygiene, and knowledge of health facilities to seek treatment for gynecological problems. Women may also be at increased risk of RTIs due to the unhygienic management of menstruation (Gittlesohn et al 1994; Oomman 2000). A study in China found that rural women who did not bathe frequently were at the risk of having bacterial viginosis (Kaufman et al 1996). Similarly, studies in India have also shown that good personal hygiene were protective of women with self reported RTIs (Bhatia and Cleland 1995). The results of our multivariate analysis show that maintenance of menstrual hygiene has significant influence on the prevalence of gynecological morbidity. Given the poor knowledge of adolescent women regarding various aspects of reproductive health, providers unanimously believed that increasing awareness among adolescent women on reproductive health is important to increase the utilization of services. *According to a LHV, "adolescent girls in schools should be provided with health education". A BEE said, "adolescents should be made more aware of various aspects of personal hygiene". Another ANM said, "adolescent women should also be made aware of anemia, menstrual hygiene and antenatal care". Similarly, an ANM suggested, "adolescent girls generally do not attend STD camps and should be encouraged to attend these camps".*

The study points towards a clear need for specific programmatic attention to enhance young women's knowledge and awareness regarding various aspects of reproductive health such as

changes during puberty, menstrual hygiene, reproduction and contraception. Emphasis should also be placed to increase their knowledge and awareness regarding antenatal and postnatal care including significance of breastfeeding. The National Population Policy 2000 also aims to provide for adolescents' nutritional, contraceptive and other information needs (MOHFW 2000). Early marriage in India also underlines the need for premarital counseling and sensitisation on responsible parenthood. Teenage women also need counseling on appropriate contraceptive methods and social and health advantages of delayed childbearing. Implementation of school health programmes is imperative to increase the knowledge and awareness among young women. Another important point of programmatic focus is successful side-effects management and strengthening of post-operative care and husband's involvement in family planning to increase contraceptive use.

Due to the lack of knowledge on reproductive health issues women often perceive reproductive health problems as 'normal' and a "woman's lot" and do not seek treatment unless extremely serious (Jejeebhoy et al., 2003). Results of our study also show that adolescent women do not seek treatment, especially in the case of gynaecological and obstetric problems, which they consider as a part of womanhood. Most of the post partum complications are considered normal after the birth of a child and no care is obtained. Adolescent women are also less open and frank in discussing their reproductive health problems compared with older women as they often perceive any reproductive health problem with shame and embarrassment (CWFP 1998). Our survey shows that the most common reason for not seeking treatment for reproductive morbidity is embarrassment. Women are embarrassed to seek treatment and do not discuss about their problems with anyone at home. Health personnel also tend to attribute women's non-utilisation of reproductive health services to social stigma attached to these problems. Thus, women prefer to endure in silence rather than seeking treatment. At the time of the interview (in most of the cases) mothers-in-law present reported that earlier they were not aware of their daughters-in-law's reproductive health problems. Results of multivariate analyses clearly show that an increase in the consultation of problems, especially gynaecological and obstetric significantly increases the probability of treatment seeking. Providers should encourage adolescent women to discuss and seek treatment for reproductive health problems. The need is for greater inter-spousal communication as well as consultation of problems with either anyone at home or health personnel.

Conventional disposition of women also plays an important role in determining their health-seeking behaviour. This is more so in the case of adolescent women who do not have any autonomy in decision making with regard to even their own health care (Jejeebhoy et al., 2003). Adolescent women interviewed in our survey reported that the use of reproductive health services is opposed by the parents and elders as they believe that it is not necessary or customary to go to a health facility, especially for utilising antenatal care, natal care and post natal care services. Also, in the case of family planning services, adolescent women are not supposed to utilise contraceptives immediately after marriage as they are supposed to prove their fertility. The elders in some cases also oppose treatment seeking for reproductive morbidity. *An ANM remarked, "it is not enough to educate adolescent women as they do not have any decision making authority. The target should be their parents and elders in the society who need to be educated and made aware about various reproductive health issues".* Even adolescent women suggested that decision making rests with their husbands and mothers-in-law and any programme in order to have the desired impact should include them as their target population.

Women's powerlessness and lack of control over resources also plays an important role in their poor treatment seeking behaviour (Jejeebhoy et al., 2003). Although standard of living index in the multivariate analysis has emerged as an important factor which shows that better standard of living leads to better treatment seeking, case studies have revealed that even in the households with a better standard of living, a daughter-in-law has least priority with regard to health care. Providers are also of the opinion that economic factor for adolescent women is a hindrance in seeking treatment as they lack control on economic and other resources in the household. *An ANM said, "adolescent women do not seek treatment as they have to spend on transport and medicines".* Our survey shows that among women who were earning at the time of the survey, more than 80 percent had to give the money earned by them to either husband or mother-in-law. The study also reveals that only 1.0 percent of women have a say with respect to purchase of household goods. Thus, the findings of the study re-emphasize the need for investment in education and employment opportunities for adolescent women. The draft National Youth Policy 2000 also calls for a multi-dimensional integrated approach to youth development with a focus on youth empowerment, gender justice and youth participation in decision making.

During FGDs most of the adolescent expressed their desire for educational and employment opportunities in their village. The survey shows that at least half of the women (46.7 percent) did not want to get married at the time they were married. Those women who did not want to marry

rather expressed their desire to complete their studies before marriage. Some of them wanted to work and become independent. *One young woman said, " if we are provided with credit, then I would like to start some small-scale business".* They thought that educational and employment opportunities would be helpful in improving their overall status in the household in particular and the society in general. *A general belief in the village is a quote by* an *adolescent woman who mentioned that, " an educated woman has a good status in society".*

Finally, programmatic factors including inaccessibility and non-availability of services and poor quality of care also hinder utilisation of services among adolescent women. The study reveals that limited mobility of adolescent women and the need for male relatives or husband's accompaniment also delays seeking treatment. Women do not utilise services, as there is no one to accompany them to the health facilities. Being newly married and young, one of the main constraints of these women is that they could not go alone for seeking treatment. Moreover, they are also not confident to travel alone to a PHC/CHC in another village, tehsil or district headquarters. The present study has however, shown that development is not an important factor influencing utilisation of services. It is rather the distance of a user from a health facility that has important implications for the utilisation of reproductive health services among adolescent women. A place may be developed but may not have a health facility on the other hand a place may be undeveloped but still has a health facility. Multivariate results indicate that adolescent women living near a health facility are more likely to use the services compared with those living far away from a health facility.

Inaccessibility of services is evident in the comment of a young focus group discussant "If there was a health facility in our village itself then we could go alone without any male member accompanying us or even without asking permission from the elders". Another woman responded, "we need at least a health centre in each village where a doctor should be available for emergencies". One young woman from low socio-economic status said, "Being poor I can not go to a health facility, if there was a health facility in the village to conduct delivery I could have availed the services". Yet another woman remarked "at least an ANM should visit our village daily". An important finding of this study is non-availability of transportation to reach higher level facilities. The findings of our study show that a significant percent of adolescent women could not go to a health facility for delivery due to lack of transport. The study suggests that mobile delivery clinics along with the doctors could be used to reach adolescent women.

Health camps at regular intervals in remote and far-flung areas can also provide counselling as well as reproductive health services to adolescent women.

Another important programmatic factor is the quality of service. Poor quality of care and inaccessibility poses barrier to health seeking (Koeing et al., 2000) An analysis of the pattern of utilisation of reproductive health services in this study reveals wide variations in women's experiences with and perceptions of the services offered by both public as well as private sector. Unfriendliness of public health providers underlines adolescents' reluctance to use the health services. Focus Group Discussions conducted with adolescent women reveal that one of the main reasons for seeking treatment from private providers is better client provider interaction at private health facilities. Among adolescent women, impressions of public health workers are much less positive. Women reported that at government facilities doctors do not give them proper time and attention and neither they are appreciative nor responsive to their problems. A 17-year-old Muslim woman narrated her experience of seeking antenatal care at a higher level facility as follows: "When I went to the PHC for antenatal care, one of the health personnel present at the PHC remarked, " Delivery will take place at its own time, where is the need of an antenatal check up? "

In addition to the behaviour of public health providers, women also reported that they are charged money from the public health providers for the services, which are supposed to be free. Women report that even at the government facilities they have to spend a lot of money. During the focus group discussions, *one of the women remarked, "every time we go to a public health facility, we have to pay Rs 50. At the time of the delivery we have to spend between Rs.400-500". Another woman added, "even if we go to the government facilities, we have to buy all the medicines." One young woman said, " government has trained the Dai but she does not have a kit to conduct deliveries, moreover, she also charges money for conducting delivery". A young woman who used private services for delivery explained, "even if an ANM, who visits our home for delivery, charges money".* These findings corroborate to a qualitative study in Tamil Nadu which, paints a decidedly negative view of clients' encounters with support staff and providers in health facilities, citing verbal abuse by staff and nurses, and demands for payment (in an ostensibly free system) even before rendering the most basic services (Nahar and Costello 1998; Ravindran 1999).

Clearly, greater policy attention must be paid to improve the quality of care provided in the public health services to increase the service utilisation by adolescent women. Potential areas of focus for policy makers include "Adolescent Friendly" services which including special hours for adolescents, convenient access to services, affordable cost, empathetic, knowledgeable and trustworthy staff. Thus, the quality of public health services, both technical and service delivery needs considerable improvement. Health care providers should be more sensitive to the special needs of young. The family planning workers should give more attention to the newlywed couples and teenage married women.

Paucity of staff, specialists, equipment and facilities also inhibits prompt use of services (UNFPA 2000). A survey of health facilities in our study area has confirmed non-availability of services at the public health facilities. We find that provision of emergency obstetric care is particularly lacking. Even services like MTP are not available at CHC and PHC. The block PHC does not offer female sterilization services. The study also shows that non-availability of female doctors at public health facilities is a major hindrance in seeking treatment. Most of the respondents in Indore tehsil complained of non-availability of a female doctor at the PHC for not seeking treatment. *According to an aganwadi worker, "adolescent women prefer private providers, especially a female doctor for treatment of reproductive health problems." An adolescent woman during a focus group discussion suggested, "at least a female doctor should be posted at each health facility".* In our study area the need for a female physician has been consistently mentioned irrespective of the type of treatment a woman is seeking. *A young woman remarked, "we feel more comfortable with a female doctor while discussing our symptoms of reproductive morbidity".* The study also reveals that ANMs and LHVs are not competent enough to provide treatment for many reproductive health problems such as gynaecological morbidity. Even if women approach them, they only refer them to higher level facilities. Therefore, the study emphasizes that the ANMs and LHVs should be trained to provide treatment for reproductive health problems.

Our findings reaffirm the overarching importance of educating women and education's direct influence on the utilisation of reproductive and child health services. In order to improve Adolescent Reproductive Health, not only an investment in the provision of health services but also an investment in other broader needs such as education, jobs and supportive families and communities is imperative. Creating opportunities for adolescent women has the potential to improve their sexual and reproductive health. Programmes are needed to enhance married

adolescent girls' autonomy in their homes by encouraging education and strengthening girls' life skills and generating employment opportunities. To accomplish this a partnership of government, non-government and private sector becomes imperative.

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Correlation Matrix

	Distance from a Health Facility	Husband's Occupation	SLI	Autonomy Index	Children Ever Born	Attended School	Ever Exposed to Newspaper	Ever Exposed to Radio	Ever Exposed to T.V.	Work Status	Develop-ment of Tehsil	Spontan-eous Abortion
Distance from a Health Facility	1.000	.169**	.095	-.118*	-.044	.057	.042	.043	-.096	.010	.000	-.099
Husband's Occupation	.169**	1.000	-.303**	.039	.239**	.158**	.130*	.121*	.150**	-.002	.045	-.085
SLI	.095	-.303**	1.000	-.030	-.078	-.240**	-.289**	-.247**	-.148*	.119*	-.025	.063
Autonomy Index	-.118*	.039	-.030	1.000	.102	-.052	.029	-.045	.058	.012	-.165**	.059
Children Ever Born	-.044	.239**	-.078	.102	1.000	.069	-.005	.094	.092	.043	-.118*	.073
Attended School	.057	.158**	-.240**	-.052	.069	1.000	.520**	.257**	.223**	-.177**	-.060	-.112
Ever exposed to Newspaper	.042	.130*	-.289**	.029	-.005	.520**	1.000	.311**	.164**	-.144*	-.186**	-.093
Ever exposed to Radio	.043	.121*	-.247**	-.045	.094	.257**	.311**	1.000	.263**	-.025	-.069	-.013
Ever exposed to T.V	-.096	.150**	-.148*	.058	.092	.223**	.164**	.263**	1.000	-.073	-.127*	.008
Work Status	.010	-.002	.119*	.012	.043	-.177**	-.144*	-.025	-.073	1.000	-.133*	.069
Development of Tehsil	1.000	.045	-.025	-.165**	-.118*	-.060	-.186**	-.069	-.127*	-.133*	1.000	-.034
Spontaneous Abortion	-.099	-.085	.063	.059	.073	-.112	-.093	-.013	.008	.069	-.034	1.000

** Significant at 0.01 level * Significant at 0.05 level

Appendix II

WOMAN'S QUESTIONNAIRE (13-19 YEARS)

District: ☐ **Interview no.** ☐☐☐

Village: ☐

Section –1 General

Questions	Coding Categories	Skip To	Coding
1. Name of the respondent			
2. Religion	Hindu-1 Muslim-2 Christian-3 Sikh-4 Others-5		
3. Caste/Tribe:	SC/ST-1 OBC-2 Others-3		
4. Type of house	Kutcha –1 Pucca -2 Semi-pucca –3		
5. What type of fuel do you use for cooking?	Wood-1 Cow dung-2 Coal-3 Kerosene-4 Electricity-5 LPG-6 Bio-gas-7 Any other (specify) –99		
6. What is the main source of drinking water?	Pipe water-1 Tanker-2 Hand pump-3 Covered well-4 Open well –5 Tube well –6 Any other (specify)-99		
7. What kind of toilet facility do you use?	Own toilet-1 Public toilet-2 Open space/Field-3		
8. Does the hh own any livestock?	Yes –1 No –2 ——→	Q10	
9. If yes, number	_____(No.)		
10. What vehicle do you own?	None-1 Bullock cart-2 Bicycle-3 Scooter/M.cycle-4 Jeep/Car-5 Tractor-6 Any other (specify)-99		

11. How old are you?	___(Age in completed yrs)		
12. Have you ever-attended school?	Yes-1 No-2 →	Q14	
13. What is the highest grade you Completed? **(See code list)**			
14. Do you: Read a newspaper/ magazine Listen to a radio Watch television Go to a cinema hall (Never/Sometimes/Regularly)	 Nev –1 Somet-2 Regular-3 Nev –1 Somet-2 Regular-3 Nev –1 Somet-2 Regular-3 Nev –1 Somet-2 Regular-3		
15. What is your current marital status?	CM-1 Separated/Deserted-3 Divorced –4 Widowed-5		
16. What was your age at the time of your marriage?	_____ Years		
17. How old were you when you started living with your husband?	_____ Years		
18. Did you ever give birth?	Yes-1 No-2 →	Q20	
19. What was your age at time of your first delivery?	_____ Years →	Q21	
20. Did you ever become pregnant?	Yes-1 No-2 →	Q26	
21. How many pregnancies, in total, did you have?	_____ (No.)		
22. How many children, in total, did you ever give birth to?	Male No. ___ Female No. ___ Total No. ___		
23. Have you ever given birth to a child who was born alive but later died?	Yes-1 No-2		
24. How many children in total are currently surviving?	Male No. ___ Female No. ___ Total No. ___		
25. Have you ever had :	S.B No.___ S.A No.___ I.A No.___		
26. Are you currently pregnant?	Yes-1 No-2 →	Q28	
27. How many months pregnant are you?	_____(months)		
28. Are you aware of the risks of adolescent childbearing?	Yes-1 No-2 } Dk-88 } →	Q31	
29. If yes, can you list some of the risks of adolescent childbearing?			
29A. Which is the most important risk?			
30. Who informed you?	Nobody-1 Health worker-2 Friends-3 Husband-4 Other relatives-5 T.V-6 Any other (specify)-99		

31. Did you want to marry at the time you were married?	Yes-1 → No-2 Dk-88	**Q34**	
32. If no, what were the reasons?			
33. Which was the most important reason?			
34. According to you, what is the ideal age for marriage of girls?	_____ Years/ DK –88		
35. What is ideal age of bearing first child?	_____ Years/ DK -88		

Section –II Antenatal Care

Questions	Coding Categories		Skip To	Coding
1. Do you know what kind of care is required at the time of pregnancy?	Yes-1 **No-2** } → DK-88 }		**Q3**	
2. If yes, can you list				
3. Do you know where to go for ANC?	Yes-1 No-2			
4. Did any govt. health worker inform you about the need for ANC?	Yes-1 No-2			
	Current pregnancy	**Last birth** (L.B/S.B)		
5. At the time you became pregnant did you want to become then, did you want to wait until later, or did you want no more children at all?	Wanted then –1 Wanted later –2 No preference –3 No more –4	Wanted then -1 Wanted later -2 No preference -3 No more -4		
5A. If wanted later, why?				
6. Did you receive antenatal check ups during pregnancy?	Yes-1 No-2	Yes-1 No-2 →	**Q12**	
7. If yes, how many times?	_____(No.)	_____(No.)		
8. How many months pregnant were you when you received the first check up?	_____(No.)	_____(No.)		
9. Where did you go for ANC? **(See Code list)**				
10. What is the reason for the choice of this source? **(See Code list)**				
11. Did you have following performed at least once during any of your antenatal check ups?				
a. Was weight measured	Yes-1 No-2	Yes-1 No-2		
b. Was height measured	Yes-1 No-2	Yes-1 No-2		
c. Was blood pressure checked	Yes-1 No-2	Yes-1 No-2		
d. Blood test	Yes-1 No-2	Yes-1 No-2		
e. Urine test	Yes-1 No-2	Yes-1 No-2		
f. Abdomen examined	Yes-1 No-2	Yes-1 No-2		
g. Internal exam	Yes-1 No-2	Yes-1 No-2		
h. X-Ray	Yes-1 No-2	Yes-1 No-2		
i. Sonogram/ultrasound	Yes-1 No-2	Yes-1 No-2		

12. Did you receive iron/folic acid tablets?	Yes-1 No-2	Yes-1 No-2 ⟶	**Q14**	
13. Did you take all the tablets?	Yes-1 No-2	Yes-1 No-2		
14. Did you receive TT injection in the arm to prevent Tetanus?	Yes-1 No-2	Yes-1 No-2 ⟶	**Q16**	
15. How many times?	_____(No.)	_____(No.)		
IF Q6, Q12 and Q14 = No then skip to Q25				
IF source of ANC is Health worker/Health facility				
16. How frequently does the **ANM** visits?	Daily-1 Once in 3days-2 Weekly-3 Monthly –4 Once in 2 mon-5 Once in 6 mon-6 Yearly-7	Daily-1 Once in 3days-2 Weekly-3 Monthly –4 Once in 2 mon-5 Once in 6 mon-6 Yearly-7		
17. During antenatal check (**health facility/ ANM**) ups did you receive advise on a. Diet b. Delivery Care c. New born care d. Breastfeeding practices	 Yes-1 No-2 Yes-1 No-2 Yes-1 No-2 Yes-1 No-2	 Yes-1 No-2 Yes-1 No-2 Yes-1 No-2 Yes-1 No-2		
18. Did **ANM/Staff** advice you to go a health facility for delivery?	Yes-1 No-2	Yes-1 No-2		
19. Does the **health facility** provide privacy/**ANM** respects your need for privacy?	Yes-1 No-2	Yes-1 No-2		
20. Are you satisfied with the time and attention given to you at the **facility/ by ANM**?	**(see code list)**			
21. How much time does it takes to reach the **health facility**?	_____(min)	_____(min)		
22. Is doctor always available at the **health facility**?	Yes-1 No-2	Yes-1 No-2		
23. Is timing at **health facility** convenient?	Yes-1 No-2	Yes-1 No-2		
24. Was the **health facility** clean?	Clean-1 Somewh clean-2 Not clean-3	Clean-1 Somewh clean-2 Not clean-3		
25. If not received any ANC, why?	Not necessary-1 Not customary-2 Facility far of-3 Costs too much -4 No health wr visited-5 Poor quality servi-6 No time to go/long waiting-7 Elders opposed-8 No one to accompany-9 Lack of knowle-10 Staff is unfriendly-12 No provision for priv/confident-13 Other(specify)-99	Not necessary-1 Not customary-2 Facility far of-3 Costs too much -4 No health wr visited-5 Poor quality servi-6 No time to go/long waiting-7 Elders opposed-8 No one to accompany-9 Lack of knowle-10 Staff is unfriendly-12 No provision for priv/confident-13 Other(specify)-99		

26. Did you have any of the problems during pregnancy?	No problem-1 Night blindness-2 Blurred vision-3 Convulsions-4 Swelling of hands and feet-5 Fatigue-6 Anemia-7 Bleeding-8 Weakness/Dizzin-9 Weak/no movement of fetus-10 Other(specify)-99		No problem-1 → Night blindness-2 Blurred vision-3 Convulsions-4 Swelling of hands and feet-5 Fatigue-6 Anemia-7 Bleeding-8 Weakness/Dizzin-9 Weak/no movement of fetus-10 Other(specify)-99		**Sec III**	
27. Did you discuss this with anyone?	None-1 Husband –2 Mother –3 Sister –4 Mother-in-law –5 Sister-in-law –6 Doctor/health worker –7 Friend/Neighb- 8 Other(specify-99		None-1 Husband –2 Mother –3 Sister –4 Mother-in-law –5 Sister-in-law –6 Doctor/health worker –7 Friend/Neighb- 8 Other(specify-99			
28. Do you know where to go for the treatment?	Yes-1 No-2		Yes-1 No-2			
29. Did you seek any treatment?	Yes-1 No-2		Yes-1 No-2 →		**Q32**	
30. If yes from where? **(See code list)**	**First Treat**	**Second Treat**	**First Treat**	**Second Treat**		
31. Are you satisfied with the treatment? **(See Code list)**						
32. If did not seek any treatment, Why? **(See Code list)**						

Section –III Natal and Post Natal Care (Last birth: S.B or L.B)

Questions	Coding Categories	Skip To	Coding
1. Where did you give birth to your last child?	Your home –1_____ Your parent's home-2 _____} Govt. hosp-3 CHC-4 PHC-5 NGO/Trust hosp/clinic-6 Pvt. hosp/clinic/Materni.h-7 Any other (specify)-99	**Q12**	
2. What is the reason for the choice of this source? **(See Code list)**			
3. How much did you pay?	_____(Rs/Paise)		
4. What is the source of financing? **(See code list)**			

5. How much time does it takes to reach the facility?	_____(min)		
6. Is doctor always available at the **health facility**?	Yes-1 No-2		
7. Is timing at **health facility** convenient?	Yes-1 No-2		
8. Are emergency services available?	Yes-1 No-2		
9. Does it provide privacy?	Yes-1 No-2		
10. Was the facility clean?	Clean-1 Somewhat clean-2 Not clean-3		
11. Are you satisfied with the time and attention given to you at the **facility/ by ANM?** **(see code list)**	→	**Q16**	
12. If **home delivery**, who assisted the delivery?	Doctor-1 ANM/Nurse-2 Trained dai-3 Untrained dai(TBA)-4 Friend/Relative-5 None-6 Any other (specify)-99		
13. Why did you not go to a health Facility for delivery? Not necessary-1 Not customary-2 Costs too much-3 No transport-4 Poor quality service-5 Doctors/staff not available-6 No facility nearby-7 No time to go-8 Family did not allow-9 No one to accompany-10 Lack of knowledge-11	Better care at home-12 Fear of clinic/hospital Settings-13 Doctors opt for cesarean instead of normal deli)-14 Fear of forced steriliz/inserti Copper-T-15 Provider does not maintain Confidentiality/Privacy-16 Staff is unfriendly-17 Any other (specify)-99		
14. Was the disposable delivery kit used?	Yes –1 No-2		
15. What did she use? (e.g. Blade/thread etc)			
16. Was the delivery normal?	Yes –1 No-2		
17. During delivery did you experience the following problems?	No problem-1 Obstructed labor-2 Premature labor-3 Prolonged labor (more than 12 hours)-4 Delay in the outcome of placenta-5 Breech presentation-6 Any other (specify)-99		
18. Was the infant large/small /very small?	Large-1 Average-2 Small-3 Very small-4		

19. Was infant weighted at birth?	Yes –1 _____(in kg)DK-88 No-2 Don't know-3		
20. During **one week after** the delivery did you experience any of the following	No problem-1 ⟶ High fever-2 Lower abdominal Pain-3 Foul smell vag discharge-4 Excessive bleeding-5 Dizziness/sev headache/bodyache-6 Any other (specify)-99	**Q27**	
21. Did you discuss this with anyone?	None-1 Husband –2 Mother –3 Sister –4 Mother-in-law –5 Sister-in-law –6 Doctor/health worker –7 Friend/Neighb- 8 Other(specify)-99		
22. Do you know where to get treatment for this problem?	Yes-1 No-2		
23. Did you seek any treatment?	Yes-1 No-2 ⟶	**Q26**	
24. If yes, from where? **(See Code list)**	**First trt** / **Second trt**		
25. Are you satisfied with the treatment? **(See Code list)**			
26. If did not seek any treatment, why? **(See Code list)**			
27. Within **42 days after** your delivery, did you receive any post natal check ups?	Yes-1 No-2 ⟶	**Q29**	
28. Where did you go for postnatal check-ups? **(See Code list)**			
29. Did any govt. health professional visit your home for postnatal check-up?	Yes-1 No-2		
30. If no, what was the reason for not going for postnatal care?			
Not necess/Did not have any problem-1 Not customary-2 No facility near by-3 Costs too much-4 Professional not available-5 Poor quality service-6 No time to go/long waiting-7 Elders opposed-8	No one to accompany-9 Lack of knowledge-10 No health worker visited-11 Provider does not maintain confidentiality/privacy-12 Staff is unfriendly-13 Any other (specify)-99		
31. Did you ever breastfed this child?	Yes-1 No-2 ⟶	**Sec IV**	
32. How long after the birth did you first put the child to the breast?	Immdiately-1 No. of Hrs _____ No. of Days _____		

Section- IV Immunization (children below 5 years)

Questions	Coding Categories	Coding Categories	Skip To	Coding
	Last birth	Next to last birth		
1. Age of the child (> 1 month = 99)	_____(in months)	_____(in months)		
2. Sex	Male –1 Female-2	Male –1 Female-2		
3. Do you know that vaccination against major childhood diseases is a must for an infant?	Yes-1 No-2	Yes-1 No-2		
4. Did any govt. health worker advise you to get your child immunized against diseases?	Yes-1 No-2	Yes-1 No-2		
5. Do you know where to get vaccination?	Yes-1 No-2 Dk -88	Yes-1 No-2 Dk –88		
6. Did ever receive any vaccination?	Yes-1 No-2	Yes-1 No-2 →	Q19	
7. Did the child receive BCG (an inject in left arm against T.B wh causes a scar)	Yes-1 No-2	Yes-1 No-2		
8. Did the child receive DPT (against diphtheria, whooping cough and tetanus)	None-1 One dose-2 Two doses-3 Three doses-4	None-1 One dose-2 Two doses-3 Three doses-4		
9. Did the child receive polio vaccine (drops in the mouth)	None-1 One dose-2 Two doses-3 3 doses & more-4	None-1 One dose-2 Two doses-3 3 doses & more-4		
10. Did the child receive an injection against measles?	Yes-1 No-2	Yes-1 No-2		
11. Was a dose of Vitamin A liquid or capsule ever given to your child as a protection against night blindness?	Yes-1 No-2	Yes-1 No-2		
12. Where did receive most of his/her vaccinations? **(See Code list)**				
13. What is the reason for the choice of this source? **(See Code list)**				
14. How much time does it takes to reach the **health facility**?	_____(min)	_____(min)		
15. Is doctor always available at the **health facility**?	Yes-1 No-2	Yes-1 No-2		
16. Is timing at **health facility** convenient?	Yes-1 No-2	Yes-1 No-2		
17. Was the facility clean?	Clean-1 Somewhat clean-2 Not clean-3	Clean-1 Somewhat clean-2 Not clean-3		
18. Are you satisfied with the time and attention given to you at the **health facility/ by ANM? (See Code list)**				
19. If the child has not received any vaccination, what is the reason?	Child too young-1 Ignorant about immunization-2	Child too young-1 Ignorant about immunization-2		

	Place or time not known-3 No facility near by-4 Fear of side effects-5 No faith in immunization-6 No time to go/long waiting-7 No one to accompany-8 Family members did not allow-9 Child unwell-10 Vaccine not available-11 Staff not available-12 Staff is unfriendly-13 Costs too much-14 Any other (specify)-99	Place or time not known-3 No facility near by-4 Fear of side effects-5 No faith in immunization-6 No time to go/long waiting-7 No one to accompany-8 Family members did not allow-9 Child unwell-10 Vaccine not available-11 Staff not available-12 Staff is unfriendly-13 Costs too much-14 Any other (specify)-99		

Section V - Child Health

Questions	Coding Categories		Coding Categories		Skip To	Coding
1. Were you ever informed by a govt. health worker on the management of childhood diseases?	Yes-1 No-2 } DK –88 } →				Q3	
2. If yes, can you list some of the diseases you were told about? (e.g. Diarrhea management & Danger signs of pneumonia etc)						
	Last birth		**Next to last birth**			
3. Did the child suffer from any illness during last one month?	Yes-1 No-2		Yes-1 No-2 →		Sec VI	
4. What was the nature of illness?						
5. Do you know where to seek treatment?	Yes-1 No-2		Yes-1 No-2			
6. Did you seek any treatment?	Yes-1 No-2		Yes-1 No-2 →		Q14	
7. If yes, from where? **(See Code list)**	**First trt**	**Second Trt**	**First trt**	**Second Trt**		
7a. What is the reason for the choice of this source?						
8. Were you satisfied with the treatment? **(See Code list)**						
9. How much time does it takes to reach the **health facility**?	_____(min)	_____(min)	_____(min)	_____(min)		
10. Is doctor always available at the **health facility**?	Yes-1 No-2	Yes-1 No-2	Yes-1 No-2	Yes-1 No-2		
11. Is timing at **health facility** convenient?	Yes-1 No-2	Yes-1 No-2	Yes-1 No-2	Yes-1 No-2		
12. Was the facility clean?	Clean-1 Some C-2 Not C-3	Clean-1 Some C-2 Not C-3	Clean-1 Some C-2 Not C-3	Clean-1 Some C-2 Not C-3		

13. Are you satisfied with the time and attention given to you at the **health facility/ by ANM? (see code)**						
14. If did not seek any treatment, Why? **(See Code list)**						

Section – VI Family Planning

{First tick the methods mentioned by the respondent spontaneously. Then ask him by naming each method (not mentioned spontaneously) and describing them}.

Sl. No.	Name of the method	1. What are the family planning methods have you ever heard of?		2. Do you know where to get these methods?	3. Are you currently using any of these methods?	4. If yes, mention the source	5. Have you ever used any of these methods?	6. If yes, mention the source
		Sponta-neous Response	After Probing		Yes-1 No-2 **Q5**		Yes-1 No-2 **Q11** **Q42**	
1.	Nirodh or condom							
2.	Pills							
3.	IUD (C-T or Loop)							
4.	Male Sterilization							
5.	Female Sterilization							
6.	Rhythm or Abstinence							
7.	Withdrawal							
8.	Injection							
9.	Any other method which you used or tried to delay/avoid getting pregnant? (specify)							

(If a woman has ever used as well as currently using a method then ask about the current use)

Questions	Coding Categories	Skip To	Coding
7. What is the reason for the choice of this particular source? **(See Code list)**			
8. For how long you have been using this method/ how long ago did you undergo sterilization?	_____ Months DK –88 (>1 month=99)		
9. When did you use this method for the first time?	Immediately after marri-1 After first child-2 After second child-3 After third child-4		
10. With whose advice did you adopt this particular method?	Self-1 Husband-2 Both-3 Health worker-4 Friend/Relatives-5 Magazines/media-6 Any other (specify)-99		
11. Did any govt. health worker ever visit you and advise you to adopt a family planning method?	Yes-1 No-2		
12. If yes, what method?	Condom-1 Pill-2		

	IUD –3 Male sterilization-4 Female sterilization-5 Safe period-6 Withdrawal-7 Any other (specify)-99		
If Q3, Q5 and Q11 = No then skip to Q42			
IF source of contraception is a Health worker/Health facility			
13. How frequently does the **ANM/ health worker** visit?	Weekly-1 Monthly –2 Once in two months-3 Once in six months-4 Yearly-5 Never visited-6		
14. Did the **staff at govt. facility/ANM** suggest you different methods available that you might use?	Yes-1 No-2		
15. Which methods were you told about by the **staff/ANM**?	Condom-1 Pill-2 IUD –3 Male ST-4 Female ST-5 Safe period/withdrawal-6 Injection-7 Any other –99		
16. Did you receive the desired method at the **health facility/ ANM**?	Yes-1 No-2		
17. Is it easily available whenever you need it **health facility/ ANM** ?	Yes-1 No-2		
18. Did you pay for it at the **health facility/ ANM**?	Yes-1 No-2		
19. How much did you pay?	_____(Rs/Paise)		
20. What is the source of financing (in case of sterilization)? **(See code list)**			
21. Were you informed how to use this method by the **staff/ANM**?	Yes-1 No-2 Do not remember-3		
22. Were you told about the advantages and disadvantages of the method by the **staff/ANM**?	Yes-1 No-2 Do not remember-3		
23. Were you informed about the follow up visits required after acceptance of a method by the **staff/ANM**?	Yes-1 No-2		
24. Are you satisfied with the time and attention given to you at the **health facility/ by the ANM**? **(See code list)**			
25. Does the **health facility** provide privacy/ANM respects your need for privacy?	Yes-1 No-2		
26. How much time does it takes to reach the **health facility**?	_____ (min)		
27. Is doctor always available at the **health facility**?	Yes-1 No-2		
28. Is clinic timing convenient at the **health facility**?	Yes-1 No-2		
29. Was the **health facility** clean?	Clean-1 Somewhat clean-2 Not clean-3		

30. Did you receive any follow-up either at home/health facility?	At home-1 In a health facility-2 Both-3 Neither-4		
31. Have you/your husband had any health problems after you started using this method?	Yes-1 No-2 →	Q39	
32. If yes, what problem? Weight gain/loss –1 Excessive Bleeding-2 Hypertension-3 Headache/Body ache/Backache-4 Nausea/Vomiting –5 No menstruation/ Irregular/ spotting-6 Weakness/Dizziness/Inability to work-7 Fever-8 Inconvenient to use-9	Abdominal pain/Cramps-10 White discharge-11 Breast tenderness-12 Allergy –13 Expulsion-14 Loss of sexual desire-15 Problem in stitches –16 Convulsions –17 Any other(specify)-99		
33. Did you discuss this with anyone?	None-1 Husband –2 Mother –3 Sister –4 Mother-in-law –5 Sister-in-law –6 Doctor/health worker –7 Friend/Neighb- 8 Other(specify)-99		
34. Do you know where to get treatment for this problem?	Yes-1 No-2		
35. Did you seek any medical help for this problem?	Yes-1 No-2 →	Q38	
36. If yes, from where? **(See Code list)**	**First trt** / **Second trt**		
37. Are you satisfied with the treatment? **(See Code list)**		Q39	
38. If no, what is the reason for not seeking treatment?			
39. Are you satisfied with the method you are using?	Yes-1 No-2		
40. Are you willing to recommend this method to other women?	Yes-1 No-2		
41. If ever used, reasons for discontinuing? Method failed/got pregnant-1 Created menstrual/health problems-2 Inconvenient to use-3 Hard to get method-4 Want to have a child-5 Lack of privacy to use-6 Lack of sexual satisfaction-7	Husband away-8 Costs too much-9 No time to go/long waiti-10 No one to accompany-11 Facility far off-12 Provider does not maintain confidentiality/privacy –13 Any other (specify)-99		
42. If currently not using a method, reasons for not using? Husband Away-1 Pregnant/Breastfeeding/ In fecund –2 Wanted a child-3 Wants a son-4	No one to accompany-14 No time/long waiting-15 Facility far off-16 Inconvenient to use-17		

Opposed to FP-5 Husband opposed-6 Other members of family opposed-7 Against religion-8 Knows no method-9 Knows no source-10 Health does not permit-11 Worry about side effects-12 Costs too much –13	Desired method (spacing)not availa-18 No provisi of privacy/confidentiality-19 Mother-in-law wants a child-20 Not necessary-21 Any other (specify)-99		
43. Do you intend to use a method in the future to delay or avoid pregnancy?	Yes-1 No-2 } → Q45 Dk-3 }		
44. If yes, What method?	Condom-1 Pill-2 IUD –3 Male sterilization-4 Female sterilization-5 Safe period-6 Withdrawal-7 Any other –9		
45. Have you ever discussed family planning (use of contraception)?	Yes-1 No-2 → Q47		
46. If yes, with whom?	Husband –1 Mother –2 Sister –3 Mother-in-law –4 Sister-in-law –5 Doctor/health worker -6 Friend/Neighbour -7 Other (specify) -99		
47. Have you ever-discussed family size (no. of children)?	Yes-1 No-2 → Q49		
48. If yes, with whom?	Husband –1 Mother –2 Sister –3 Mother-in-law –4 Sister-in-law –5 Doctor/health worker -6 Friend/Neighbour -7 Other (specify) -99		
49. Do you approve of using a family planning method?	Yes-1 No-2		
50. Does your husband approve of using birth control methods to avoid a pregnancy?	Yes-1 No-2		

Section – VII Abortion

Questions	Coding Categories	Skip To	Coding
1. Have you ever had an abortion?	Yes-1 No-2 →	Sec VIII	
2. What was it?	S.A-1 I.A-2 →	Q5	

3. What was the reason that you opted for induced abortion? *(if more than one ask about the last one)*	Did not want the child -1 Did not want a girl child -2 Health reasons (self) - 3 Child was physically disordered - 4 Any other (specify) - 5		
4. Whose decision was it?	Self-1 Husband-2 Both-3 Mother-in-law-4 Other members of family-5 Doc/health worker-6 Any other (specify)-99		
5. At what month of pregnancy did it happen?	_____(months)	**If S.A Q19**	
6. Do you know where to go for induced abortion?	Yes-1 No-2		
7. Where did you go for induced abortion (MTP)? **(See Code list)**			
8. What is the reason for the choice of this source? **(See Code list)**			
9. Did you pay for it?	Yes-1 No-2		
10. How much did you pay?	_____(Rs/Paise)		
11. What is the source of financing? **(See code list)**			
12. How much time does it takes to reach the **health facility**?	_____(min)		
13. Is doctor always available at the **health facility**?	Yes-1 No-2		
14. Is timing at facility convenient?	Yes-1 No-2		
15. Was the **health facility** clean?	Clean-1 Somewhat clean-2 Not clean-3		
16. Does the **health facility** provide privacy?	Yes-1 No-2		
17. Are you satisfied with the time and attention given to you at the **facility? (See code list)**			
18. Did you receive any follow up either at home or in a health facility after MTP?	Yes-1 No-2		
19. Did you have any health problem immediately after abortion (within 6 weeks)?	Yes-1 No-2 →	**Q27**	
20. If yes, what was the health problem?	High fever-1 Lower abdominal pain-2 Foul smelling discharge-3 Excessive bleeding/ No menstruation-4 Weakness/ Dizziness/ Inability to work-5 Headache/Backache/Body ache-6 Any other (specify)-99		
21. Did you discuss this with anyone?	None-1 Husband –2 Mother –3		

	Sister –4 Mother-in-law –5 Sister-in-law –6 Doctor/health worker –7 Friend/Neighb- 8 Other(specify)-99			
22. Do you know where to get treatment for this problem?	Yes-1 No-2			
23. Did you seek any treatment for your health problem?	Yes-1 No-2 →		Q26	
24. If yes form where? **(See Code list)**	**First trt**	**Second trt**		
25. Are you satisfied with treatment? **(See Code list)**			Q27	
26. If did not seek any treatment why? **(See Code list)**				
27. Do you know that induced abortion (MTP) is legal in India?	Yes-1 No-2 Don't know-88			

Section -VIII RTI/STD and AIDS

Questions	Coding Categories	Skip To	Coding
1. 1. Have you heard of RTI/ STD?	Yes-1 No-2 →	Q3	
2. If yes, what is your source of information?			
3. Did any govt. health worker inform you about RTIs/STDs?	Yes-1 No-2		
4. Have you ever heard of an illness called HIV/AIDS?	Yes –1 No-2 →	Q7	
5. If yes, from which sources of information have you heard about HIV/AIDS?			
6. Do you know how HIV (AIDS) is transmitted?			

Before Marriage

	Questions	Coding Categories (> 1 month =99)			
Sl. No	Reproductive health problems of women (Tick)	7. Did you ever experience this problem?	8. How many **months** back did it happen?	9. Duration of illness	10. Perceived cause
1.	Vaginal discharge (white discharge)				
2.	Itching/irritation/ Sores in vaginal area				
3.	Menstrual disorders (e.g. excess bleeding, irregular menstruation)				
4.	Lower backache				

5.	Lower abdominal pain				
6.	Pain or burning while urinating/blisters				
7.	Any other (specify)				

If Q7 is blank then skip to Q18

Questions	Symptom 1		Symptom 2		Skip To
11. Did you discuss this with anyone?	None-1 Husband –2 Mother –3 Sister –4 Mother-in-law –5 Sister-in-law –6 Doctor/health wor–7 Friend/Neighb- 8 Other(specify)-99		None-1 → Husband –2 Mother –3 Sister –4 Mother-in-law –5 Sister-in-law –6 Doctor/health wor–7 Friend/Neighb- 8 Other(specify)-99		**Q13**
12. How many days after falling ill, did you discuss?	_____(no.)		_____(no.)		
13. Do you know where to get treatment for this problem?	Yes-1 No-2		Yes-1 No-2		
14. Did you seek any treatment?	Yes-1 No-2		Yes-1 No-2 →		**Q18**
15. How many days after falling ill, did you seek treatment?	_____(no.)		_____(no.)		
16. From where? **(See Code list)**	First trt	Second trt	First trt	Second trt	
17. What is the reason for choice of this source? **(See Code list)**					**Q19**
18. If no treatment was sought, reasons for no treatment? **(See Code list)**					

After Marriage

	Questions	Coding Categories (> 1 month =99)			
Sl. No.	Reproductive health problems of women (Tick)	19. Did you ever experience this problem?	20. How many months back did it happen?	21.Duration of illness (in months)	22. Perceived cause
1.	Vaginal discharge (white discharge)				
2.	Itching/irritation/ Sores in vaginal area				
3.	Menstrual disorders (e.g. excess bleeding, irregular menstruation)				
4.	Lower backache				
5.	Lower abdominal pain				
6.	Pain or burning while urinating/blisters				
7.	Prolapse				
8.	Dyspareunia				
9.	Any other (specify)				

If Q18 is blank then skip to Q39				
Questions	**Symptom 1**		**Symptom 2**	
23. Did you discuss this with anyone?	None-1 Husband –2 Mother –3 Sister –4 Mother-in-law –5 Sister-in-law –6 Doctor/health worker –7 Friend/Neighb- 8 Other(specify)-99		None-1 Husband –2 Mother –3 Sister –4 Mother-in-law –5 Sister-in-law –6 Doctor/health wor –7 Friend/Neighb- 8 Other(specify)-99	
24. How many days after falling ill, did you discuss?	_____(no.)		_____(no.)	
25. Do you know where to get treatment for this problem?	Yes-1 No-2		Yes-1 No-2	
26. Did you seek any treatment?	Yes-1 No-2		Yes-1 No-2	
27. How many days after falling ill, did you seek treatment?	_____(no.)		_____(no.)	
28. From where?	**First trt**	**Second trt**	**First trt**	**Second trt**
29. What is the reason for choice of this source? **(See Code list)**				
30. Did you pay?	Yes-1 No-2	Yes-1 No-2	Yes-1 No-2	Yes-1 No-2
31. How much?	_____ (Rs)	_____ (Rs)	_____ (Rs)	_____ (Rs)
32. What is the source of financing? **(See Code list)**				
33. Were you satisfied with treatment? **(See Code list)**				
34. Does the **health facility** provide privacy/ANM respect your need for privacy?	Yes-1 No-2	Yes-1 No-2	Yes-1 No-2	Yes-1 No-2
35. Are you satisfied with the time and attention given to you at the **health facility/ by ANM**?	**(see code)**			
36. How much time does it takes to reach the **health facility**?	_____ (min)	_____ (min)	_____ (min)	_____ (min)
37. Is doctor always available at the **health facility**?	Yes-1 No-2	Yes-1 No-2	Yes-1 No-2	Yes-1 No-2
38. Is timing at **health facility** convenient?	Yes-1 No-2	Yes-1 No-2	Yes-1 No-2	Yes-1 No-2
39. Was the **health facility** clean?	Clean-1 Som clean-2 Not clean-3	Clean-1 S clea-2 Not cl-3	Clean-1 S clea-2 Not cl-3	Clean-1 S clea-2 Not cl-3
40. If no treatment was sought, reasons for no treatment? **(See Code list)**				

Menstrual Hygiene	
41. What do you use during your periods?	Re-used cloth-1 New cloth-2 Cotton-3 Sanitary napkin-4 Nothing –5 Any other (specify)-99
42. How often do you change?	Twice or more-1 Twice in a day-2 Once in a day-3 Once in two days-4
43. How often do you take bath during your periods?	Daily-1 Once in two days-2 Once in three days or more-3
44. How often do you take bath?	Daily-1 Once in two days-2 Once in three days-3 Weekly-4 Monthly-5

Section – IX Husband's background and Woman's autonomy in the HH

Questions	Coding Categories	Skip To	Coding
1. How old is your husband?	Age in completed years _____(years)		
2. Did your husband ever attend school?	Yes-1 ⟶ No-2	Q4	
3. What is the highest grade he completed? **(See code list)**			
4. Husband's occupation **(See code list)**			
5. What is your occupation? **(See code list)**			
6. Do you earn?	Yes-1 ⟶ No-2	Q8	
7. If yes, who retains the money earned by you?	Self –1 Husband –2 Mother-in-law –3 Other members of the family-4		
8. Who takes the following decisions in your household? What items to cook Obtaining health care for yourself Purchasing household goods Your going and staying with parents Education of children **(Self/ Husband/Both/Mother-in-law/ Other members of the family)**	 S-1/H-2/B-3/Mil-4/O-5 S-1/H-2/B-3/Mil-4/O-5 S-1/H-2/B-3/Mil-4/O-5 S-1/H-2/B-3/Mil-4/O-5 S-1/H-2/B-3/Mil-4/O-5		
9. Can you go alone to work to seek health care for yourself/children to buy household goods	 Yes-1 No-2 Can't Say-3 Yes-1 No-2 Can't Say-3 Yes-1 No-2 Can't Say-3		

to meet relatives /friends (within the village) to your natal home (outside the village)	Yes-1 No-2 Can't Say-3 Yes-1 No-2 Can't Say-3		
10. Are you a member of	None-1 Mahila mandal-2 Self help group-3 Credit society-4 Any other (specify)-99		

Code list

1. Source:	2. Reason for the Choice of source	3. Reason for no treatment	4. Satisfaction
Govt. hosp/dispensary-1 CHC-2 PHC-3 Sub-Centre-4 Govt. Mobile clinic-5 Camp-6 ANM-7 LHV/Aganwadi work-8 NGO hosp/clinic-9 NGO worker-10 Pvt. Hosp-11 Qualified Pvt. Doc-12 Unqualified Pvtdoc-13 Pvt. Mobile clinic –14 Vaid/Hakim-15 Dai/TBA-16 Chemist shop-17 Husband-18 Friend /Relative-19 Home remedy/Self trt/Self induced-20 Any other (specify)-99	Effective treatment-1 Better quality services-2 Availability of a doctor-3 Convenient location/nearby-4 Affordable cost-5 Medicines/Vaccines are available-6 No long waiting-7 Timing suitable-8 Staff is friendly-9 Sex preference-10 Did not know any other source-11 Confidential/privacy is maintained-12 No insistence on contraception-13 No Insistence on husbands signature-14 Mother-in-law asked/took there-15 Knows the doctor personally/someone suggested-16 Not satisfied with the doctor-17 Any other (specify)-99	Problem not considered serious-1 Did not know where to go-2 Costs too much-3 No time to go/long waiting-4 No one to accompany-5 Family/husband did not allow/opposed-6 Facility far of-7 Diagnosis/treatment facilities/medicines not available at sub-centre-8 lady doctor not available –9 Provider does not maintain confidentiality / privacy –10 Self treatment-11 Staff is unfriendly-12 Too embarrassed to seek treat-13 Any other (specify)-99	Fully satisfied/ recovered -1 Somewhat satisfied/ recovered-2 Not satisfied/ not recovered-3 Can't say –4 Satisfied with ANM or health personnel –1 Not satisfied -2

5. Education	6. Occupation	7. Source of financing
Illiterate-15 First-1 Second-2 Third –3 Fourth-4 Fifth-5 Sixth-6 Seventh-7 ..... Higher sec-12 Diploma/certif-13 Degree-14	Agriculture-1 Allied agri-2 Agricultural labor-3 Non-agri labor-4 Artisan-5 Businessman-6 Salaried-7 Pensioner-8 Professional-9 Unemployed-10 Household work-11 Student –12 Repairing –13 Self employed –14 Driver –15 Any other (speci)-99	Own source/savings-1 Liquidation of assests-2 Loan from frieds/relati-3 Loan form money lender-4 Any other (specify)-99

8. Nature of Illness
Cough and Cold-1 Fever-2 Pneumonia-3 Diarrhea-4 Skin problem-5 Indigestion/problem in motion-6 Swelling of hands and feet-7

CHC/PHC LEVEL QUESTIONNAIRE

1. Name of the PHC	
2. Serves a population of	
3. Name of the district	
4. Distance from district HQ	
5. Number of villages under this PHC	
6. Total staff working	
7. Staff positioned at CHC/PHC	**Number**
a. Chief Medical officer	
b. Specialist	
c. Physician (MD)	
d. Radiographer/X-ray Technician	
e. Lab Technician	
f. Pharmacist	
g. Staff nurse	
h. LHV	
i. ANM/MPW (Female)	
j. MPW (Male)	
k. Any other (specify)	
8. Physical Facilities	
a. Building (i) Status (ii) Type	 Own Building – 1 Rented Space – 2 Pucca – 1 Semi-Pucca – 2 Kutcha – 3
b. Source of drinking water	Pipe water –1 Tanker – 2 Hand Pump – 3 Well – 4 Pond/River/Lake – 5 Any other (specify) – 6
c. Is electricity supply available?	Regular-1 Irregular-2 Not available-3
d. Is telephone facility available?	Yes – 1 No – 2
e. Whether toilet facility available?	Yes – 1 No – 2
f. Is water available in the toilet?	Yes – 1 No – 2
g. Number of beds available	
h. Number of ambulance	

i. Number of other vehicles	
j. Does it offers privacy for pelvic examination/IUD insertion?	Yes – 1 No – 2
9. Services	
a. Whether regular supply of following available? i. IUD ii. Condom iii. Pills iv. Iron and folic acid tablets v. TT injections vi. ORS packets vii. Vaccines for children viii. Vitamin A oil ix. Other essential drugs	Regular- 1 Irregular –2 Not available-3
b. Type of sterilization facility available?	Vasectomy – 1 Laparascopy – 2 Laparatomy – 3 Tubectomy – 4 Quinacrine - 5
c. Does the CHC/PHC have an operation theatre?	Yes – 1 No – 2
d. Maternal Health Services	Prenatal Care – 1 Delivery – 2 Instrumental delivery (Forceps/ Caesarian) – 3 Post natal care – 4 Emergency Obstetrics – 5
e. Does the CHC/PHC have a separate labor room?	Yes – 1 No – 2
f. Whether abortion (MTP) Services available?	Yes – 1 No – 2
g. Whether diagnosis and treatment of RTIs and STDs available?	Diagnosis of RTIs and STDs –1 Treatment of RTIs and STDs –2 Diagnosis of infertility –3 Treatment of infertility - 4
h. Whether IEC and counseling available?	Yes – 1 No – 2
i. Whether IEC aids and materials such as posters, pamphlets/leaflets, flip charts, slides, flash cards, graphs are?	Enough – 1 Some – 2 Not Available - 3
j. Any other service (specify)