CHAPTER IV

REGIONAL VARIATIONS IN REPRODUCTIVE MORBIDITY AND TREATMENT SEEKING BEHAVIOUR IN INDIA AND TAMIL NADU
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4.1 INTRODUCTION
This chapter deals with spatial variations in various types of reproductive morbidity such as obstetric morbidity, gynaecological and related morbidity, and contraceptive morbidity as well as treatment seeking behaviour in India, and Tamil Nadu. The District Level Household Survey-Reproductive and Child Health (DLHS-RCH) survey carried out during 2002-2004 shows wide variations in reproductive morbidity and treatment seeking behaviour among states of India and also among districts of Tamil Nadu. The DLHS-RCH-2 survey covered currently married women aged between 15 and 44 years who were asked a series of questions on reproductive morbidity such as obstetric morbidity (pregnancy complication, delivery complication, post-delivery complication, and post-abortion complication), gynaecological morbidity (menstruation problems, reproductive tract infection/sexually transmitted infection, and abnormal vaginal discharge), and contraceptive morbidity; and also treatment seeking behaviour for their complication or symptom. The DLHS-RCH survey also covered husbands of currently married women of age 15-44 (irrespective of husband’s age) who were asked a series of questions on reproductive health problems. The reporting of reproductive morbidity is, as noted earlier, based on self-perception and not clinical or laboratory investigation. As such, the morbidity is self-reported.

4.2 REGIONAL VARIATIONS IN INDIA
4.2.1 Obstetric Morbidity and Treatment Seeking Behaviour
The prevalence of any pregnancy related complication is high in India (34.2 percent). Moreover, wide regional variations are seen among states in the country. The overall prevalence rate ranges from 17.6 percent in Karnataka to 50.7 percent in Nagaland (details are shown in Table A.4.1). Relatively high level of reporting of any complications during pregnancy is observed in Maharashtra, Kerala, Mizoram, Sikkim, West Bengal, Orissa, and Chandigarh. On the other hand, Andaman and Nicobar Islands, Chhattisgarh, Andhra...
Pradesh, Uttarakhand (Uttarakhand), Pondicherry, Punjab, Tamil Nadu and Manipur show low prevalence of complication during pregnancy. Overall, the western and eastern Indian states show very high to high level of prevalence, whereas, southern Indian states (except Kerala) show low to medium level of reporting of pregnancy complications (Map 4.1).

At the national level, 40.8 percent of women reported some delivery complication (Table A.4.1). The highest percentage was reported in Bihar (79.3 percent) and the lowest percentage in Meghalaya (14.5 percent). The regional variations show that the central belt from West Bengal in east to Gujarat in west has high prevalence of delivery complication (Map 4.1). Northern and north-eastern states in India along with Karnataka show low to moderate level.

Nearly one-third of the women in India reported some complication during post-delivery periods (31.4 percent). Nagaland, Jammu and Kashmir, Bihar, Jharkhand, West Bengal, Orissa, Sikkim, Chandigarh, Madhya Pradesh, Maharashtra, Uttar Pradesh, Mizoram, and Assam are above the national average (Table A.4.1). Map 4.1 shows a very high prevalence of post-delivery complication among women from eastern India and low among women in southern states in India. Only three Union Territories (Lakshadweep, Pondicherry, Andaman and Nicobar Islands) fall in the very low prevalence rate region in India (union territories are not marked individually in the maps due to the small size).

Nearly two-thirds of currently married women reported any obstetric morbidity (pregnancy complications or delivery complications or post-delivery complications) during the survey in India (Table A.4.1). However, the percentage ranges from 40.1 percent in Karnataka to 90.0 percent in Bihar clearly showing a wide variation in obstetric morbidity within the country. Percentage of women, who have reported any maternal complication, is lower in sixteen major states including Tamil Nadu than the national average. More than seventy percent of women had reported obstetric morbidity in Bihar, Jammu and Kashmir, Jharkhand, Maharashtra Orissa, Sikkim, and in West Bengal. On the other hand, less than fifty percent of women who belong to Chattishgarh, Haryana, Himachal Pradesh, Karnataka, Manipur, Meghalaya Punjab and Utteranchal reported any obstetric morbidity. Similarly among the
UTs, women from Dadra and Nagar Haveli reported the highest and Andaman and Nicobar Islands the lowest level (Map 4.1).

Only about half of the women who had experienced any pregnancy related complication (50.6 percent) sought treatment. There is a wide range from Jammu and Kashmir (81.5 percent) with the highest and Meghalaya (27.3 percent) with the lowest percentage of women who had sought treatment for the pregnancy complications (Table A.4.1). Overall, the picture shows some regional pattern with the central, eastern and the north-eastern states showing low to very low level of treatment seeking among those who had pregnancy complications (Map 4.2).

Map 4.2: Inter-State Variations in Percentage who Sought Treatment for Pregnancy and Post-Delivery Complications, India, DLHS-RCH-2 Survey, 2002-2004

Similarly, half of the respondents who had experienced any post-delivery complications sought treatment for the cause in India (50.4 percent). Women from Jammu and Kashmir (83.4 percent) and Mizoram (19.6 percent) had sought the highest and the lowest level of treatment for any post-delivery complications respectively (Table A.4.1). Here also clear difference has been observed across the regions in the country. Women belonging to the
southern and the western regions are more likely to seek care than the women from the central and the eastern regions (Map 4.2).

4.2.2 Gynaecological and Other Related Morbidity and Treatment Seeking Behaviour

Gynaecological morbidity includes any symptoms of RTI/STI, symptoms of any abnormal vaginal discharge, and any menstrual related problems. Table A.4.2 shows that one-third (32.3 percent) of women have experienced any one symptom of reproductive tract infection/sexually transmitted infection. However, inter-state variation is large, the level ranging from 47.7 percent in Rajasthan to 8.4 percent in Andaman and Nicobar Islands. Manipur, Orissa, Arunachal Pradesh, Himachal Pradesh, Tripura, Haryana are close to the national average (32.3 percent). All the southern states, except Kerala, show low prevalence of RTI/STI among women, whereas, the northern (except Jammu and Kashmir) and the central regions along with the western India show high to moderate rate of prevalence of the RTI/STI symptoms (Map A.3).

In India, 15.8 percent of women reported any abnormal vaginal discharge. Women belonging to Uttaranchal (Uttarakhand) have the highest percentage (30.4 percent) and women from Jammu and Kashmir (0.9 percent) have the lowest level of this morbidity (Table A.4.2). The high concentration of this problem is among the women belonging to the northern and the central states in India; on the other hand, the southern state shows low level of abnormal vaginal discharge (Map A.3).

Nearly one-third of the (32.4 percent) women in India had sought treatment for abnormal vaginal discharge (Table A.4.2). The level ranges from 62.5 percent in Andaman and Nicobar Islands to 18.8 percent in Dadra and Nagar Haveli. Women from Jammu and Kashmir and the southern region show high to moderate level of treatment seeking for abnormal vaginal discharge. On the other hand, the north-eastern states and Rajasthan along with Chhattisgarh show low level of treatment seeking (Map A.3).
Map 4.3: Inter-State Variations in Reported Prevalence of Symptom of RTI/STI, Abnormal Vaginal Discharge and Treatment Seeking for Abnormal Vaginal Discharge, India, DLHS-RCH-2 Survey, 2002-2004

Symptom of RTI/STI (Prevalence Rate)

Abnormal Vaginal Discharge (Prevalence Rate)

Sought Treatment for Abnormal Vaginal Discharge (Percent)
West Bengal shows the highest reported prevalence of any menstruation related problems in India (27.6 percent), well above the national average (17.2 percent). On the other hand, Jammu and Kashmir (3.7 percent) had very low level of reporting of prevalence of menstruation problems among women (Table A.4.3). In general, central India shows high prevalence of menstrual related problems with very high prevalence seen in the eastern region (Map 4.4).

Map 4.4: Inter-State Variations in Prevalence of Menstrual Problems and Treatment Seeking for Menstrual Problems, India, DLHS-RCH-2 Survey, 2002-2004

Treatment seeking for the gynaecological and other related problems in India is not very high. Moreover, clear regional variations can be observed in the country. About 36 percent of women among those who had any menstruation related problems had sought treatment (Table A.4.3). Jammu and Kashmir (85.2 percent) has the highest percentage of women who went for the medical care whereas Nagaland has the lowest (23.1 percent). Punjab, Uttar Pradesh, Haryana, Uttarakhand, Bihar fall near the national average. The northern-central belt
and the western and the eastern regions show a low rate of treatment seeking for any menstruation related problem (Map 4.4).

4.2.3 Contraceptive Morbidity and Treatment Seeking Behaviour

Health related problems due to use of three major types of modern contraceptive methods were collected during the survey. The results show that side effects or health related problems are high among sterilised women compared with users of other available modern contraceptive methods (Table A.4.4). About one-sixth (16.5 percent) of women experienced some side effects or health related problems due to female sterilisation and in Tamil Nadu, this figure was 12.9 percent. West Bengal (30.8 percent) has the highest prevalence and Meghalaya has the lowest (3.5 percent). Bihar, Himachal Pradesh, Jharkhand, Madhya Pradesh, Orissa, Rajasthan, Uttar Pradesh and West Bengal show higher prevalence than the national average (Map 4.5).

Among the IUD users in India, 11.9 percent reported experiencing some side effects (Table A.4.4). Prevalence of health related problems due to IUD insertion is high in Bihar, Himachal Pradesh, Kerala, Madhya Pradesh, Rajasthan, Tamil Nadu, and West Bengal than the national average (Map 4.5).

Oral pill is an important modern contraceptive method in India. About one-sixth (15.5 percent) of the pill users reported some side effects; the highest level is seen in West Bengal (25.4 percent) and the lowest in Nagaland (4.3 percent). In Tamil Nadu, 7.8 percent of women reported some side effects due to oral pill consumption (Table A.4.5). Only in Bihar, Kerala, Orissa and, West Bengal have the high percentage of women reported some side effects for use of pills than national average (Map 4.5). Andaman and Nicobar Islands shows the highest morbidity rate caused by use of pill among all UTs in India.
Map 4.5: Inter-State Variations in Prevalence of Contraceptive Morbidity, India, DLHS-RCH-2 Survey, 2002-2004

Morbidity Prevalence Rate after Female Sterilisation

Morbidity Prevalence Rate after Oral Pill Use

Morbidity Prevalence Rate after IUD Use

Morbidity Prevalence Rate after Modern Method Use

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Overall, about 16.2 percent of currently women in India reported some health problems due to use of modern contraceptive methods (Table A.4.5). Women from West Bengal (29.1 percent) show the highest prevalence of any side effects due to use of modern contraceptive methods and the lowest level is seen among the women from Mizoram (3.8 percent). Nine states (Bihar, Himachal Pradesh, Jharkhand, Madhya Pradesh, Maharashtra, Orissa, Rajasthan, Uttar Pradesh, and West Bengal) have reported higher percentage of some health related problems due to any modern contraceptive compared to the national average. Thirteen percent of women from Tamil Nadu have reported some side effects or health related problems. Chandigarh (19.2 percent) shows the highest percentage of complications among all union territories among modern contraceptive users (Map 4.5).

4.2.4 Male Reproductive Health Problems and Treatment Seeking Behaviour
The prevalence of any one symptom of reproductive tract infection/sexually transmitted infection among men in India is not very high (7.6 percent). But Nagaland scores the highest (15.2 percent) and Pondicherry (1.9 percent) the lowest in the prevalence of any reproductive tract infection/sexually transmitted infection among men. Lakshadweep shows no reports of such symptoms in the survey (Table A.4.6). Prevalence rate is high in central, eastern and northern India. The north-eastern region also shows relatively higher prevalence rate than the southern region of the country (Map 4.6).

In India, 40.4 percent men had sought treatment for any symptom of reproductive tract infection/sexually transmitted infection (Table A.4.6). Meghalaya (8.0 percent) and Goa (77.3 percent) show the lowest and the highest figures of the level of treatment seeking for symptoms of RTI/STI. The treatment seeking behaviour is low in eastern India and north eastern India (Map 4.6).
4.3 REGIONAL VARIATIONS IN TAMIL NADU

As the district level data on various types of reproductive morbidity are available from the District Level Household Survey-Reproductive and Child Health-2, carried out between 2002 and 2004; variations within the state of Tamil Nadu are studied and discussed in this section.

4.3.1 Obstetric Morbidity and Treatment Seeking Behaviour

In Tamil Nadu, more than one-fourth (26.3 percent) of women suffered from some pregnancy related complication. However, the percentage is nearly double among the women belonging to Theni (53.3 percent) district and half among the women belonging to Pudukkottai (13.9 percent) district in the state, which constitute the two ends of the range (Table A.4.7). Ariyalur, Salem, Nagapattanam, Karur, Kanyakumari, Thanjavur, Virudhnagar districts fall close to the state average. Western and southern districts of the state show low prevalence of pregnancy related complications. Districts situated in the
eastern regions have moderately high and the south-western districts have high prevalence of some pregnancy related complication (Map 4.7).

Nearly one-third of the women from Tamil Nadu (32.1 percent) had experienced some delivery related complications (Table A.4.7). There are districts with very high level of prevalence of delivery related complication like Madurai, Nagapattanam, Thiruvalur (more than 45 percent) and also with low level of prevalence (less than 20 percent). Map 4.7 shows that the prevalence rate is low among the northern districts of Tamil Nadu and moderate in the central region with high prevalence in the eastern region.

About 16.6 percent of women had reported some post-delivery complication (Table A.4.7). Map 4.7 shows that prevalence is high among the southern districts in the state. However, the highest rate has been reported in Perambalur district (28.6 percent) far above the state average (16.6 percent). Women from the south-western districts have reported high prevalence of post-delivery complication.

Almost half of currently married women in Tamil Nadu have reported some obstetric morbidity (50.4 percent) and Villupuram district shows the lower reporting of this morbidity (41.6 percent) than the state level (Table A.4.7). There are only five districts, the Nilgiris, Tiruchirapalli, Ramanathapuram, Erode, Coimbatore, and Pudukkottai with the state lowest (22.8 percent), where less than forty percent of women have reported any obstetric morbidity. On the other hand, more than seventy percent of women who belong to districts like Madurai and Theni reported any obstetric morbidity (Map 4.7).
Map 4.7: Inter-District Variations in Prevalence of Obstetric Morbidity, Tamil Nadu, DLHS-RCH-2 Survey, 2002-2004

Pregnancy Complication (Complication Rate)

Delivery Complication (Complication Rate)

Post-Delivery Complication (Complication Rate)

Any Obstetric Morbidity (Complication Rate)
Table A.4.7 shows that 64.5 percent women among those who had reported some pregnancy complication in the state sought treatment. However, there is a wide variation among the districts with the highest percentage seen in Tirunelveli (88.0 percent) and the lowest in Ramanathapuram (18.2 percent). It gives a scattered regional picture on treatment seeking behaviour of pregnancy complications. Women residing in the southern, the central and the coastal-northern regions show high to moderate level of seeking medical care for the pregnancy related problems (Map 4.8).

More than sixty percent of women in Tamil Nadu among those who had reported any post-delivery complication had sought treatment (Table A.4.7); Namakkal and Erode districts have very high degree of seeking treatment (above 80.0 percent). In almost all the districts in
the state (except Thiruvallur and Ramanathapuram) more than fifty percent of women had
treatment for their complication during post-delivery period. The central and the southern
regions have higher percentage women who had treatment than their counter part in the
eastern and the northern regions in Tamil Nadu (Map 4.8)

4.3.2 Gynaecological and Other Related Morbidity and Treatment Seeking Behaviour
Table A.4.8 reveals that prevalence of symptoms of RTI/STI among women in Tamil Nadu is
not very high (17.2 percent). Relatively high level of prevalence is seen in the northern and
the southern regions. The lowest prevalence rate is found in Ramanathapuram district (2.3
percent) and the highest prevalence rate in the Toothukudi district (39.5 percent) in the state
(Map 4.9).

Prevalence of abnormal vaginal discharge is common among the women in the north-western
and the southern districts in Tamil Nadu (Map 4.9). However, the state average is low (9.4
percent). It is very low among the women who residing in western part of the state.

Table A.4.8 shows that Tamil Nadu has moderate level of treatment seeking for abnormal
vaginal discharge (42.0 percent). A wide regional variation has been observed in the state
(Map 4.9). The treatment seeking behaviour is low among the women from the northern and
the coastal-northern regions. On the other hand, the western and the coastal-southern regions
show a high level of treatment seeking for abnormal vaginal discharge.
Map 4.9: Inter-District Variations in Reported Prevalence of Symptom of RTI/STI, Abnormal Vaginal Discharge and Treatment Seeking for Abnormal Vaginal Discharge, Tamil Nadu, DLHS-RCH-2 Survey, 2002-2004

Symptom of RTI/STI (Prevalence Rate)

Abnormal Vaginal Discharge (Prevalence Rate)

Sought Treatment for Abnormal Vaginal Discharge (Percent)

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Tamil Nadu shows a low level of prevalence of symptoms of menstruation related problems among currently married women (12.5 percent). No definite pattern evolves from the regional picture (Table A.4.9). The prevalence rate is low in the western region and the northern, the southern and the eastern coastal regions have reported high prevalence of some menstruation related problem (Map 4.10).

More than two-fifths (42.5 percent) of women in Tamil Nadu had sought treatment for some menstruation related problems (Table A.4.9). The lowest percentage is in Ramanathapuram district (18.4 percent) and the highest percentage in Theni (55.6 percent). Women from the coastal area have low level of treatment seeking behaviour in the state (Map 4.10).

Map 4.10: Inter-District Variations in Prevalence of Menstrual Problems and Treatment Seeking for Menstrual Problems, Tamil Nadu, DLHS-RCH-2 Survey, 2002-2004
4.3.3 Contraceptive Morbidity and Treatment Seeking Behaviour

Contraceptive morbidity generally refers to the side effects or health related problems or complications related to the use of any contraception. In Tamil Nadu, 13.0 percent of women reported any of contraceptive morbidity. Female sterilisation is the commonly used permanent modern contraceptive method. Nearly one-seventh (12.9 percent) of women in Tamil Nadu reported health problems after sterilisation with the highest seen in Thiruvarur (28.8 percent) and the lowest in Pudukkottai (3.7 percent) district (Table A.4.10). It may be noted that districts located in the western region have low and the coastal districts in the northern regions and the southern regions high prevalence of health problems after female sterilisation (Map 4.11).

Among women who had an IUD inserted, 15.3 percent of reported some side effects or health related problems (Table A.4.10). It must be noted here that the number of women in the survey who had an IUD insertion was quite small in all the districts and hence the computed rates suffer from large sampling errors. For other methods such as the oral pills, the numbers are even smaller and hence the level of side effects or health related problems is not examined or reported here.

Overall, women in Tamil Nadu have reported low prevalence rate of health problems after using any modern methods of contraceptive (13.0 percent). The level is the highest in Thiruvarur (27.8 percent), followed by in Perambalur, Karur, Thiruvanamalai districts (above 20 percent) in the state of Tamil Nadu. Erode, Coimbatore and the Nilgiris have reported very low level (below 5.0 percent) of health problem after use of modern contraception (Table A.4.10). It shows that the western region has low prevalence rate and it gradually increases towards the eastern region. But the southern region in the state also shows quite high prevalence rate of health problems due to use of modern contraception (Map 4.11).
Map 4.11: Inter-District Variations in Prevalence of Contraceptive Morbidity, Tamil Nadu, DLHS-RCH-2 Survey, 2002-2004

Morbidity Prevalence Rate after Female Sterilisation

Morbidity Prevalence Rate after IUD Use

Morbidity Prevalence Rate after Modern Method Use
4.3.4 Male Reproductive Health Problem

The prevalence rate of reproductive tract infection/sexually transmitted infection based on self-reporting, is very low among men in Tamil Nadu (2.8 percent). There are five districts in the state, where there were no reports of RTI/STI cases in the DLHS-RCH sample (Table A.4.11). This also shows pattern from the north to the south, high or moderate to low level of prevalence of RTI/STI among men. Coastal districts in the northern region (Kancheepuram, Cuddalore, Nagapattanam, Thiruvalur) have relatively high level of RTI/STI cases as reported (Map 4.12).

Map 4.12: Inter-District Variations in Prevalence of Symptom of RTI/STI among Men, Tamil Nadu, DLHS-RCH-2 Survey, 2002-2004

4.4 SUMMARY

The prevalence of obstetric, gynaecological and contraceptive morbidities, overall known as reproductive morbidity, is high among currently married women in India. However, vast regional variations have been observed in prevalence of reproductive morbidity. The reporting of reproductive morbidities is based on self-perception and symptoms are not
clinically certified, thus knowledge may influence the reporting of the symptoms hence the reproductive morbidity as seen from the survey in the country.

Women who belong to western and eastern region of the country reported high prevalence of pregnancy, delivery and post-delivery complications compared to women reside in southern region. Tamil Nadu, a southern state of India shows lower reporting of obstetric morbidity than national average. On the other hand, women who belong to northern, central and eastern India have not sought treatment for the complications where the prevalence of such complications is high. It raises the question on knowledge and the availability of health facilities in these regions. Similarly, women from northern and western India face higher than average gynecological morbidity but treatment seeking for this morbidity is low in this region. Prevalence of RTI/STI among male is high in north-eastern regions but treatment seeking behaviour is observed to be very low in this part of the country. This observation shows that the implementation of reproductive health programme in the post-ICPD period has not yet made much of an impact in India. The programme was meant to provide necessary care, specially the follow-up care and knowledge on reproductive and sexual health. In reality, the treatment seeking for the complication is low where as reporting of complications is high in the country.

Overall, Tamil Nadu does not show a gloomy picture for the various types of reproductive morbidity compared to other northern or eastern states in India. However, there is considerable regional difference in prevalence of reproductive morbidity and treatment seeking behaviour within the state. Large percentage of women from eastern, southern and south-western districts in the state had reported various types of obstetric morbidity and treatment seeking behaviour is low among women residing in eastern districts. For gynecological morbidity, the picture is the same as above among women who reside in northern as well as southern districts in the Tamil Nadu. On the other hand, treatment seeking is low among women belonging to northern districts for gynecological complications. Complications due to female sterilisation are high among women who reside in northern districts. The prevalence of RTI/STI is high among men who belong to northern, southern, and coastal areas of the state. This gives a clear view that at the aggregate level the
prevalence of reproductive morbidity is low in Tamil Nadu compared to other northern and eastern states in India, but within the state there is skewed distribution of reporting of the complications of these morbidities. The successive chapters will examine the level and determinants of reproductive morbidity in Tamil Nadu.