

An Overview of Utilization of Antenatal Care Services Among the Scheduled Tribe of Major States in India

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ABSTRACT In the present paper an attempt has been made to study the utilization of antenatal care (ANC) services among the Scheduled Tribe population in the major states of India. It has also tried to sort out some of the social variables responsible for the non-utilization of the antenatal care services. For this study data has been extracted from National Family and Health Survey which was conducted in 26 major states of our country in 1992-93. Besides percentage distribution the technique of Pearsons Correlation has been adopted to analyze the data.

INTRODUCTION

Antenatal care refers to pregnancy related health care provided by doctors or health workers in hospital or at home for providing safe motherhood and survival of the infant. The safe motherhood basically aims at maintaining the good health of the mother during pregnancy which will enable her to produce a healthy, normal infant and remain so herself (Bourne, 1972). Antenatal care can contribute significantly to the reduction of maternal morbidity included advice on the correct diet and provision of iron folic acid tablets to pregnant women besides medical care. Improve nutritional status, coupled with improved antenatal care, can help to reduce the increase of low birth weight babies and thus reduce perinatal, neonatal and infant mortality.

Realizing the importance of maternal and child health care services, the Ministry of Health and Family Welfare, Government of India, took concrete steps to strengthen maternal and child health services in the first and second five year plan (1951-61) and subsequent years. Recently the program has been further strengthened by introducing the child survival and safe motherhood Program (Ministry of health and Family Welfare, 1992).

However, such programmes have its differential impact on the different section of the heterogeneous population of the country. The tribal communities which is a neglected section and are at the bottom of the social hierarchy comprises about 8 per cent of the population. All their activities are molded by their traditional beliefs and practices and poses rigidity to the diffusion of modern cultural elements including government's intervention programmes into social matrix.

Understanding the gravity of the problem recently there is a move among the administrative machinery to penetrate into the tribal areas with community wise need based programmes to uplift the dilapidated condition of the tribals. These give rise to lots of changes in the tribal way of life. Health is no exception. The introduction of Primary Health Centers and Sub-Centers has made an additional medical facility available along with traditional health care practices and practitioners (Bhatia, 1990). In order to accelerate welfare and nutrition programs for women and children in tribal, hilly and backward areas of India, the government of India has accepted the National Program of Integrated Services (ICDS). The package of services of pre-natal women included physical and obstetrical exams; serial recording of weight, blood pressure, haemoglobin and urinalysis; tetanus immunization; iron (60mg) and folic acid (0.5mg) tablets; food supplements; identification and referral of high risk mothers; and health education on antenatal care, breast feeding, child rearing and family planning (Yagnik, 1993). Thus, a need has been felt to investigate how far the tribal population has been utilizing the antenatal care services of the PHC or other modern medical facilities and present study is a humble attempt in this direction.

The study specially tries to highlight the following aspects:

1. Utilization of antenatal care services,
2. Utilization of antitoxin,
3. Places of delivery,
4. Correlation between Providers of ANC, place of delivery and utilization of anti toxin and
5. Reasons for not seeking Antenatal services.

METHODS AND METHODOLOGY

Data for the present study has been collected from National Family and Health Survey, which is a nation wide survey conducted in 26 major states of our country in 1992-93. It is conducted by International Institute for Population Sciences, Mumbai with the help of the State Population Research Centers. However, for the present study data on antenatal care services for the major states of India has been explored. Besides percentage distribution the technique of Pearson's Correlation has to been adopted to analyze the data.

ANALYSIS AND DISCUSSION

Table 1, reveals that a large number of mothers belong to schedule tribe (52 per cent) does not receive any antenatal care during pregnancy. Among those who receives ANC services outside home either from doctor or other health

professional or traditional birth attendant it is lowest among Schedule tribe compared to schedule caste and others. Moreover, number of schedule tribes women receives ANC from doctors (21 per cent) followed by those mothers who receive the services at home from health workers. Interestingly, being a member of a close community very less mothers consult traditional birth attendance for the services.

State wise analysis reveals that Kerela ranks first in the utilization of antenatal care services where around 83 per cent of the tribal women receives one or the other ANC services, immediately followed by West Bengal and Maharastra. ANC utilization is poor in north Indian States of Uttar Pradesh (15 per cent), Bihar (21 per cent), Rajasthan (32 per cent), Madhya Pradesh (41 per cent) and Assam and other north-eastern states (31 per cent).

Place of Delivery

Most of the births of the scheduled tribe women are delivered at home, which include own house and that of parents house (refer Table 2). Further, most of the deliveries were found to have taken place in their own house (78 per cent). Births delivered in the parents house accounts for 12 per cent of the total cases, while over 9 per cent of the births among the tribal women are institutionalized. Kerela records highest number of deliveries (72 per cent) in the

Table 1: Antenatal Care (ANC) among the Scheduled Tribes in different states of India

States	ANC only at home from health worker	Antenatal care provider (outside home)			No ANC	Total	No. of births	Missing
		Doctor	Other health professionals	Traditional birth attendant				
Himachal Pradesh	3.8	18.1	36.4	—(less than .05%)	41.6	100.00	103	-
Maharastra	29.6	30.9	13.5	-	26.1	100.00	230	-
Bihar	6.4	13.4	1.1	0.3	78.8	100.00	272	-
Orissa	30.0	16.3	5.0	0.7	46.1	100.00	493	1.9
Gujrat	39.4	22.2	6.1	-	31.5	100.00	343	0.9
Andhra Pradesh	29.8	29.8	2.4	-	35.5	100.00	124	2.4
Kerela	(2.9)	(82.9)	(-)	-	(8.6)	100.00	35	(5.7)
Madhya Pradesh	20.2	12.9	6.4	-	59.2	100.00	1078	13
Rajasthan	14.3	6.8	9.7	0.4	68.5	100.00	517	0.4
Uttar Pradesh	3.9	8.5	2.9	-	84.6	100.00	116	0.1
Assam	0.8	22.2	7.7	0.4	68.9	100.00	342	-
West Bengal	6.7	45.0	16.0	-	32.3	100.00	114	-
Schedule Tribe	18.5	21.0	7.1	0.2	52.3	100.00	4703	-
Schedule Caste	14.0	29.4	12.8	0.2	42.2	100.00	6590	-
others	11.9	44.0	9.0	0.3	34.0	100.00	38076	-

() based on 25-49 cases

- Less than 0.05 per cent

Table 2: Places of Delivery

States	Institutionalised Health Facilities		Health facilities at home		others	Don't know/missing	Total (%)	No. of births
	Public	Private	Own home	Parent's home				
Himachal Pradesh	3.2	-	82.8	7.7	6.4	-	100.00	103
Maharastra	10.0	6.1	60.0	22.1	1.3	0.4	100.00	230
Bihar	2.5	1.4	83.2	12.9	-	-	100.00	272
Orissa	3.3	1.3	85.1	7.3	1.2	1.9	100.00	493
Gujrat	6.4	6.4	68.5	17.8	0.3	0.6	100.00	343
Andhra Pradesh	2.4	4.8	74.2	16.1	-	2.4	100.00	124
Kerala	(68.6)	(2.9)	(20.0)	(2.9)	(-)	(5.7)	100.00	35
Madhya Pradesh	3.1	0.9	84.9	9.0	0.7	1.3	100.00	1078
Rajasthan	5.6	0.6	80.1	13.3	0.2	0.2	100.00	517
Uttar Pradesh	0.3	-	98.8	0.2	0.8	-	100.00	116
Assam	4	1.4	90.4	2.8	-	-	100.00	342
West Bengal	16.0	-	74.5	8.5	1.0	-	100.00	114
Schedule Tribe	6.7	2.4	77.9	11.7	0.6	0.8	100.00	4703
Schedule Caste	10.9	5.1	71.5	11.2	0.6	0.8	100.00	6590
others	16.3	12.9	57.9	12.1	0.5	0.4	100.00	38076

(-) based on 25-49 cases

- Less than 0.05 per cent

institutionalized health facilities followed by Maharashtra around 16 per cent. While north Indian states like in Assam, Orissa, Himachal Pradesh births are mostly uninstitutionalized.

Assistance During Delivery

From table 3, it is found that 41 per cent and 39 per cent of births in scheduled tribe household are attended by traditional birth attendants and relative respectively. Only a small number of births are attended by doctors (7 per cent)

and nurses/midwives (10 per cent).

While undergoing state wise analysis we found that in Kerala highest number of deliveries are assisted by doctors followed by Maharashtra and Andhra Pradesh. On the other hand, in Uttar Pradesh, Himachal Pradesh and Madhya pradesh negligible number of deliveries are assisted by doctors, they mostly rely upon traditional birth assistant and other relatives for delivery. Pandey et al., (1993) studied the health-seeking behaviour among the Hill Korwa tribe

Table 3: Attendance during delivery

States	Attendants assisting during delivery						Total (%)	No. of births
	Doctor	Nurse/ midwife	Traditional birth attendant	Relative/ others	None	Don't know/ missing		
Himachal Pradesh	3.2	8.6	55.9	31.0	1.3	-	100.00	103
Maharastra	11.3	13.9	39.6	34.8	0.4	-	100.00	230
Bihar	5.4	0.8	79.6	14.2	-	-	100.00	272
Orissa	3.4	3.9	33.8	52.7	4.3	1.9	100.00	493
Gujrat	9.9	6.1	68.2	15.2	-	0.6	100.00	343
Andhra Pradesh	10.5	8.1	35.5	44.4	0.8	0.8	100.00	124
Kerala	(54.3)	(20.0)	(11.4)	(8.6)	(-)	(5.7)	100.00	35
Madhya Pradesh	4.2	14.2	33.8	46.4	-	1.4	100.00	1078
Rajasthan	5.0	10.4	43.9	39.7	-	1.0	100.00	517
Uttar Pradesh	0.1	6.6	47.6	45.7	-	-	100.00	116
Assam	7.0	5.4	23.9	60.9	2.8	-	100.00	342
West Bengal	8.5	8.2	45.9	36.2	1.2	-	100.00	114
Schedule Tribe	7.4	10.1	41.8	39.2	0.9	0.7	100.00	4703
Schedule Caste	13.7	11.4	39.5	33.9	0.7	0.9	100.00	6590
others	24.7	13.2	33.7	27.5	0.5	0.4	100.00	38076

(-) based on 25-49 cases

- Less than 0.05 per cent

in Surguja District of Madhya Pradesh and came out with the result that out of 14 pregnant women studied, 5 seemed to know about tetanus toxoid injections and the use of iron tablets during pregnancy. 72 per cent of the deliveries were performed by untrained birth attendants, 24 per cent by elderly ladies and less than 1 per cent by trained dais.

Administration of Tetanus toxoid Vaccination and Iron folic tablets

Tetanus is an important cause of death among neonates in India. It develops during the first or second week of life and is fatal in 70 to 90 per cent cases (Foster, 1984). It is most common when the delivery takes place in an unhygienic environment. Two doses of tetanus toxoid vaccine given to the pregnant women one month apart during early pregnancy are nearly 100 per cent effective in preventing tetanus among the new born and among the mothers. Another common characteristic visible among most of the pregnant mothers in India is the prevalence of anaemia. The size of a women's baby, her preparation for lactation and iron and folate status of both the mother and the child depends upon the mother's nutritional status at the time of conception as well as her diet during pregnancy (WHO, 1994). Proper maternal care is important for the healthy intrauterine care growth of the baby and may affect the baby's

birth weight. The provision of iron and folic acid tablets as a prophylaxis against nutritional anaemia among pregnant women forms an integral part of the MCH activities of the Indian Family Welfare Programme (Ministry of Health and Family Welfare, 1991). It is recommended that a pregnant women should take 100 tablets of iron and folic acid during her pregnancy and health workers should be instructed accordingly.

From table 4, it is observed that more number of tribal women (56 per cent) does not receive any dose of tetanus toxoid vaccination and only 40 per cent women reports to have taken iron or folic tablets during pregnancy and inter-state variation depicts the same result as earlier i.e., in Kerala the highest number of women were administered with Tetanus toxoid and iron folic tablets followed by Maharashtra. On the other hand, the picture depicted by northern states are not satisfactory.

Results of Correlation Matrix

From correlation matrix (Table 5), it is observed that there exist a strong and positive association between antenatal care services from doctor and the mother who have received complete tetanus toxoid injection (i.e, two dose) and iron folic tablets. On the contrary, a strong and negative association is visible between home deliveries and mothers who have not received tetanus toxoid and iron and folic tablets. Fur-

Table 4: Utilization of Tetanus toxoid Injection and Iron folic tablet in prenatal stage

States	Number of tetanus toxoid Injection				Total (%)	% given iron/ folic tablets	No. of births
	None	One dose	Two dose	Don't know/ missing			
Himachal Pradesh	55.6	16.9	27.4	-	100.00	50.8	103
Maharashtra	27.0	14.3	58.7	-	100.00	62.6	230
Bihar	81.8	2.5	15.7	-	100.00	12.3	272
Orissa	48.7	11.5	39.1	0.7	100.00	47.7	493
Gujarat	42.0	9.9	48.1	-	100.00	62.4	343
Andhra Pradesh	44.4	10.5	45.2	-	100.00	53.2	124
Kerala	(22.9)	(2.9)	(74.3)	(-)	100.00	(80.0)	35
Madhya Pradesh	62.4	10.0	27.4	0.2	100.00	34.6	1078
Rajasthan	69.1	7.9	22.4	0.6	100.00	30.4	517
Uttar Pradesh	87.4	-	12.6	-	100.00	9.0	116
Assam	73.4	4.6	21.6	0.4	100.00	26.8	342
West Bengal	34.2	10.6	55.0	0.4	100.00	56.5	114
Schedule Tribe	56.2	9.4	34.1	0.3	100.00	40.2	4703
Schedule Caste	45.4	7.0	47.4	0.2	100.00	44.2	6590
others	35.7	6.8	57.3	0.2	100.00	52.8	38076

() based on 25-49 cases

- Less than 0.05 per cent

Table 5: Correlation Matrix

Variables	v1	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14
v1	1.0000	0.4657	0.1778	-0.5834	-0.1839	0.3565	0.0116	-0.2526	-0.3219	0.1536	-0.0983	-0.2442	0.1805	0.1347
v2		1.0000	-0.1474	-0.3503	-0.7811*	0.9283**	0.2515	-0.8966**	-0.1469	-0.1518	-0.7467*	-0.1001	0.8526**	0.7499**
v3			1.0000	-0.2099	-0.1434	-0.2240	-0.2720	0.1804	0.0477	0.9200**	-0.1063	0.6993*	-0.0684	0.1593
v4				1.0000	0.3835	-0.2342	-0.2808	0.3278	-0.1539	-0.1854	0.3287	-0.1061	-0.3448	-0.3356
v5					1.0000	-0.6312	-0.5505	0.8136**	-0.3010	-0.1245	0.9801**	-0.4746	-0.9574**	-0.9930**
v6						1.0000	0.1263	-0.9095**	-0.2702	-0.1829	-0.5841	-0.2654	0.7161*	0.6226
v7							1.0000	-0.4679	0.7190*	-0.2926	-0.5551	0.2298	0.5574	0.5449
v8								1.0000	-0.1403	0.1647	0.7805*	0.0049	-0.8656**	-0.8037**
v9									1.0000	-0.0768	-0.3671	0.5283	0.2678	0.2980
v10										1.0000	0.0483	0.6296	-0.1121	0.1302
v11											1.0000	-0.4952	-0.9726**	-0.9713**
v12												1.0000	0.2798	0.4955
v13													1.0000	0.9413**
v14														1.0000

1-tailed Signif: * < .01, ** < .001.

Providers of ANC

v1: ANC only at home from health worker, v2: Doctor, v3: Other health professionals, v4: Traditional birth attendants, v5: No ANC providers

v6: Public health facilities, v7: Private health facilities, v8: own home, v9: Parent's home, v10: others.

Utilization of tetanus toxoid injection and iron/folic tablets

v11: No tetanus toxoid injection, v12: One dose, v13: Two doses, v14: Per cent given iron/folic acid tablets.

Place of delivery

ther, the table shows that those who have received two dose of tetanus toxoid are more likely to receive iron or folic tablets also.

Reasons for Non Utilization of ANC by ST Population

And now comes the question of the reason for not seeking the antenatal care services by ST women. Here the main reason for not seeking antenatal care services is that most mothers feels that such care is not necessary for a healthy motherhood (51 per cent), while many does not have any knowledge of these services (13 per cent) (Table 6). Other reasons such as the women already visited by health staff, no time to go, financial cost, poor quality services etc. are also expressed by the mothers are detrimental to the utilization of ANC services.

Table 6: Reasons for non-utilisation of ANC by ST population

Reasons	Percentage of ST population
Lack of knowledge of services	13.2
Not necessary	51.4
Not customary	2.9
Financial cost	5.1
Inconvenient	2.8
Poor quality services	3.0
Home visit by Health staff	10.2
No time to go	8.0
Not permitted to go	2.4
Others	1.1

Some of the Social Factors Responsible for Non-Utilization of ANC by ST Population

In the NFHS (1992-93), each woman who had a live birth during the four years prior to the survey was initially asked whether any health worker visited her home for antenatal checkup when she was pregnant or whether she had gone for an antenatal checkup outside the home. On the basis of these question we made three categories - (1) ANC received only at home from the health worker, (2) ANC care received outside home and (3) Received no ANC care. When it is cross tabulated with the level of education and the standard of living index (SLI) of the respondent, we find that with the increase of educational level their is an increase in the utilization of ANC care and it is similar in case of standard of living where about 50 per cent of the

women of high SLI are not receiving ANC in comparison to 73 per cent of the low SLI women (Table 7). This proves that improvement of the social variables leads to improvement in the utilization of ANC inspite of rigidity towards acculturation among these closed community.

short coming.

Moreover, there are lots of cultural indicators *i.e.*, certain taboos (dos and don'ts) or certain beliefs, customs, perception and mode of practices which acts as hindrance in the acceptance of ANC among the tribes which is hitherto

Table 7: Social factors responsible for non-utilisation of ANC by ST population

Variables	ANC only at home from health worker	ANC care outside home	Non-utilisation of ANC	Total births
Education				
Illiterate	153 (5.3)	634 (22.1)	2076 (72.5)	2863 (100.0)
Primary literate	68 (16.0)	42 (9.9)	314 (74.0)	424 (100.0)
Middle complete	36 (28.1)	11 (8.6)	81 (63.3)	128 (100.0)
High school & above	24 (35.3)	10 (14.7)	34 (50.0)	68 (100.0)
Standard of Living Index				
Low	197 (6.9)	590 (20.6)	2080 (72.5)	2867 (100.0)
Medium	68 (11.7)	104 (17.9)	406 (70.2)	578 (100.0)
High	16 (42.1)	3 (7.9)	19 (50.0)	38 (100.0)

CONCLUSION

From the foregoing discussion it is evident that Schedule tribe women were lagging far behind Scheduled caste and others in terms of acceptance of antenatal care services. Further, the utilization of antenatal care services was much poorer in the northern states compared to southern states. This difference in the acceptance of ANC may be due to difference in certain social variables such as level of education which is lower in the northern states in compared to the southern states and in general the lower status of women in the northern status compared to southern states.

LIMITATION OF THE STUDY

Though the study highlights the poor performance in terms of acceptance of the ANC by the schedule tribe, but to be mentioned here that tribe vary among them considerably which is lacking in the NFHS data so it could not be analyzed. Thus a common plan of action will always not be that successful in meeting the demands of the people. It requires a community based need based study to overcome this

erto missing in the data generated by NFHS in 1992-93, which abstain us from depicting the actual picture.

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