

# Utilization of maternal health-care services by tribal women in Kerala

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## Abstract

**Background:** The coverage of maternal care services among the tribal women in Kerala is better as compared to other states in India. **Aim:** This study was done to identify the factors contributing to better coverage of maternal care services among the tribal women in Kerala and to study the reasons for remaining differences that exists in utilization of services between tribal and non-tribal pregnant women. **Settings and Design:** This was a descriptive cum qualitative study conducted in Thariode Gramapanchayat in the Wayanad district of Kerala. **Materials and Methods:** Among all women who had registered their pregnancies in the 5 sub-centres under CHC Thariode and had delivered between September 2009 and October 2010, equal numbers of tribal and non-tribal ante-natal women, 35 each were interviewed in-depth using a semi-structured questionnaire. **Statistical Analysis Used:** Quantitative data was analysed using SPSS Version 16.0. Content analysis was done for qualitative data. **Results:** The determinants of utilization in tribal women were general awareness, affordability, accessibility and quality of services along with motivation by health workers. Among tribal antenatal women, 85% utilized maternal health care facilities fully compared to 100% among non-tribal women. Lower levels of education and lack of transport facilities were prime factors contributing to under utilization by tribal women. **Conclusions:** Affordable, accessible and good quality of services in the public health system in Kerala and motivation by health workers were important contributing factors for better utilization of maternal care services.

**Key words:** Maternal health-care, tribal women, utilization

## INTRODUCTION

Maternal health-care services include ante-natal care (ANC), intra-natal and post-natal care services. As of from 2005 to 2006, the proportion of women delivering without any ANC in India was 22.8% among non-tribal women and much higher, 37.8% among tribal women. Still 49% of all the deliveries in non-tribal and 82.3% among tribal women were at home.<sup>[1]</sup>

Kerala performs much better in delivery of these services. Tribal population in Kerala constitutes 1.4% of the total

population; Wayanad district having 35% of Kerala's tribal population which constitutes 17.4% of the district's population.<sup>[2]</sup> As for maternal health-care in Kerala, 72.2% of pregnant women received full ANC whereas in Wayanad 68% of women received the same. Proportion of institutional deliveries was above 98.7% for all districts except for Wayanad, where 95.4% women delivered in institutions.

This study was intended to assess the utilization of maternal health-care services by tribal women as compared to non-tribal women and to identify the factors affecting their differential utilization.

## MATERIALS AND METHODS

The study was carried out at Thariode Gramapanchayat in Wayanad, where 20% is tribal population. The study was descriptive cum qualitative, conducted between

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November to December 2010. The sample size 70 (35 tribal and 35 non-tribal women) was selected randomly from among the antenatal women who had registered their pregnancies in the five sub-centres under Community Health Centre (CHC) Thariode and had delivered between September 2009 and October 2010. Equal numbers of tribal and non-tribal women were selected to obtain a clearer picture of their preferences and choices which is qualitative information. Ethical clearance was obtained from the Institute Ethics Committee.

For the purpose of this study “full utilization” was defined as registration of pregnancy at the health center, minimum three antenatal check-ups of which one was at home by Auxiliary Nurse Midwife (ANM), two doses of Tetanus Toxoid (TT) injection, received 100 Iron Folic Acid (IFA) tablets, minimum two recordings of body weight and blood pressure, high risk cases detected and referred, institutional delivery and three post-natal check-ups by ANM at home.<sup>[3]</sup>

After obtaining informed consent, in-depth interviews were conducted at home of the subjects using a semi-structured questionnaire. Quantitative data was analysed using SPSS Version 16.0. Content analysis was done for qualitative data.

## OBSERVATIONS

The socio-economic and demographic characteristics of the women are presented in Table 1. Level of education as well as per capita monthly income of tribal women was significantly lower than that of non-tribal women.

### Utilization of maternal health care services

Maternal health care services were fully utilized by 85.7% of tribal women compared to 100% among non-tribal antenatal women and the difference was statistically significant ( $P = 0.02$ ). Overall utilization of the 70 women was 92.8%.

Among tribal women, 82.9% had 1<sup>st</sup> trimester registration of pregnancy whereas 97.1% of non-tribal women had the same. The difference however was significant ( $P = 0.04$ ). All the non-tribal women availed ANC services fully and only one (2.9%) of the 35 tribal women had partial utilization of these services. All were visited at least once at their home for ANC by ANM and received minimum 100 IFA tablets. Of the tribal antenatal women, 11.4% delivered at home and all the home deliveries were attended by untrained persons from the locality. All the 70 women were visited at least twice at their home after delivery for post-natal care

by Junior Public Health Nurse (JPHN), the designation for ANM in Kerala.

### Factors affecting utilization by tribal women

Education of woman emerged as an important factor affecting utilization of maternity care services by tribal women. Level of education of the tribal women who did not utilize full services was significantly lower than those who utilized ( $P = 0.006$ ). The tribal women who registered their pregnancy in the first trimester (90%) had utilized the services fully as compared to the women who registered their pregnancy later (40%) ( $P = 0.02$ ) [Table 2].

### Reasons for utilizing maternal health care services by tribal women

#### Awareness

All the tribal women received maternal health care services from government facilities. General awareness that modern medical care during the antenatal period, hospital delivery, and postnatal care, help in having a better outcome for mother and baby; emerged as a vital factor affecting utilization for 80% of the tribal women.

**Table 1: Distribution of subjects according to their socio-demographic characteristics**

Characteristics of the women	Tribal women (n=30)		Non-tribal women (n=30)	
Age of the women				
<20 years	4	11.4	3	8.6
20-24 years	20	57.1	12	34.3
25-29 years	9	25.7	16	45.7
≥30 years	2	5.7	4	11.4
Education* ( $P<0.01$ )				
≤ Ower secondary (5-7)	19	54.3	02	5.7
Upper secondary (8-10)	09	25.7	18	51.4
≥ Post- secondary (11-12)	07	20	15	42.9
Per capita monthly income# ( $P<0.01$ )				
≥ Rs. 960 (class I, II, III)	10	28.6	26	74.3
Rs. 480-959 (class IV)	14	40	07	2
< Rs. 480 (class V)	11	31.4	02	5.7
Occupation ( $P<0.05$ )				
Not employed	20	57.1	34	97.1
Manual laborer	15	42.9	01	2.9

**Table 2: Distribution of subjects according to educational status in utilized and not fully utilized groups**

Educational status*	Utilized		Not utilized	
	Tribal	Non-tribal	Tribal	
	(n=30)	(n=35)	(n=5)	%
Illiterate	0	0	1	20
Primary school (1-4)	3	0	2	40
Lower secondary (5-7)	11	2	2	40
Higher secondary (8-10)	9	18	0	0
Post- secondary (11-12)	6	14	0	0
Graduate	1	1	0	0

\*International classification of education - UNESCO

### Factors related to government health facilities

The specific reasons related to government health facilities that favored utilization were free treatment, good quality of services including efficient doctors, drugs, lab services, and improved physical facilities.

### Influence of health workers

The influence of health workers as the sole reason for receiving any health service during pregnancy and delivery was mentioned by 20% of tribal women.

The service of health workers was especially appreciated by, 33-years-old primi that had severe pre eclampsia and was referred to a tertiary center:

“Without them (ANM and Accredited Social Health Activist (ASHA) I wouldn’t be alive today. I had high BP. They took me to the district hospital and then to medical college. They stayed with me at the hospital till my relatives came on the next day.”

### Others

Accessibility to the sub-centres, provision of monetary incentives under Janani Surksya Yojana (JSY) and insistence of relatives were other reasons.

### Reasons for not fully utilizing maternal health care services by tribal women

#### *Lack of awareness of the need of health care service*

The tribal women who did not utilize one or more of maternal health care services were of the opinion that ANC and delivering at the hospital were unnecessary (5.7%). They believed that medicines and injections are harmful to health and will cause other health problems. They never consulted hospitals for any diseases.

“My mother has advised me that these medicines and injections are harmful to body (*“sareerathinu kedanu”*). I delivered at the hospital only because sister (ANM) hired a vehicle and accompanied me to the hospital.” (24-years-old multiparous woman who delivered at the hospital).

A 20-year-old woman who had antepartum hemorrhage and intrauterine death in her first pregnancy and whose second delivery was at home responded:

“I don’t like going to the hospital. It is not needed though they took me to hospital last time. I don’t go to hospital for any disease. Sister gave me tablets, but I did not take any. I don’t want tablet.”

### Difficulties in accessibility to hospitals

The main reason stated by tribal women who wanted

to utilize the services but could not, was the lack of availability of public transport facilities in their area. This made seeking health care difficult and expensive. This was a major barrier to institutional delivery in the present study. Two women delivered before the hired vehicle reached home.

### Other reasons

The other reasons for under-utilization by tribal women were rude and unfriendly behavior of staff in government Hospitals and financial constraints. Though, treatment was free in government hospitals, expenditure incurred were expenses of the person accompanying pregnant mother to the hospital, food, etc.,

## DISCUSSION

The coverage of full ANC services by 85.7% of tribal women and 100% non-tribal antenatal women in this study was higher compared to District level household and facility survey 2007-08 (DLHS-3) data for Kerala.<sup>[4]</sup> The proportion of institutional deliveries was 88.6% for tribal women and 100% in non-tribal women. The high utilization of services is likely to be due to the extra efforts put up by ANMs in the area, especially in providing services to tribal women as recognized by the subjects.

The lower utilization among tribal (85%) as compared non-tribal (100%) women was statistically significant, similar to studies by Dilip and Mishra,<sup>[5]</sup> Navanetham and Dharmalingam,<sup>[6]</sup> Singh and Yadav,<sup>[7]</sup> NFHS-3 reports<sup>[1]</sup> and DLHS-3 Kerala reports.<sup>[4]</sup>

Among factors affecting utilization, educational status of the tribal women who did not utilize full services was significantly lower than tribal women who utilized the services. Similar relationship was observed by Dilip and Mishra.<sup>[5]</sup> and Singh P *et al.*<sup>[7]</sup>

In the present study per capita monthly income of the families was low for tribal women both in the utilized and not fully utilized groups. Dilip and Mishra showed that utilization of maternal health care services was low in women from poorer economic background, but the education-caste association was stronger than income-caste association in terms of utilization of all maternity care services.<sup>[5]</sup>

The tribal women who registered their pregnancy in the first trimester better utilized the services compared to women who registered later. This could be due to the possibility that women who did an early registration had higher awareness, which indirectly lead to full utilization. Deb in a similar

study observed that most women failed to receive full ANC because of late registration of pregnancy.<sup>[8]</sup>

For 80% of tribal women, awareness on the need of services emerged as a vital factor affecting utilization and was higher than the awareness among tribal women in other parts of the country.<sup>[9]</sup> This could be attributed to the high female literacy in Kerala.<sup>[2]</sup> In this study information regarding available services were given to more than 30% of tribal women exclusively by health workers and thus points out the impact of the advice of health staff in creating awareness.

Free treatment and good quality of services made 68.5% tribal women choose government hospitals for maternity care services. Mohindra *et al.* in his study among tribal people found out that they predominantly used free public health services.<sup>[10]</sup>

The main reason for the inability to utilize services was the lack of accessibility to health facilities. So also are the findings by Navanetham and Dharmalingam.<sup>[6]</sup> The tribal women who did not utilize one or more of maternal health care services were of the opinion that these services were unnecessary. The lower level of education may have added to the age old beliefs and practices of tribal women in these situations.

## CONCLUSION

The determinants of utilization of maternal care services among tribal women were early registration of pregnancy, better general awareness regarding medical services for mothers, affordable, accessible, and good quality of services in the public health system in Kerala. Motivation by health workers emerged as an important contributing factor for better utilization. Lack of transport facilities was a prime factor which contributed to under-utilization by tribal women coupled with lack of awareness and financial

constraints.

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