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The Socio-demographic correlates of utilization of antenatal care services by tribal women in North Eastern Region of India

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ABSTRACT : *Maternal health care services utilization by tribal women continues to be a major public health problem in India. Prior to the very existing of the national programmes for improving maternal and child health in NER, the maternal health care services still continue to be low among tribal women. Utilization of Ante natal care (ANC) services is poor in the rural areas, causing significant impact on the health of the tribal women. The fourth round of the DLHS 4 District Level Household and Facility Survey a nationwide survey which was conducted during 2012-13 is used for the analysis. A total of 12517 women were included in the study. Thus, of the total women covered more than half of the women had availed ante-natal care, i.e. (66.11%). Place of residence has been considered as important in determining any services utilization. This present study has revealed that association between predicator's variables and health outcomes variables such as antenatal care were statistically significant. The study indicates that women of urban place of residence, higher level of education etc. have preferred to use the service more. The utilization of ANC were almost universal but were still low in rural areas and among tribal women.*

KEYWORDS: *Antenatal health care services, DLHS-4, North Eastern Region, Socio-demographic factors, Tribal women, Utilization pattern*

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I. INTRODUCTION

Antenatal care services are one of the most important maternal health care among every woman. This present study aimed to examine the socio-demographic correlates of utilization of ante-natal care services among ever-married women 15-49 age groups in North Eastern Region of India (NER). The tribal women in the region remain to be poorer in terms of antenatal care services utilization underlying several socio-demographic factors. Analysis of this study have revealed that among the tribal women there are inequality which shows that they are socially excluded, lived in poverty and are marginalised. This marginalised group's inequality do persists among socially and economically backward groups i.e. tribal woman in particular. The North Eastern region presents about 4.5 % of the total population [1] belongs to STs and mostly resides in rural areas has still experienced low in terms of ante-natal care services utilization. These huge tribal groups in India across states remain socially and economically poor as compared to other social groups [2]. Furthermore, women belonging to lower caste groups are deprived with basic education, and maximum are residing in rural areas where by remain poor in access to public health facilities [2-3-4]. The social stratification which today still persists and is apparent in Indian society. This social is one among the strongest determining the status of social and health [5]. In a study conducted by [5-6] have mentioned that STs/SCs and OBCs who still remain poor in the society are being marginalized socially and economically. Factors that were selected in this study have revealed that maternal health care utilization are determined by various social setting. The accessibility and utilization of services do depend on these social setting [7- 4]. Further the socio-demographic factors have determined the services utilization of available services and health care facilities among tribal women or even in a community are evident at larger scale. The study have addressed the antenatal care services utilization among tribal women by selected socio-demographic characteristics such as place of residence, religion, women age, women education, husband education, wealth and age at first birth.

II. REVIEW OF LITERATURE

Health status and service utilisation in India has witnessed a lot of task which comprehend the determinants of health outcomes. Researcher, policy makers and public health attempted to ensure the goal to achieve health equity. Many recants studies suggested health inequality based on socio-economic status which identified that lower socio economic group are subsequently attacked by poor health outcomes [8]. Previous studies had given a widespread about poor health promotion across the globe especially for those policy research and action [9-10-11].Of course, there are a few region-based or population subgroup studies with

regards to health per se in India. But there are studies which have much reflected on disparities and not purely on inequalities. As because disparities will certainly imply the position aggregate outcome, while inequalities have to deal on certain value of ethics or economics perspectives [12]. In India these tribal live in poverty, illiteracy, and malnourished [13-14]. Also no proper safe drinking water facilities and sanitation were identified [15] poor maternal and child health services [16] had lead to a worse situation of maternal mortality and morbidity. The living arrangement of tribes in the hilly areas, and remoteness, poor and lack of infrastructures make them more vulnerable and remain in isolation [17-18]. Also among the tribes population if compared with all other social groups the utility of available health care's services remain less or low. For example, [19-20-21] focus on social and economic inequality in health and nutrition by different sections of the society. Other studies by [22-23] concentrated with the aspects of maternal and child health. Poverty, inadequate health resources, ignorance and high risk beliefs and practices among the tribal communities have contributed to the vulnerability of tribes in terms of maternal and child health as well. The growing consensus of health status among the tribal population remain poor and worst due to isolation, remoteness and being largely unaffected by development process. The importance of maternal and child health deserves special attention with regards to health care services especially among women. Of course there are several studies which explore that there are strong linkages between men and maternal health which is further encompass with strong cultural influences. Strong community and cultural values played an important role in the utilization of health care services [24]. Thus, these problem deserves in situating inequality in health among the tribes and rest of the population in understanding and policy implication for maternal and child health in India and North-East India. The scheduled tribe and caste in the region are socially, economically neglected and particularly in socio-demographic characteristics and also health outcome. Further, even few studies that were done for the region still lack to address the above issue. One of the reasons could be the lack of government intervention in case of health services and infrastructures in the region. The objective is to study health inequality among scheduled caste and tribe population, which can be used for evaluating health status by the ST's and SC's in the backward region of India and North East India. In both developed and developing nations there exists groups or classes based-marginalisation. India is a country known for caste-based discrimination in most sections of the societies. The vulnerable groups that faced discrimination are Scheduled castes and Tribes, women, children, aged and disabled, etc. [25]. Thus, SCs /STs remain disadvantaged and are socially excluded. Their health status and utilization pattern remain poor and they mostly lived in poverty [6]. Caste in Indian society had depicted social inequality. In other words, the lower caste groups were economically dependent on the upper caste group for existence. This form of inequality had effects on lifestyles, access to food, education and health of the lower caste groups [26]. In India social stratification is considered to be one of the strongest indicators in social determinants of health [5]. The scheduled castes (SC) and scheduled tribes (ST)are not only living in poverty but also by their marginalization and seclusion from the rest of the society, remain economically disadvantaged and had lived in isolation [6]. The studies of such kind are less addressed in North East India. Even though social stratification is the proxy of socio-economic status and health in India. Today, the inter and intra castes disparity have been less focused. In spite, of variety of determining factor which determine health access this social stratification in Indian context have gain impetus among researchers [5]. The previous literature which study intra caste differential in utilization of health services include: In Kerala caste differential is found with maternal health care utilization [17]. A similar study which was conducted in Jharkhand revealed that the maternal care and services are low among Scheduled Tribes mother as compared to non-scheduled tribes [27]. With regards to this purpose of studies literature is less for the region. And studying inters and intra castes differences in health status are a new area using the Indian national population and survey data.

STATEMENT OF THE PROBLEM

As noted earlier, India missed the MDGs and India has a huge role in world SFGs, it is important to identify the marginalised groups and their health status. The tribal population are the most prominent marginalised group with low level of socio-economic outcome as compared to the general/remaining groups of the population. Therefore they have poorer health outcome. Similarly, the marginalised region such as North East India needs special attention due to lack of research in those area. The present study aims to study the maternal health care, i.e. ante-natal care services among tribal population of North Eastern Region (NER) of India.

III. METHODOLOGY

Research Design

The Indian national demographic and health survey District Level Household and Facility Survey DLHS 4 [2012-13] is used for entire analysis provides details information on ever-married women in the age groups 15-49. The study here has restricted to only tribal women ever-married women from the surveys. The total sample sizes of 35705 ever-married women have been considered for analysis. The survey is a nationwide

representative samples capturing 319695 women in the age groups 15-49 from 7 states are interviewed (excluding Assam). This study analysis have considered women questionnaire only. The dependent variables i.e. antenatal care is used as indicators of maternal health care utilization. The dependent variable is dichotomous in nature i.e. binary form with yes and no responses. A woman is considered to have used ANC if she has avail or received from services provider or elsewhere. This variable was coded as 1 if the mother had received and 0 if otherwise. The aim objective of this study is to explore the socio-demographic and antenatal care services utilization among tribal women in North East region of India.

Dependent variables

The question being asked, "Did you receive antenatal care"? The purpose of this variable that was selected is to study whether women had avail/received antenatal care (if she had received from provider at home or elsewhere, otherwise no if not received). The responses here are in binary form, i.e., (yes/no). Women who had received from provider at home or elsewhere are coded as Yes=1, and No=0 if not received.

Independent variables

Here all these selected socio-economic and demographic characteristics such as place of residence, religion, women age, women education, husband education and age at first birth were similar with other previous studies. The categorised variables which were considered for executing the results are as follows: age group (15-24, 25-34, 35+), place of residence (rural, urban), women's education (illiterate/none; up to primary school; secondary school and above), husband's education (illiterate; up to primary school; secondary school and above), religion (Hindu; Muslims; others) and age at first birth (10-21, 22-32, >43). The whole analysis and computation of results is done using statistical software STATA 12.1 version. Descriptive statistics (frequency and percentages) are used for describing both the data. Bi-variate analysis using chi-square tests are computed to see the proportion of utilization and its association with predicators' variables. Binary logistic regression model was performed to seek the determining factors.

IV. DISCUSSION

The sample size considering the surveys i.e. District Level Household and Facility Survey (DLHS 4) for North East India the results were presented in (Table I). Thus, this table were presented through descriptive statistics. The percent of utilization of antenatal care services is presented in (Table II). The associations between each one of the independent variables were tested using chi-square test (Table III). The factors which determine the utilization of these indicators were presented by multi variate analysis (Table IV).

Table I: Percentage distributions of ever-women 15-49 age groups by background characteristics, North East India, DLHS IV, 2012-13.

Background characteristics	%	N=35705
Place of residence		
Rural	78.96	**28,194**
Urban	21.04	**7,511**
Religion		
Hindus	14.61	**5,214**
Muslims	0.86	**306**
Others	84.54	**30,179**
Women age		
15-24	13.98	**4,992**
25-34	37.72	**13,467**
35+	48.30	**17,246**
Women education		
Illiterate	24.97	**8,905**
up to Primary school	64.72	**23,082**
Secondary School above	10.31	**3,677**
Husband education		
Illiterate	24.97	**193**
up to Primary school	64.72	**21,177**
Secondary School above	10.31	**5,915**
Age at first birth		
10-21year	57.33	**17,865**
22-32	40.66	**12,671**
>43	2.01	**626**

Source: Authors calculation

More than half of the women had availed ante-natal care 8275/12517 (66.11%) whereas about almost half had not utilized the services 4242/12517 (33.89%) as presented in the below [Table II].

Table II: The utilization of ante-natal care services by the study population.

Variables	**North East India**	
Ante-natal care	**n**	**%**
Yes	**8,275**	**66.11**
No	4,242	33.89

Source: Authors calculation

The antenatal care services utilization among ever-married tribal women (15-49) age group prior from the date of the survey by place of residence, religion, women age, women education, husband education, wealth quintile and age at first birth. The tests of association suggest that all of the selected predicator's variables were significant at p value < 0.005.The tribal women considered in this analysis were only those belonging to STs/SCs. And the results were drawn from the surveys.

The utilization of ante-natal care are accessed to determine the factors, bi-variate analysis were performed based on the selected background characteristics. (Table III) shows the percentage of ever-married women in utilizing maternal health care services by selected background characteristics. The percentage for ante-natal care received was 66.11% and those have not avail were 33.89 % as shown in (Table II). The results of bi-variate analysis have revealed that all the predicator for ante-natal care utilization were positively significant among the tribal in the region. The percent of receiving ANC by rural women was 64.19%.The category of Hindus are better in case of utilization for ANC with 82.26%. Women age have also influence ANC utilization where utilization rate of ANC is high among 15-24 age groups with 72.76%. Another important factor which influences the health care services is women education. Ante-natal care services have increase with level of education. For instances, the percent of utilization for ANC among illiterate women were 43.94% as the level of education rises. Substantially these percent have raise among those women with secondary 73.16% and above secondary school with 90.65%. Similarly, husbands have also determined the utilization services higher is the level of education higher is the rate of utilization with respects to the dependent variables. Similar is the result with age at first birth higher age groups during their child birth are determined to use more services. The study have revealed that the utilization of ante-natal care services remain low among the tribal women in the region.

Table III: Utilization of maternal health care services among ever-married women (15-49) age groups by background characteristics, North-East India. DLHS-IV, 2012-13.

Background characteristics	**Percent of ANC received**
Place of residence	(714.0081)***
Rural	64.19
Urban	87.76
Religion	(431.2319)***
Hindus	82.26
Muslims	73.30
Others	64.75
Women age	(112.1527)***
15-24	72.76
25-34	70.66
35+	61.66
Women education	(1.5003)***
Illiterate	43.94
up to Primary school	73.16
Secondary School above	90.65
Husband education	(277.8208)***
Illiterate	52.17
up to Primary school	70.68
Secondary School above	85.39
Age at first birth	(138.4991)***
10-21	65.44
22-32	74.21
>43	72.14

Note:

Figures in parentheses are the □² statistics; □² test applied for each variable. Levels of signi□cance: *p < 0.01; **p < 0.05; ***p < 0.10.

Table IV show the multivariate logistic regression for antenatal care services utilization among tribal women in North East India. The predicators variables such as; place of residence, religion, women age, women education, husband education and age at first birth were used in computing binary logistic regression.

Table IV: Results of binary logistic regression showing Odds ratios for determinant of ante-natal care utilization, North-East India. DLHS- IV, 2012-13.

Background characteristics	**received ante-natal care**
	Odds ratio
Place of residence	
Rural®	1.000
Urban	2.795***
Religion	
Hindus®	1.000
Muslims	0.627**
Others	0.374***
Women age	
15-24®	1.000
25-34	0.845**
35+	0.666***
Women education	
Illiterate®	1.000
up to Primary school	2.454***
Secondary School above	5.645***
Husband education	
Illiterate®	1.000
up to Primary school	1.384**
Secondary School above	1.914**
Age at first birth	
10-21 ®	1.000
22-32	1.312***
>43	1.335**

® Reference category, Levels of signi cance*p<0.10; **p<0.05; ***p<0.01

Results of the multivariate analysis reiterate that place of residence and women's education are the significant determinants of antenatal care utilization. Both the predicators variables place of residence and women's education have influence the utilization of full antenatal care (Table IV). Women with up to primary school and secondary and above were 2.4 times and 5.6 times more likely to utilize antenatal care compared with illiterate women. Another determinant factor is place of residence compared with women from rural place of residence, antenatal care utilization was found to be more likely among women residing in urban (OR=2.7). Thus, although other predicator's variables were significant in bi-variate analysis (Table IV) the utilization of ANC need not be necessarily important in regression analysis and remain less significant.

V. CONCLUSION

The study findings have explored the factors that have influence utilization of ante-natal care services. The study has also made an attempt in examining the association of socio-demographic variables and ante-natal care utilization. There were several factors which have determined the utilization pattern. Place of residence has been considered as important in determining any services utilization. Previous studies have found residence i.e. rural to be the low in terms of maternal health care utilization [28-29]. The study has revealed that association between predicator's variables and health outcomes variables such as antenatal care were statistically significant. Bi-variate analysis indicates that women of urban place of residence, higher level of education etc. have preferred to use the service more. The utilization of ANC were almost universal but were still low among marginalised or vulnerable population. There were several factors which have determined the utilization of maternal health care. Previous literatures have shown that in India health care facility with regards to maternal health were still inadequate indicating vast inequality because of social, economic, region, education and cultural factors [30-31-32]. Also the reproductive health is closely inter-related with gender equity, female literacy, education and even decision making is associated [33-34]. Several other studies have also pin point income of the household are directly associated to access to health care in India. Thus, low income will suggests poor health conditions and even biases because of gender [35-36]. Majority of the previous studies have revealed that in most tribal dominated population the likelihood of utilization for assistance during delivery were less for STs/SCs [37]. NFHS 3 have revealed that the utilization of any ANC is lowest among SC and ST women. For example, previous study conducted in Uttar Pradesh has also revealed that SC/ST is less likely to use or received ANC, Assistance during delivery [38]. The finding of this study have confirms that all the selected background characterises i.e. the predicators variables have still dominated in influencing factors in ante-natal care services utilization. Furthermore, this study suggests a fast tracking programmed and action-oriented interventions for marginalised or vulnerable population (STs/SCs especially) and also other religious minorities groups such as Muslim and others community.

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REFERENCES

[1]. Census of India, 2011 (Office of Registrar General of India, 2011), New Delhi.
[2]. Borooah V.K., Sabharwal N.S. and Thorat S. Gender and Caste based inequality in health outcomes in India. Indian Institute of Dalit Studies, Working Paper Series, 6, 2012, 5-16.
[3]. [3] Subramanian SV, Smith GD, Subramanyam M. Indigenous health and socioeconomic status in India, PLoS Medicine, 3(10), 2006, e421.
[4]. Kumar P, & Gupta A. Determinants of Inter and Intra caste Differences in Utilization of Maternal Health Care Services in India: Evidence from DLHS-3 Survey, International Research Journal of Social Sciences, 4 (1), 27-36.
[5]. Mukherjee S, Haddad S, Narayana D. Social class related inequalities in household health expenditure and economic burden: evidence from Kerala, south India, International Journal for Equity in Health. 10(1), 2011, 1.
[6]. Nayar KR. Social exclusion, caste & health: a review based on the social determinants framework, Indian Journal of Medical Research, 126 (4), 2007, 355.
[7]. Sanneving L, Trygg N, Saxena D, Mavalankar D, Thomsen S. Inequity in India: the case of maternal and reproductive health, Global health action, 6(1), 2013, 19145.
[8]. Macinko JA, Shi L, Starfield B, Wulu Jr JT. Income inequality and health: a critical review of the literature, Medical Care Research and Review, 60(4), 2003, 407-52.
[9]. Kakwani N, Wagstaff A, Van Doorslaer E. Socioeconomic inequalities in health: measurement, computation, and statistical inference, Journal of econometrics, 77(1), 1997, 87-103.
[10]. Van Doorslaer E, Wagstaff A, Bleichrodt H, Calonge S, Gerdtham UG, Gerfin M, Geurts J, Gross L, Häkkinen U, Leu RE, O'Donell O. Income-related inequalities in health: some international comparisons, Journal of health economics, 16(1), 1997, 93-112.
[11]. Humphries KH, Van Doorslaer E. Income-related health inequality in Canada, Social science & medicine, 50(5), 2000, 663-71.
[12]. Joe W, Mishra US, Navaneetham K. Health inequality in India: evidence from NFHS 3, Economic and Political Weekly, 2008, 41-7.
[13]. Dashora R. Status of tribal girl child, Social Change: Issues and Perspectives, 25(2-3), 1995, 207-16.
[14]. Sethuraman K, Lansdown R, Sullivan K. Women's empowerment and domestic violence: the role of sociocultural determinants in maternal and child undernutrition in tribal and rural communities in South India, Food and Nutrition Bulletin, 27(2), 2006, 128-43.
[15]. Jungari S. Crisis of open defecation in tribal dominated district of Gadchiroli in Maharashtra: Evidence from recent census 2011, Asian Academic Research Journal of Social Sciences and Humanities, 15 (1), 2013, 101-107.
[16]. Babu G, Ramachandra S, Garikipati U, Mahapatra T, Mahapatra S, Narayana S, Pant H. Maternal Health Correlates Of Neonatal Deaths In A Tribal Area In India, The Internet Journal of Epidemiology, 10(2), 2012.
[17]. Mohindra KS, Haddad S, Narayana D. Women's health in a rural community in Kerala, India: do caste and socioeconomic position matter?, Journal of Epidemiology & Community Health, 60(12), 2006, 1020-6.
[18]. Balgir RS. Tribal health problems, disease burden and ameliorative challenges in tribal communities with special emphasis on tribes of Orissa. In Proceedings of National Symposium on Tribal Health, Jabalpur, 2006, 161-76.
[19]. Roy TK, Kulkarni S, Vaidehi Y. Social inequalities in health and nutrition in selected states, Economic and Political Weekly, 2004, 677-83.
[20]. Radhakrishna R, Ravi C. Malnutrition in India: Trends and determinants, Economic and Political Weekly, 2004, 671-6.
[21]. Pandey A, Roy N, Sahu D, Acharya R. Maternal health care services: Observations from Chhattisgarh, Jharkhand and Uttaranchal, Economic and Political Weekly, 2004, 713-20.
[22]. Das RK, Dasgupta P. Child Health and Immunisation: A Macro-Perspective, Economic and Political Weekly, 2000, 645-55.
[23]. Kulkarni MN. Universal immunisation programme in India: issues of sustainability, Economic and Political Weekly, 1992, 1431-7.
[24]. Stephenson R, Tsui AO. Contextual influences on reproductive health service use in Uttar Pradesh, India, Studies in family planning, 33(4), 2002, 309-20.
[25]. Chatterjee CB, Sheoran G. Vulnerable groups in India. Mumbai, India: Centre for Enquiry into Health and Allied Themes, 2007.
[26]. Khanday ZA, Akram M. Health Status of Marginalized Groups in India, International Journal of Applied Sociology, 2(6), 2012, 60-70.
[27]. Agrawal PK, Agrawal S. To what extent are the indigenous women of Jharkhand, India living in disadvantageous conditions: findings from India's National Family Health Survey 1, Asian Ethnicity, 11(1), 2010, 61-80.
[28]. Laishram J, Mukhia S, Thounaojam UD, Devi HS, Panmei J. Knowledge and practice of ante-natal care in an urban area.
[29]. Sarita PT, Tuominen R. Use of health care services in two rural communities in Tanzania, Community Dentistry and Oral Epidemiology, 21(3), 1993, 133-5.
[30]. Sahoo J, Singh SV, Gupta VK, Garg S, Kishore J. Do socio-demographic factors still predict the choice of place of delivery: A cross-sectional study in rural North India, Journal of epidemiology and global health, 5(4), 2015, S27-34.
[31]. Ravi RP, Kulasekaran RA. Does Socio-demographic Factors Influence Women's Choice of Place of Delivery in Rural Areas of Tamilnadu State in India, American Journal of Public Health Research, 2(3), 2014, 75-80.
[32]. Jat TR, Ng N, San Sebastian M. Factors affecting the use of maternal health services in Madhya Pradesh state of India: a multilevel analysis, International journal for equity in health, 10(1), 2011, 59.

[33]. Sanneving L, Trygg N, Saxena D, Mavalankar D, Thomsen S. Inequity in India: the case of maternal and reproductive health, Global health action, 6(1), 2013, 19145.
[34]. Sen A. Population and gender equity, Journal of public health policy, 22(2), 2001, 169-74.
[35]. Sen G, Iyer A. Who gains, who loses and how: leveraging gender and class intersections to secure health entitlements, Social science & medicine, 74(11), 2012, 1802-11.
[36]. Iyer A, Sen G, George A. The dynamics of gender and class in access to health care: Evidence from rural Karnataka, India, International Journal of Health Services, 37(3), 2007, 537-54.
[37]. Hazarika I. Factors that determine the use of skilled care during delivery in India: implications for achievement of MDG-5 targets, Maternal and child health journal, 15(8), 2011, 1381-8.
[38]. Saroha E, Altarac M, Sibley LM. Caste and maternal health care service use among rural Hindu women in Maitha, Uttar Pradesh, India, Journal of midwifery & Women's Health, 53(5), 2008.

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