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A Comparative Study of Maternal and Child Health Indicators of Tribal and Non-Tribal Areas of Selected States in India

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ABSTRACT

The tribal populations in India continue to experience lack of infrastructure; development facilities and services, health challenges like malnutrition, child mortality and Malaria are disproportionately high in these areas. Health indicators of Schedule Tribes continue to fare lower than the general population due to many such challenges. This article attempts to compare the status of (selected) Maternal and Child Health (MCH) indicators of the tribal dominated areas and the non-tribal areas in the states of Rajasthan, Chhattisgarh, Orissa, Maharashtra and Jharkhand. This study was carried out utilizing the secondary data from public domains. Data on performance of 8 indicators, for approximately 155 districts of the 5 mentioned states was tabulated, which we have used to derive the average performances for scheduled and non-scheduled areas. The study used the MCH data from National Family Health Survey (NFHS)-5 conducted in 2019-2020 and HMIS data of the year 2020. The scheduled (tribal) areas show higher percentage of Infant Mortality Rates, Maternal Mortality Rates and Still Birth Rates compared to the non-scheduled (non-tribal) areas, whereas the proportions for Female Literacy, completion of 4 ANC checkups and Institutional Births remain almost similar between the scheduled and non-scheduled areas. The proportion of mothers who consumed iron-folic acid tablets for 180 days during pregnancy remained low in scheduled areas. Considerable differences were observed in the performance of scheduled and non-scheduled areas of the selected states, on different selected indicators.

Keywords: *Tribal Health, Indigenous health, Maternal and Child Health, Scheduled areas.*

INTRODUCTION

As per the Census 2011, 104 million tribal people reside in India, contributing 8.6% to the national population. There are 705 notified schedule tribes in India out of which 75 are recognized as Particularly Vulnerable Tribal Groups (PVTGs) spread across 18 states, characterized by declining or stagnant populations, low levels of literacy, pre-agricultural level of technology and are economically backward [(1)]. Bhils, Gonds, Koknasand Santhals are some of the largest tribal groups in India, with Mundas, Baigas, Madiyas, Thakars, Birhors, Korkus, Koli Dhars, kamarsand Korwas among others [(2)]. As mentioned by the National Commission for Scheduled Tribes, the tribes or tribals, as per the Article 342 have to be understood in terms of their historical background of backwardness. Primitiveness, geographical isolation, shyness and social, educational and economic backwardness distinguish them as Scheduled Tribe communities of our country that are different from the other communities. The scheduled tribe communities live in 15% of the geographical area [(3).] A significant share of India's tribal population continues to reside in areas that are remote, forest covered and difficult to access. The tribal populations continue to experience lack of infrastructure; development facilities and

services, health challenges like malnutrition, child mortality and Malaria are disproportionately high in these areas [(2).] Health indicators of Schedule Tribes continue to fare lower than the general population due to many such challenges.

According to the *Report of the Expert Committee on Tribal Health: Tribal Health in India*[(4)], released in 2018, performance of the tribal areas on maternal and child health indicators continues to remain below that of the non-tribal areas, expressing the need of special services exclusively for the tribal populations that face unique challenges with respect to access, affordability and availability. The report further mentions that 27% of tribal women still deliver at home and only 15% of women received full ANC checkups. The *Rapid Survey of Children* (2013-2014) reports the tribal population has the largest share of children born underweight. The report also underscores the fact that no specific data on tribal health has been maintained so far. A number of studies have brought to light the weak health conditions of the tribal people, however there is an evident dearth of literature that described the status of maternal and child health conditions in the tribal dominated districts of India. This article attempts to compare the status of (selected) Maternal and Child Health indicators (MCH) of the tribal dominated areas (scheduled areas of these states as per the 5th schedule of the constitution) and the non-tribal areas in the (selected) states of Rajasthan, Chhattisgarh, Orissa, Maharashtra and Jharkhand. In addition to comparing status of MCH indicators, the extent of implementation and utilization of initiatives for Maternal and Child Health under the National Health Mission in the selected states is also analyzed; and promotive measures to improve the Maternal and Child Health are recommended.

MATERIALS & METHODS

This study was carried out utilizing the secondary data from public domains. Data on performance of 8 indicators, for approximately 155 districts of the 5 mentioned states was tabulated, which have been used to derive the average performances for scheduled and non-scheduled areas as mentioned above. The states for the current study have been selected from the list of 5th schedule areas (under Article 244(1)), that is available on NITI Ayog website. The study used the MCH data from National Family Health Survey (NFHS)-5 conducted in 2019-2020 and Health Management Information System (HMIS) data of the year 2020. Five states were selected from the list of ten states mentioned in the scheduled areas list as per the 5th scheduled of the constitution.

NFHS 5 data was utilized for the indicators - percentage of women literate in the district; percentage of mothers who had at least 4 antenatal care visits; percentage of mothers who consumed Iron Folic acid tablets for 180 days when they were pregnant; percentage of institutional births; percentage of pregnant women who are aneamic; **HMIS** data was utilized for the indicators of –Maternal Mortality Rate (MMR) (Maternal deaths and total live births recorded in the year 2019 were used to calculate MMR of the districts using the total number of maternal deaths recorded); Infant Mortality Rate (IMR), the total number infant deaths recorded in the HMIS were used to calculate the IMR; Still Birth Rate , per 1000 births, the data available on HMIS on total still births and total number of births was used for calculating the still birth rate. IMR and Still birth rate was calculated for each district of the selected states separately.

The obtained data of IMR and Still birth for all the districts was categorized into two sections, the scheduled and non-scheduled districts, the average IMR and Still birth under scheduled areas/districts and non-scheduled districts was calculated for each state. The same method of categorizing the districts into scheduled and non-scheduled districts for each state was used for

tabulating and calculating average for the other indicators used in this study.

RESULT

Findings of this comparative study are discussed indicator-wise.

Comparison of Maternal and Child Health indicator 1: Percentage of mothers who consumed Iron folic acid for 180 days when they were pregnant.

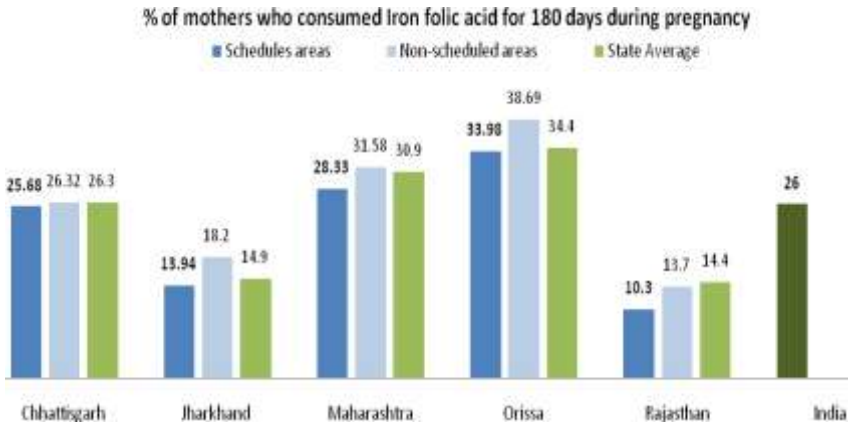

Figure 1: % of mothers who consumed Iron folic acid for 180 days during pregnancy; source of data - NFHS 5

In all the states, the scheduled areas (tribal areas) have less percentage of mothers who consumed Iron folic acid for 108 days during pregnancy, compared to the non-scheduled areas (non-tribal areas).

Comparison of Maternal and Child Health indicator number 2: Maternal Mortality Rate (per 100000 live births):

MMR in all the selected states, except Maharashtra is higher than the national average (Figure 2).

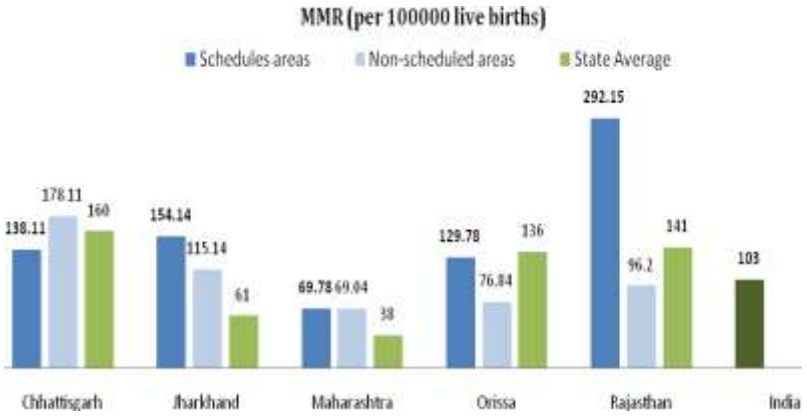

Figure 2 : MMR of scheduled and non-scheduled areas. (MMR of states obtained from NFHS 5; MMR of scheduled and non-scheduled areas obtained by calculating the data available in HMIS).

The scheduled areas in all the selected states have a higher MMR compared to the non-scheduled areas, with Chhattisgarh being an exception. The scheduled areas in Rajasthan show almost double the MMR compared to the state average, and up to three times higher than the non-scheduled counterparts.

Comparison of Maternal and Child Health indicator 3: Infant Mortality Rate (per 1000 live births)

In all the states, the scheduled areas have higher IMR than the non-scheduled areas. The IMR in the scheduled areas of Chhattisgarh is the highest among scheduled areas (figure 3).

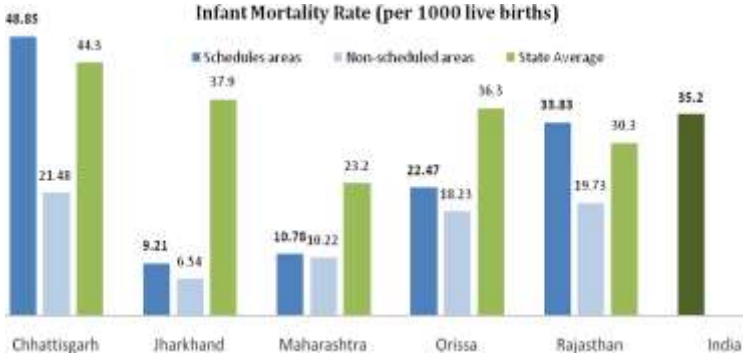

Figure 3: Infant Mortality Rate; data for State and National averages obtained from NFHS 5, the averages of scheduled and non-scheduled areas obtained from calculating values available in HMIS).

Comparison of Maternal and Child Health indicator 4: Still Birth Rate (per 1000 live births):

Figure 4: Still Birth Rate (per 1000 live births). Data obtained from calculating the values available in HMIS.

The scheduled areas of all the (selected) states show a still birth rate higher than the non-scheduled areas in their respective states. The scheduled areas of Orissa (25.19) and Rajasthan (23.56) show a still birth rate that is almost double to the still birth rate of the country (12.52).

Comparison of Maternal and Child Health indicator 5: Percentage of women (15–49-year-old) who are literate:

Literacy rate among women in the scheduled areas is lower than that of the non-scheduled areas in the states of Orissa, Rajasthan and Jharkhand.

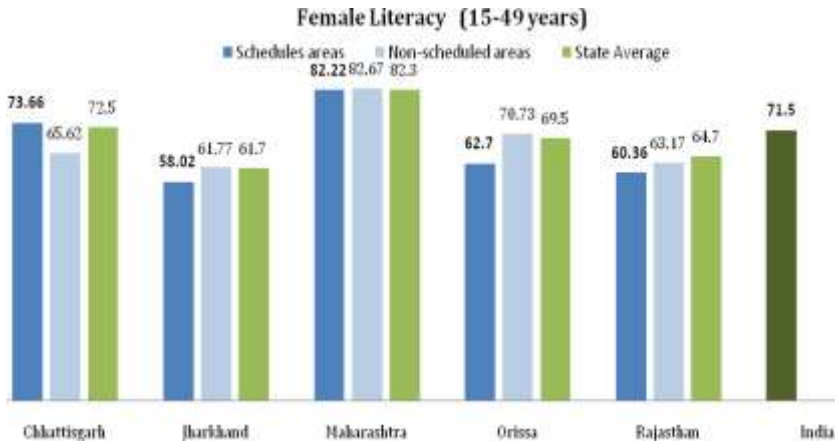

Figure 5: % of women who consume alcohol; data source - NFHS 5

There is little to no difference between the female literacy rates of scheduled and non-scheduled areas of Maharashtra and Chhattisgarh.

Comparison of Maternal and Child Health indicator 6: Percentage of Mothers who had at least 4 Ante-Natal Care (ANC) visits:

In Orissa, Maharashtra and Jharkhand, the scheduled areas have lower percentage of women who had at least 4 ANC visits compared to the non-scheduled, and are lesser than the state average. In Chhattisgarh and Rajasthan, the scheduled areas have a better performance compared to the non-scheduled areas (figure 6).

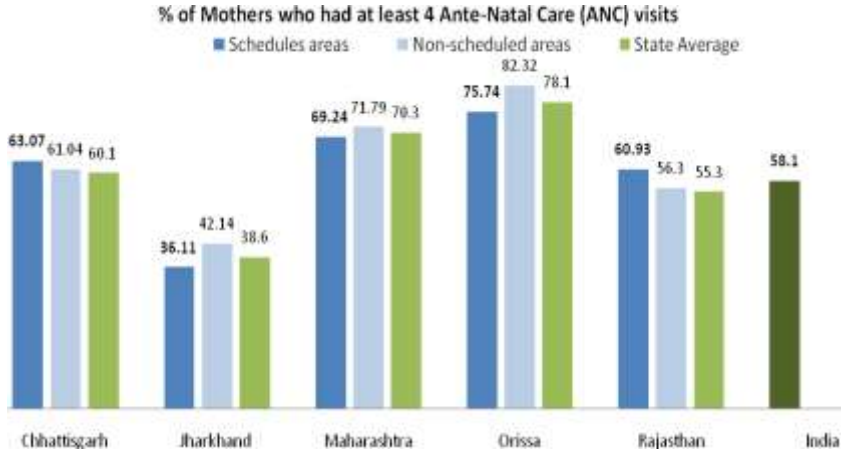

Figure 6: % of mothers who had at least 4 ANC visits; data source - NFHS 5

Comparison of Maternal and Child Health indicator 7: Percentage of Institutional Births:

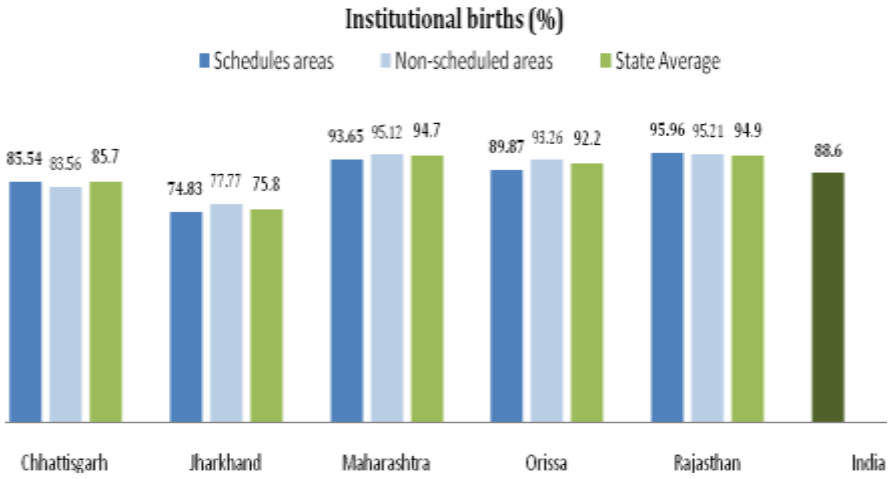

Figure 7: % of institutional births; Data source- NFHS 5.

The scheduled areas of Jharkhand, Maharashtra and Orissa have a lower percentage of institutional births compared to the non-scheduled areas. In Rajasthan Chhattisgarh, there is little to no difference in institutional births between the scheduled and non-scheduled areas.

Comparison of Maternal and Child Health indicator 8: Percentage of pregnant women (age 15-49 years) who are anemic (<11.0 g/dl):

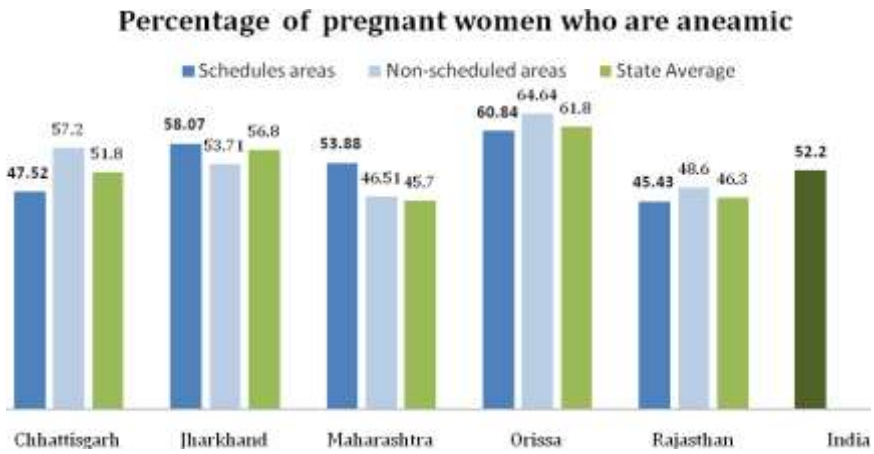

Figure 8: % of pregnant women who are anemic; Data source -NFHS 5

The scheduled areas of all the selected states, except Jharkhand and Maharashtra have lower percentage of pregnant women who are anemic. The scheduled areas of Rajasthan have the least percentage of pregnant women who are anemic with 45.435 followed by scheduled areas of Chhattisgarh with 47.52%.

DISCUSSION

Improving Maternal and Child Health remains a major public health challenge all across the globe, especially in the developing nations. Although the number of under-five deaths has halved during the past two decades, an unacceptably large numbers of children under five years continue to die, most due to preventable causes. Maternal health reflects the availability, access and utilization of health services within a state and nation. A large majority of maternal deaths can be prevented by adequate diet and supplementations, basic literacy and services during pregnancy and childbirth[(5)]. India's MMR dropped from 301 in 2001 to 103 in 2019-2020 (as per NFHS 5 report). However the aggregate of scheduled areas of all the selected states in the study, except Maharashtra have an MMR higher than the national average. The MMR in the tribal areas remains higher than the MMR in the non-scheduled areas in all states except Chhattisgarh, this reflects the need for maternal health care services in the tribal areas that include awareness and mobilizing, promotion of health care services, availability and access of the services.

Iron and Folic acid tablets are amongst the most effective means to prevent anemia in India[(6)], especially in adolescent and pregnant women, however the consumption of IFA tablets among the pregnant women in the scheduled (tribal) areas of the selected states remain lower than that in the respective non-scheduled areas, with the scheduled areas Rajasthan and Jharkhand having the lowest numbers. Female literacy is an important determinant of growth, development and health in a community[(7)]. Female literacy has also been proved to have a protective effect against still birth and infant mortality [(8)]. As per this study, the scheduled areas of all the selected states except Maharashtra and Chhattisgarh continue to under-perform compared to the non-scheduled areas in terms of female literacy.

Percentage of women who had at least four Ante-Natal Care (ANC) visits in the scheduled areas is almost comparable to the non-scheduled areas in their respective states, and are also higher than the national in most of the selected states (except

Jharkhand). Institutional deliveries are fairly comparable in the scheduled (tribal) and non-scheduled areas, however the proportion of women with ANC visits are lower compared to, and do not align with the comparatively high numbers of institutional deliveries. High number of institutional deliveries could be due to the monetary support and benefits provided to the mother through the conditional cash transfer scheme[9].

Among the scheduled areas of the selected states, Maharashtra has better indicator performance in almost all the indicators. The scheduled areas of Rajasthan, Chhattisgarh, Orissa and Jharkhand have concerning numbers with respect to IMR, MMR and stillbirth rates. Among the key challenges to providing health care services to the tribal areas remains low health-literacy and awareness, along with environmental challenges. It is important to acknowledge the role of extensive behavior change communication (BCC) and system strengthening along with improved infrastructure in improving the utilization and access of maternal and child health care [10].

CONCLUSION

Considerable differences were observed in the performance of scheduled and non-scheduled areas of the selected states, on different selected indicators. The scheduled areas are observed to be under-performing compared to the non-scheduled areas, in most of the indicators. As per the results of the study, the scheduled areas of Maharashtra performed better compared to the scheduled areas of other states, and are more or less equal to the performance of the non-scheduled areas of its own state.

Tribal health is most often considered as a part of rural health; however tribal health has unique challenges of its own, very different from that of the rural areas. To address the fact that there are no databases available for recording tribal health data, establishing exclusive surveillance bodies for the performance of Maternal and Child Health Indicators in the scheduled areas, that specifically target the scheduled tribes and the Particularly Vulnerable Tribal Groups, is a crucial step that is required in order to design targeted interventions. Increasing support to the existing organizations (both government and non-governmental) and establishing meaningful partnerships is important in order to broaden the scope, range, accessibility and availability of the services to improve maternal and child health outcomes.

Declaration by Authors

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