Original Research Article

**Landscaping of non-governmental organizations working to improve reproductive, maternal, neonatal, child health and nutrition services in tribal India: a scoping study**

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**ABSTRACT**

**Background:** Nearly 104 million (9%) of the total Indian population live in tribal areas. For the tribal population, in the recent past, many organizations initiated health programs. However, there is little understanding of the work they do in the health and nutrition area. In this scoping study, the study aimed to review NGO based models of healthcare delivery with an emphasis on reproductive, maternal, neonatal and child health, and nutrition (RMNCHN) related interventions in tribal areas of India.

**Methods:** A list of NGOs, in districts having 35% tribal population, was made. NGOs with functional websites, RMNCHN related interventions and registered with the Government of India online portal “NGO darpan” were selected using multistage search criteria. NGO types, their approaches for RMNCHN and intervention models were studied.

**Results:** A total of 1503 NGOs were working on tribal health in 115 districts having >35% tribal population. Out of these, only 103 NGOs had an active health intervention and provided information freely in open public access. Only 36 NGOs had a well-structured program in reproductive, maternal, child health and nutrition area. A compendium of good practices by 12 NGOs working in RMNCHN was prepared.

**Conclusions:** A limited number of NGOs in tribal India works on reproductive, maternal health, neonatal and child health, and nutrition issues. The health-related interventions are primarily at a small scale, community-based, lacks continuum of care and are present in districts with a lesser tribal population.

**Keywords:** Health service delivery, Landscape study, Non-governmental organizations, Reproductive maternal neonatal and child health nutrition, Tribal health

**INTRODUCTION**

India is home to nearly 1.3 billion people, of which 8.6% are tribal. Disadvantaged across history, the tribal community continues to bear a disproportionate burden of poverty, ill-health, illiteracy, and malnutrition. According to the expert committee report on tribal health, a majority (90%) of the tribal population reside in rural areas, over two-third (67%) work in primary sector, nearly half (40.6%) live under poverty and are illiterate (41%) and few (10.7%) have access to clean drinking water compared to 20.5%, 31%, and 28.5% among non-scheduled tribe (ST) population respectively. All these factors not only affect tribal health directly but also hinder their ability to identify illnesses, adopt healthy practices and seek medical care. The life expectancy (at birth) for tribal population in India is 63.9 years compared to 67 years for general population. Literature reports high incidence of communicable (tuberculosis, leprosy, measles), vector-borne (malaria, filariasis),
waterborne (diabetes and dysentery, jaundice), skin (fungal infections, conjunctivitis, scabies) and sexually transmitted diseases (STDs) among the tribal population.4,5

The tribal women have lesser access to Antenatal (ANC) and postnatal check-up (PNC) compared to women in other categories and account for a disproportionately large proportion of maternal deaths in some states.6 The under-five and the infant mortality rate (per 1000 live births) among the tribal population are 57.2 and 44.4 compared to 38.5 and 32.1 among others.7 The prevalence of underweight among tribal children is 13% higher compared to the children that fall under other category. Consequently, the reduction in child malnutrition among tribal children is slower than those from other social categories.8,9

Despite the disproportionately high burden of diseases, most tribal areas lack required number of health facilities and human resources in health.4,10 There is a 27%, 40% and 31% shortfall in the required number of sub-centers (SC), primary health center (PHC) and community health centers (CHC) in states where tribal population is more than 10%,2,10 49% of the posts for male health workers (MHW), 33% of posts for allopathic doctors in PHC and 84% posts for specialist doctors in CHC are vacant in health facilities in tribal areas. 10

The efforts at reversing these trends are unorganized, insufficient, and have had little impact on the iniquitous tribal health scenario.11,12 The Government has various programs like the Janani Shishu Suraksha Karyakaram (JSSK), Janani Suraksha Yojana (JSK), Rashtriya Bal Shishu Karyakaram (RBSK), etc. focused at improving maternal and child health outcomes, but, none of them are exclusive or unique for the tribal population.2 The for-profit private sector, on the other hand, is almost absent from the scene and the not for profit organizations have efforts scattered across different regions and domains.7,13 A landscape view of the RMNCHN interventions, their distribution, and the model of service delivery for tribal people is not available in India.

Considering the limited resources and overwhelming need, efforts aimed at improving tribal health would require a strategic approach. This study, therefore, fulfills an important literature gap to provide an overview of tribal Non-Governmental Organizations (NGOs) working in the reproductive, maternal health, neonatal and child health, and nutrition (RMNCHN) area. Specifically, we focus on NGO's distribution, their service models, types of interventions, methods of service delivery, funding sources and impact. This understanding could potentially aid in developing an understanding of ground realities and taking a strategic approach while developing future health programs for the tribal population.

Objectives

Objectives were to identify tribal NGOs working in health specifically RMNCHN, their distribution, focus areas and the type of interventions they use in India and to understand the tribal NGOs organizational structure, the scale of operations, mode and service delivery model, and outcomes or impact of working in tribal areas.

METHODS

Study design and search method

The study is a scoping review that used a multistage search criterion to identify organizations working on tribal health. The data search and data collection was undertaken from 4th April 2019 to July 2019. Census 2011, data was used to identify states and union territories having more than 9% tribal population in proportion to the state's total population. Eighteen states and Union Territories (UT) were identified. Using the same data source (Census 2011), we identified 115 districts having a tribal population of more than 35% in proportion to the district’s population in these 18 states and UTs.

Selection criteria for selection of NGOs

Study used "NGO Darpan", (https://ngodarpan.gov.in), a National Institute for Transformation of India’s web portal, to search NGOs working on reproductive, maternal health, child health and nutrition areas in the selected tribal districts. Key search terms "health and family welfare, nutrition, tribal child health, tribal affairs, and HIV" were used. Additionally, annual reports and websites of the select list of tribal NGOs were explored to understand the scope, type, and kind of interventions, their mode and service delivery model, and the impact of RMNCHN related work.

This search threw up 1503 organizations. Out of the 1503 organizations, 296 had a functional website, 42 out of which did not give enough details to serve any of the objectives of this study and 151 did not show any active intervention on health. The remaining 103 organizations were listed and initial analysis of the nature of NGOs, their distribution, focus areas and type of interventions were done. Further, the list of 103 organizations was narrowed down to a list of 36 organizations that worked on maternal health, reproductive health, child health, and nutrition.

A total of 36 organizations were identified working on RMNCHN areas. The website and the annual reports of these organizations were reviewed and preliminary analysis was done to identify their distribution, nature, focus areas and types of intervention. The organizations that described “what” their intervention area were, and “how” they undertook the intervention were included to form a list of 8 organizations. Further through the Delfi technique, 4 more organizations working on tribal health across different states of India were added. This made the final list of 12 organizations that were analyzed. Figure 1 depicts the selection and search methodology used to select NGOs.
The objectives of the study was further broken into subcomponents such as nature of NGO, geographic distribution, focus areas, type of intervention, financing, model of service delivery and impact. Organizational data were entered in excel under these subcomponents and analyzed. Frequency and percentages were reported.

RESULTS

The results section is divided into three parts, (I) analysis of the 103 organizations that have an active website and interventions in tribal health, (II) analysis of 36 NGOs that satisfy the criteria of part one and are working in RMNCHN and (III) analyses of the models, interventions of 12 NGOs that describe "what" and "how" of their work on RMNCHN.

Details of 103 NGOs working for tribal health

Nature of NGOs

Of all the 103 organizations, 77 (75%) had health as one of the many different socio-developmental work domains it had interventions in. Only 25 (24.3%) out of the 103 NGOs worked exclusively on health. Other most common work domains were livelihood 40 (38%), environment 42 (40%), women's issues 48 (47%) and education 61 (59%).

Demographic distribution

Most of the NGOs 42 (40%) were present in districts with a tribal population of 36%-49%. In districts with a tribal population of 50% to 75% around 36 (35.3%) of organizations were working and only 25 (24.5%) organizations were present in districts with a tribal population of 75% and above.

Focus areas within health

Seventy-nine (77%) out of the 103-organisation worked on multiple health needs and the most common ones were maternal and child health (n=54), nutrition (n=22), Non-Communicable Diseases (n=9), and mental illness (n=3). Only 21 out of the 103 organizations worked exclusively on one specific health issue. Seven out of these 21 organizations worked on disability, four on minor illnesses and the remaining ten worked on one of the following intervention areas - RMNCHN (2), Cancer (1), Water Sanitation and Hygiene (WASH) (3), Non-Communicable Diseases (1), Ophthalmic care (2) and Ayurveda (1).

Type of interventions

Nearly two-thirds 69 (67%) of the NGOs worked exclusively through community-based interventions. Eighteen (17.5%) organizations provided only facility-based secondary level care. A few NGOs-6 (5.8%) were managing government health facilities through a public-private partnership and a tenth 11 (10.6%) NGOs had a mixture of both community and facility-based interventions. Figure 2 gives types of interventions used by the 103 selected NGOs working on health.

![Figure 2: Types of interventions used by the 103 selected NGOs working on health.](image-url)
Demographic distribution

A majority of the NGOs 24 (66.67%) were providing their services in the districts with less than 50% of the tribal population. Only 9 (25%) were working in districts having 75% or more tribal population. Figure 3 gives a schematic presentation of the District tribal population-wise distribution of the 36 NGOs working on RMNCHN.

![Figure 3: District tribal population-wise distribution of the 36 NGO's working on RMNCHN.](image)

Focus area within health

Most of the NGOs 31 (86.11%) were working in more than one intervention area. These areas were maternal, reproductive and child health 25 (69.44%), minor illnesses 15 (41.67%), Malaria 12 (33.33%), nutrition 9 (25%) and disability 4 (11.11%). Only 4 (11.11%) out of the 36 organizations worked exclusively in one intervention area, namely, disability-1 (5.55%), NCDs-1 (2.77%) and eye care-1 (2.77%).

Type of intervention

Only 11 (30.55%) NGOs were having both community-based and facility-based interventions. Around 30.55% (n=11) were working through only facility-based interventions. Most of the NGOs (38.88%, n=14) were functioning with only community-based interventions for RMNCHN care.

Description of models and interventions of 12 NGOs focusing on RMNCHN care in tribal areas

The list of 36 NGOs was further narrowed down to 8 NGOs, working in the RMNCHN area. All these NGOs gave details of the kind and types of services offered, level, funders, impact, and human resources. This list was run through a Delphi panel of experts and four more organizations, with pioneering work in tribal health were added, making the final list of NGOs to 12.

Nature of NGOs

All these 12 NGOs worked on providing RMNCHN related care and their websites and annual reports gave enough details to answer "what it is doing” and "how it is doing so”.

Demographic distribution

None of the NGOs were working in districts having a tribal population of 75% and above. Most of the NGOs 9 (75%) were working in districts with less than 50% tribal population. Only two NGOs (16.67%) were present in districts with a tribal population in between 50-75%.

Geographic scope

The geographic scope of the 12 NGOs ranged from 1-8 blocks in a district to an entire state. Half of the NGOs 6 (50%) were focussed in one or more blocks, 5 (42%) worked in one or more districts, and only 1 (8%) worked at the state level.

Type of interventions

Half of the NGOs provided both facility-based curative and community-based preventive and promotive care. The remaining 6 (50%) NGOs had only community-based interventions, and none had stand-alone facility-based interventions.

Work focus within RMNCHN

All the 12 NGOs had multiple focus areas under RMNCHN. A few of the focus areas are listed in Figure 4.

![Figure 4: Frequency of the final 12 NGOs as per the type of interventions used.](image)

Intervention areas within RMNCHN

Most of the NGO’s 9 (75%) were working on family planning and reproductive health issues among tribal men and women. Only 4 (33.33%) had interventions on both Antenatal Care (ANC) and Postnatal Care (PNC), 2 (16.67%) on intrapartum and ANC and 6 (50%) NGOs worked on all interventions related to ANC, PNC, and
intrapartum care. Figure 5 gives the focus areas of the final 12 NGOs within RMNCHN.

![Focus areas of the final 12 NGOs within RMNCHN.](image)

**Figure 5: Focus areas of the final 12 NGOs within RMNCHN.**

**Intervention areas within the nutrition**

Only 3 (33.33%) out of 9 NGOs with an intervention on nutrition worked on the supply side (nutrition supplement growth monitoring etc.), 2 (22.22%) on demand-side (creating awareness), 3 (33.33%) on both and 1 (1.01%) on monitoring of Anganwadi and other government programs.

**Intervention areas within family planning**

Nearly three-fourth 9 (75%) out of 12 NGOs had an intervention on family planning, 3 (25%) out of which worked only on the supply side by providing family planning-related service (contraceptives, IUD, etc), while 1 (8.33%) worked on demand-side by created awareness among the population and 5 (41.67%) on both demand and supply side. Besides this, they also had interventions on other areas like minor illnesses, adolescent health, NCD and geriatric health.

**Types of health interventions used**

All NGOs but one used more than one health intervention to provide RMNCHN related care. Altogether ten different interventions were used in different combinations by the twelve NGOs. Human resource training was the most common and was used by eight organizations, research and community engagement through community health worker by seven, health service provisioning by six, health camps and use of mobile medical units to deliver care by five, community meetings by four, referral clinics by three, maternity waiting homes by two and health financing interventions was used by one. Table 1 gives the frequency of types of interventions used by different NGOs working on RMNCHN.

### Table 1: Frequency of types of interventions used by different NGOs working on RMNCHN.

| Mode of service delivery      | No of NGOs | Percentage |
|------------------------------|------------|------------|
| Human resource training      | 8          | 66.67      |
| Research                     | 7          | 58.33      |
| Engagement of community health worker | 7          | 58.33      |
| Health care facility provision | 6          | 50         |
| Community health camps       | 5          | 41.67      |
| Mobile Medical Units         | 5          | 41.67      |
| Community meetings           | 4          | 33.33      |
| Referral clinics             | 3          | 25         |
| Maternity waiting home       | 2          | 16.67      |
| Health financing             | 1          | 8.33       |

**Financing**

Only 8 (66.67%) out of 12 NGOs gave details of their funding sources. These NGOs received funding from either the Government, or Corporate Social Responsibility (CSR), or from an international source, or a combination of these. Two organizations received funding from all the three sources (Government, CSR, international source), three from a combination of CSRs and international source, one from Government alone, CSR alone and one from a combination of government and international source.

**Impact**

Most of the NGOs 7 (58.33%) do not give any information on the impact of their interventions. Even the organizations that do, provide fragmented information, the impact figures are given only in a few selected areas without giving the details. Around 5 (46.67%) NGOs reported the impact of their work over the years on Infant mortality reduction, ANC coverage, and Immunization coverage.

**Description of the models of tribal healthcare delivery by NGOs**

Half 6 (50%) of the organizations used a hub and spoke model of health care delivery. Wherein a health care facility providing secondary level care served as a hub and the activities at the community level through satellite clinics, mobile health units, and community-level workers served as the spokes. The other half used only community-based interventions that primarily focused on preventive and promotive aspects of health. These organizations used a combination of service delivery methods like community health workers, research, medical and camps to create awareness, build capacity, screen diseases, generate evidence and build capacities of the community and health workers.
Study could not find structured government programs specifically for the tribal population identified through Google search or on the websites of the Ministry of Health and Family welfare and the ministry of tribal affairs. The existing programs were through PPPs or integrated into the national health programs.

**DISCUSSION**

In this study, it was found that most of the NGOs work in moderately populated tribal districts. There are not any exclusive and organized government model for tribal health care. Most of the government work is through the extensions of already existing national health programs and PPP with the not for profit sector. This was also in concurrence with the expert committee report on tribal health report. The findings of this study also indicated that much of the work done by the NGOs was scattered and disorganized with many organizations not having even a functional website. A large portion of the work on tribal health was funded by foreign agencies, indicating that tribal health has been ignored for long domestically.

Present study showed that NGOs have a preference to work in districts with a lesser proportion of the tribal population. This is evident by the presence of an exceedingly higher number of NGOs in the district with a lesser tribal population. This is worrisome as it suggests that the inverse care law stands true even here, wherein the people who are the most marginalized and require the highest degree of care seem to have the least likelihood of receiving it. Other studies have reported similar results. For most NGOs, health is one of the focus areas among many others, and thereby, competes for limited available resources. In such scenarios, it is the biases within the decision makers that determines what gets attention and what does not. Furthermore, the scale of the work of selected organizations was limited. This limited scale might be a result of the trade-off between increasing scale and adapting to maintain local values, local relevance, quality and sustainability that is known to occur while planning community-based interventions. Most of the organizations had only community-based interventions that were fragmented and without any curative component. In certain settings, healthcare is synonymous with hospitals, access to doctors and drugs. In such cases, the acceptance of a program that is exclusively community-based, without arrangement to ensure the continuum of care and with only health promotion raise concerns. The Tribal Health Report (2018) highlights the inadequate human resource and health infrastructure in tribal areas. In the absence of quality secondary level curative care, any work restricting itself to only ANC and PNC care would have only a limited effect. The wide use of such interventions could be because they are easier to deploy, light on resources and effective in a population base that is primarily uneducated. NCDs is another emerging area of intervention in tribal areas, with the increasing burden of NCDs in tribal areas such interventions are highly relevant. However, despite the increasing burden of Mental health-related illnesses, only 3 (2.9%) organizations work on mental health. This is despite different studies pointing to the emerging triple burden of diseases (communicable, non-communicable and mental illness) among the tribal population.

Most organizations did not have an inbuilt system to report the outcomes and impact of their interventions in the public domain (website or annual reports). Even among the final list of 12 organizations, this practise was inconsistent. In the absence of a systematic way of program-based impact/outcome reporting, it would be challenging to ascertain best practices and the exchange of the same. The findings of our study indicated that tribal health has remained a low priority area with scattered efforts over these years.

There is limited published literature on tribal healthcare delivery or models, which posed a challenge in the review process. It is possible that some good organizations, working on tribal health, were missed because of our inclusion criteria. Besides, much of the information was sourced from the annual reports and the websites which may have resulted in self-selection bias to some extent.

**CONCLUSION**

The study showed that tribal health, in the Indian context, remains a neglected topic and needs urgent attention. The study highlights the need for greater commitment and coordination between NGOs, civil societies, academia and policymakers for exchange of best practices to ensure an evidence-based continuum of care in addressing the RMNCHN needs of the tribal community.

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