

Functionality of Tribal Health Care Centres of Himachal Pradesh: An Empirical Study

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Abstract

An effective regulatory system is a fundamental prerequisite for attracting and sustaining investment in Maternal and Child Health (MCH) services. This study aimed to assess the functionality of tribal health care centres of Himachal Pradesh with respect to Indian Public Health Standard. A quantitative cross sectional design was adopted. Data was collected from tribal Primary Health Centres and Sub-Centres of district Sirmour using modified observational checklist related to infrastructure, manpower and MCH services for monitoring Sub-centre and PHC by external mechanism given under Indian Public Health Standards. Data was analysed using SPSS Version 21. The result revealed that there was shortage of manpower and infrastructure facilities as per Indian Public Health Standards in selected health care centres for adequate distribution of MCH services. It is concluded that there is an urgent need to take State Governmental efforts for effective implementation of MCH services in tribal areas.

Key words: Functionality, Health Care Centres, MCH services, Tribal areas

Tribal areas in India face significant healthcare challenges due to inadequate facilities, poverty, and poor living conditions. The government's healthcare delivery system plays a crucial role in addressing these issues (Suryakantha, 2013). Primary healthcare is a cost-effective approach to achieving universal access, but many people still lack essential health services (WHO, 2019).

The Government of India has adopted various policies (National Health Policy, 2017, National Population Policy, 2001) and programmes which are guided by tenets of equity, universal care, entitlement and accountability to focus on regulatory framework and organisational structure for MCH services. Various programmes related to MCH services were launched. These include CSSM (1992), RCH-I (1997), Vandemataram scheme (2004), RCH-II (2005), National Rural Health Mission (2005), Janani Suraksha Yojana (2005), RMNCH+A Strategy (2013), Janani Shishu Suraksha Karyakaram (2011), Pradhan Mantri Surakshit Matritva Abhiyan (2016) etc. in order to reduce maternal and child mortality rate (Park, 2020).

There are various newer interventions such as MCH Wings, Maternal Death Surveillance and Response, Mother and Child Tracking System and Family Planning programme, which are dealing

with population stabilisation, and promoting reproduction health and reducing maternal, infant & child mortality and morbidity (Ministry of Health & Family Welfare, 2020).

The myriad challenges confronted by tribal women and children are inextricably intertwined with the remote localisation of tribal villages, the pervasive poverty and neglect, inadequate nutritional intake, and the exhausting double burden of domestic and occupational responsibilities, which collectively perpetuate a cycle of disadvantage and marginalisation (Madankar et al, 2024). Tribal women and children face unique challenges, including remote village locations, poverty and neglect, limited access to modern healthcare, inadequate nutrition, double burden of domestic and occupational responsibilities. These factors perpetuate a cycle of disadvantage and marginalisation (Manivannan, 2020).

There is a dire need to fulfil the shortage of human resources in health facilities and increase health facilities in unserved and underserved areas of the country which need more focused plans for maternal and child health.

Need of the Study

India's maternal health policy aligns with international developments, and the government has established a regulatory framework to monitor and regulate MCH services. India is the most populous country in the world and tribal

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people constitute 8.6 percent of the country's total population (Ministry of Tribal Affairs, 2024).

Despite the decline in Infant Mortality Rate (IMR) in previous years (one in every 28 infants) at the national level (SRS Bulletin, 2020). India also has one of the highest global infant mortality ratios standing at 35.2 deaths per 1000 live births. In 2020, India recorded the second highest number of maternal deaths, with approximately 24,000 fatalities. Tribal communities in India bear a significant burden, as they account for over 50 percent of all maternal infant deaths in the country (Ministry of Tribal Affairs, 2024). According to the District Level Household Survey (2012-13), in Himachal Pradesh women belonging to Scheduled Castes (1.2%), Scheduled Tribe (1.2%), and other castes (1.7%) tend to have a higher rate of spontaneous abortion than the state average (Ministry of Health & Family Welfare). Health care facilities are lowest in district Sirmour (Dadhwal & Bhutani, 2017), which has 5 hospitals, 3 CHCs, 36 PHCs, and 145 Sub-Centres. There is low availability of health care services in Sirmour. The higher IMR and maternal mortality rate (MMR) observed in tribal populations can be related to incongruity in social determinants (education, adequate and trained healthcare workforce, access to care, and health financing) (Ministry of Health & Family Welfare, 2011). There was also underutilisation of MCH services in hilly regions, low level of antenatal care (only 10%) and institutional delivery (18%) among tribal women (Kumar et al, 2020). Vaccination rates among tribal children in tribal areas were found low (55.8%), whereas the national average stood at 62.0 percent.

To address these issues, districts with higher marginalised populations require special attention to improve MCH service utilisation (Mustafa & Shekhar, 2021). Primary Health Centres face criticism for ineffective healthcare delivery, inadequate staffing and drug supplies and need for improved manpower and infrastructure to deliver effective primary care services (Kumar & Reshmi, 2022). Because nearly 70 percent of Indian population resides in rural areas, there is a need to improve both the manpower and infrastructure in the PHCs to deliver effective primary care services (Narapureddy et al, 2013). This study provides an assessment regarding the comprehensive functionality in terms of infrastructure, manpower and services of tribal health care centres of Himachal Pradesh, India to bring the

actual situation and the IPHS norms of PHCs and Sub-Centres of tribal areas in congruity and to recommend design modifications for further scale-up.

Review of Literature

Kataria & Kaul (2023) conducted a cross sectional study to assess available health services at subcentres as per Indian public health standards guidelines (checklist) in a district of Jammu & Kashmir, India. Majority (58.8%) of the subcentres were catering a population in the range of 1000–3000. Ante-natal and child care related services were available in all subcentres. Intra-natal services were available in only two subcentres.

Sriram (2018) assessed availability of infrastructure and manpower for primary health centres in a district in Andhra Pradesh, India. Randomly selected samples of 15 PHCs were studied using structured and pre-tested performance standard questionnaire and compared with IPHS. Many deficiencies were identified in infrastructure and manpower in the PHCs studied. Some of the important drugs were available in less than 50 percent of the PHCs. Labour rooms existed in only 20 percent of the PHCs with a Standard Surgical Set for episiotomies in accordance with IPHS.

Objectives

The purpose of the study was to assess the functionality of tribal health care centres of Himachal Pradesh, India especially related to maternal and childcare services.

Methodology

A comprehensive quantitative cross-sectional study was undertaken in 2019 to evaluate the existing infrastructure, manpower, and healthcare services (especially MCH services) provided by government health centres in the tribal regions of district Sirmour, Himachal Pradesh, benchmarked against the stringent Indian Public Health Standards. The investigation focused on the Nahan and Paonta Sahib blocks, which accommodate majority of the tribal population, as reported in the District Level Household Survey (DLHS-4). So this district was selected purposely.

Total enumeration technique was used that included all seven Sub-centres (5 Sub-Centres under Nahan block and 2 Sub-Centres under Paonta Sahib Block), in addition to two PHCs from each block, thereby encompassing all Sub-Centres and PHCs within the two tribal blocks of district Sirmour.

Primary data was collected through structured observation with the help of facility-based checklist. Data collection tool was modified observational checklist for monitoring by External Mechanism as per of Indian Public Health Standard pertaining to infrastructure, manpower, and Maternal and Child Health services, for optimal functioning and delivery of MCH services at the health center level.

The modified observational checklist has three parts for monitoring of PHCs and sub-centres.

Part I: Questions related to availability of staff

Part II: Questions related to availability of infrastructure

Part III: Questions related to availability of services especially MCH services

Reliability of tool was checked with Cronbach alpha (value-78) and found reliable. Validity of tool was taken from various experts in fields of Community Medicine and Community Health Nursing. Secondary data was collated from a plethora of sources, including extant literature, books, policies, records, reports, online databases, websites, journals, and IPHS standards.

Ethical considerations were scrupulously observed during data collection. Formal permission was taken from Chief Medical Officer, Nahan, Distt Sirmaur. The quantitative data thus collected was subsequently analysed using SPSS Version 21.

Results

Data Related to Sub-Centres

Availability of the Staff in the Sub-Centre:

7 Sub-Centres had a female health worker, but only 2 had a male health worker. There was a shortage of manpower, including Safai workers and peons as per Indian Public Health Standards for the provision of sufficient services (Table 1).

Table 1: Manpower of selected sub-centres (N=7)

Staff	Essential (n)	Existing n (100%)	Deficient n (%)
ANM/Health Worker (Female)	1	7 (100%)	00
Health Worker (Male)	1	2 (28.5%)	05 (71.5%)
Safai-Karamchari*	1 (Part-time)	1 (14.2%)	06 (85.8%)

*To be outsourced. N=Number of Sub-Centres (Source: Indian Public Health Standards, Sub-Centre, 2012)

Availability of infrastructure at sub-centre:

Only 4 sub-centres had a designated government building, while others operated from Panchayat Ghar or rented rooms. Electricity was available in all sub-centres, but water supply was irregular in 2 (28.5%). Instrument sterilisers and health examination tables were not functional in any sub-centre. Weighing machines were available in all (100%) sub-centres. Waiting areas for patients were inadequate (Fig 1).

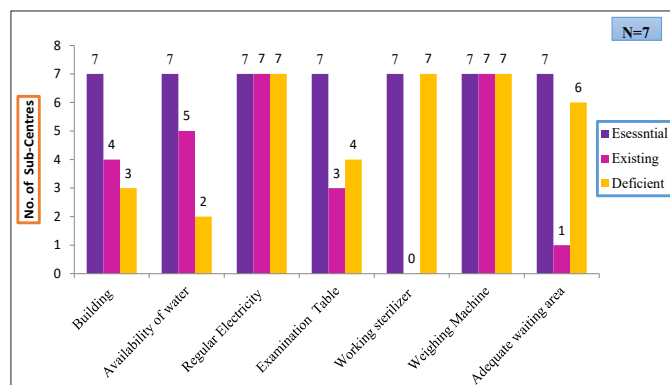


Fig 1: Availability of infrastructure in tribal sub-centres.

Availability of health care services at the sub-centre (SCs):

Health care services includes all preventive, promotive and curative components as per IPHS performa especially related to mother and children. Visiting hours for healthcare centres were not fixed, and villagers were unaware of doctor's visit timings. Antenatal care, immunisation, and treatment for diarrhoea and minor illnesses were available (100%). Referral facilities for complicated pregnancy/delivery cases were available (100%). Contraceptive services were available, but privacy facilities for Cu-T insertion were insufficient. Cold chain system for vaccine storage and transportation was lacking. ANM/ASHA (Health care personnel) used to accompany the woman in labour to the referred care facility.

In all 7 (100%) sub-centres, there was adequate availability of contraceptive services such as oral contraceptive pills or condoms but insufficient privacy facilities for Cu-T insertion at sub-centre level, which was responsible for the under-utilisation of family planning methods.

Quantitative data related to primary health centres:

Both PHCs of tribal areas were having adequate number (100%) of medical officers, staff nurses, pharmacist, HA male, accountant-cum-DEO, sanitary worker except one PHC had no HA Female/LHV and multi-skilled group worker D although in one such staff was available. Cold

Table 2: Modified check list for monitoring of sub-centre by external mechanism as per IPHS (N=7)

Availability of health care services	Existing n (%)	Deficient n (%)
3.1 Fixed timing for visit	0 (0%)	7 (100%)
3.2 Awareness among residents of the village regarding doctor visit	4 (57.2)	3 (42.8)
3.3 Provision antenatal care (Inj TT, IFA tablets, weight and BP check-up)	7 (100%)	0 (0%)
3.4 Availability of Facility for referral of complicated cases of pregnancy/delivery for 24 hours	7 (100%)	0 (0%)
3.5 ANM/ASHA accompany the woman in labour to the referred care	7 (100%)	0 (0%)
3.6 Adequate immunization services	7 (100%)	0 (0%)
3.7 Availability treatment of diarrhea and dehydration	7 (100%)	0 (0%)
3.8 Availability of minor illness treatment	7 (100%)	0 (0%)
3.9 Availability of facility for taking peripheral blood smear in case of fever	7 (100%)	0 (0%)
3.10 Provision of contraceptive services like insertion of Copper-T, distributing Oral contraceptive pills or condoms	7 (100%) (*No Cu-T)	0 (0%) (No Cu-T)

*No Cu-T insertion

chain equipment, suction apparatus, wheel chairs, and examination tables were available. OT facilities were limited due to low operation cases (Table 2).

There was regular availability of medicines, anti-snake venom, anti-rabies vaccine, malaria, drugs for tuberculosis, MDT blister packs at PHC level. All medicines were given free of cost in the PHC. Treatment for gynaecological disorders and primary management of wounds, fractures, and poisoning cases were available. Both PHCs organised antenatal clinics regularly. Facilities for normal delivery, tubectomy, and vasectomy were inadequate. Immunisation services were provided on fixed days, but family planning services did not have a fixed schedule. There was proper management of children suffering from diarrhoea with severe dehydration done at the PHC level. There was the availability of blood tests, malaria parasite, sputum, and urine examination to identify various health conditions. There were instances where patients from a particular social background had faced derogatory behaviour. Patient transportation facilities were available.

Discussion

This study assessed the functionality of tribal health care centres of Himachal Pradesh, India especially related to MCH services. Both the PHCs boasted of adequate infrastructure and manpower resources. The assessment revealed two key areas of concern: inadequate management of gynaecological conditions which were not being appropriately addressed; and secondly the discriminatory

behaviour towards marginalised social groups, highlighting a need for urgent remediation to ensure equitable care. Similar findings were found in study in rural areas by George (2015).

The findings related to sub-centre data revealed that the staffing levels at the sub-centre level were found to be inadequate, falling short of the benchmarks set by Indian Public Health Standards. Similar study conducted in Andhra Pradesh revealed that sub-centres lack the manpower and vital infrastructure necessary to function and deliver services effectively to the rural population (Narapureddy et al, 2013).

A significant proportion of sub-centres (n=4, 57.1%) possess dedicated government buildings, while others operate from makeshift facilities, including Panchayat Ghars and rented rooms, due to the lack of governmental infrastructure in underserved areas. Moreover, some sub-centres were awaiting completion of their own buildings, which were currently under construction and regular water supply was only in 5 (71.4%) sub-centres. Similar study done in sub centres of Lucknow found that water supply was found in 56.2 percent but nowhere piped water supply was available (Manas et al, 2013). Similar, study conducted at subcentre in rural area of Uttar Pradesh indicated that results weren't as good as expected due to lack of basic amenities such as electricity and manpower (Saxena et al, 2022).

A comprehensive review of the sub-centres revealed that all 7 (100%) sub-centres lacked a designated day and time for healthcare. Similar

Table 3: Modified check list for monitoring PHC of Nahan & Paonta Sahib block by external mechanism

S. No.	Services	PHC-1	PHC-2
1	General Health Services - Adequate availability of health care personnel - Availability of Medicines in the PHC - Regular availability of anti-snake venom - Availability of anti-rabies vaccine - Regular supply of drugs for malaria - Regular availability of tuberculosis drugs - Provision of treatment of leprosy (MD TB blister packs) and its complications - Availability of free of cost medicine	Y Y Y Y Y Y Y Y	Y Y Y Y Y Y Y Y
2	Availability of curative services - Primary management of wounds (stiches, dressing etc.) - Primary management of fracture - Primary management of cases of poisoning	Y Y Y	Y Y Y
3	Availability of Reproductive and Child Health Services - Provision of ante-natal clinics - Provision of availability facility for normal delivery available in the PHC for 24 hours - Provision of facility for tubectomy and vasectomy - Adequate treatment for gynaecological disorders like leucorrhoea, menstrual disorders - Fixed day immunisation services - Managements of children suffering from diarrhea with severe dehydration	Y Y NAN Y Y	Y Y NAN Y Y
4	Availability of laboratory services - Blood examination for anaemia - Detection of malaria parasite by blood smear examination - Sputum examination done to diagnose tuberculosis - Urine examination for pregnant women - Patients from a particular social background (SC, ST, minorities, villagers) have faced derogatory or discriminatory behaviour - Transportation of patients including pregnancy and labour cases available	Y Y Y Y Y Y	Y Y Y Y Y Y

Y-Yes N-No NA-Not Applicable

findings in West Bengal showed that in terms of doctor visits, it was seen that 57.50 percent sub centres did not have any doctor visits (Saha & Jana, 2024).

However, a positive finding was that all 7 (100%) sub-centres provided adequate antenatal care services, indicating a crucial strength in maternal healthcare provision. A critical gap in the Cold Chain System at the Sub-Centre level resulted in the irregular administration of vaccinations in certain villages. However, the insufficient privacy facilities for Cu-T insertion have led to the under-utilisation of family planning methods.

The findings underscore the urgent need for comprehensive and multidimensional interventions designed to address these complex challenges by enhancing the operational efficacy of tribal healthcare facilities.

Nursing Implications

- Upgrading infrastructure facilities, including state-of-the-art equipment, is essential for delivering high-quality care. Regular monitoring by external agencies ensures accountability and quality, while periodic studies provide valuable insights that inform continuous improvement initiatives.
- Appointing adequate staff is essential to ensure healthcare services and providing residential facilities at proper headquarters supports staff availability and retention.
- The digital platform, supported by internet facilities, will facilitate seamless communication, efficient data management, and informed decision-making.
- Introducing financial and non-financial incentives in the public healthcare sector can motivate healthcare professionals to work in remote tribal areas. Additionally, providing rural and transport allowances acknowledges the unique challenges of working in remote areas.
- Regular training along with promoting health education and awareness through mass media programmes ensure that staff stay up-to-date with the latest skills and knowledge.
- Employment opportunities in the healthcare sector can be created for tribal populations, transcending caste barriers. This inclusive approach will not only enhance healthcare access and outcomes for tribal communities but also empower them with economic stability and social dignity.
- Additionally, enhance road connectivity and transportation systems in hilly regions, reducing travel costs and time while increasing access to essential healthcare services.
- Collaboration with community stakeholders, including local medical professionals and leaders, to raise awareness and encourage

women to utilise maternal and child health services.

Recommendations

- Qualitative research studies can be done to explore the Govt initiatives to enhance the functionality of health care centres in tribal areas.
- Multicomponent interventional research can be performed to assess the user experience in utilisation of MCH services in tribal health care centres.

Conclusion

A robust regulatory framework is essential for attracting and sustaining investments in MCH services. In tribal areas, primary health centres and Sub-centres form the backbone of the healthcare delivery system, providing health care services through healthcare personnel. However, a critical shortage of manpower and infrastructure facilities in healthcare centres hinders the effective distribution of services. Therefore, it is imperative that state governments prioritise the effective implementation of health care services in tribal areas.

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