

Sociological Analysis of the Role of Community Health Workers (CHWs) in Improving Immunization Uptake in Bihar

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Abstract: This paper will socially analyze the Community Health Workers (CHWs or Accredited Social Health Activists (ASHAs)) and their impact on increasing the routine immunization uptake of children in Bihar, India. Bihar has universal socio-demographic barriers such as low literacy levels on the part of the mothers, rural-urban inequality, and vaccine receptivity based on local cultural beliefs, which hinder universal coverage despite the national Universal Immunization Programme (UIP). Using a qualitative research design that includes 200 workers of the ASHA in four districts of North Bihar (Darbhanga, Madhubani, Samastipur, and Sitamarhi) the study unveils that in bridging the gap between formal health services and families that cannot be reached, ASHAs use social capital and community trust as well as grassroots knowledge. But their productivity is severely limited with unstable incentive-driven compensations, overloading multi-sectors, and the institutionalization of gendered labor by disvaluing it in a patriarchal community and bureaucracy. This paper postulates that sustainable immunization coverage in Bihar requires policy changes which go beyond the focus of individual incentivization of equitable compensation, professional value as well as a strong institutional support to the CHW cadres.

Keywords: Community Health Workers; ASHA; Immunization; Vaccine Hesitancy; Social Capital; Gendered Labor

1. Introduction

Vaccination is among the most economical community health interventions in the world, which significantly lowers the mortality and illnesses by vaccine-preventable pathogens in children [1]. In India, child and maternal health policy uses the Universal Immunization Programme (UIP) that was initiated in 1978 under the name Expanded Programme on Immunization (EPI), and was later rebranded as such in 1985, aiming to provide free immunization against 12 vaccine-preventable diseases [2]. Bihar being one of the highly populated states in India with estimated contribution of 10 per cent of the nation birth cohort, the targeted 32 lakh of newborns and 34 lakh pregnant mothers and the effective birth immunization delivery of which has the national strategic weight [1, 2]. Even with major advances in programmatically, however, over the last twenty years, (Full Immunization Coverage) FIC currently stands at 71.0 percent in NFHS-5 (2019-21) and 83.54 percent in HMIS data, and despite these improvements, Bihar still experiences severe intra-state regional as well as obstinately high demand-side access disparities [3-5]. Some of them, including Purnia (59.5) and Kishanganj (61.6) are at an urgent stake with national target of 90 FIC as they are far below that threshold (Purnia 59.5, Kishanganj 61.6). Community Health Workers (CHWs), particularly ASHAs are positioned at the top of this challenge, as they were initiated in 2005 as village-level health activists as part of the National Rural Health Mission (NRHM) [6].

Being social intermediaries between the formal health infrastructure and marginalized households, ASHAs are likely to advise families, monitor zero-dose children, mobilize communities, and gain access to vaccination sessions [6]. However, sociological aspects of their activity, such as the use of trust, cultural resistance, and acting in structural restraints, are poorly explored in the scholarly publications.

The paper meets that deficit by proposing a sociological enquiry on the role of the ASHAs in routine immunization in North Bihar. It places individual CHW performance in wider social, economic and institutional questions as the argument is that the invisible affective and social work of such mostly female workers has become a fragile yet fundamental, pillar of the immunization system in India.

2. BACKGROUND

2.1 The Universal Immunization Programme and Bihar's Trajectory

The UIP became part of the subsequent national health models such as the Child Survival and Safe Motherhood Programme (1992), the National Reproductive and Child Health Programme (1997) and above all the NRHM since 2005 [2]. Exemplary accomplishments like polio eradication in the world in 2014 and the eradication of maternal and neonatal tetanus in 2015 show the coverage of the programme [2]. In the state of Bihar, the experience of immunization is salvage of the plans as well as constraints of this programme. According to the initial survey data of the late 1990s and early 2000s, the FIC went down to 11-18; hence, the state was in the range of the least performing nationwide [7,8].

In December 2014, a strategic acceleration was introduced with Mission Indradhanush (MI) specifically addressing unvaccinated and partially vaccinated children (so-called zero-dose children) in the low-coverage districts in Bihar [2,9]. Subsequently, the immunization portfolio was expanded again with the launch of the Pneumococcal Conjugate Vaccine (PCV) in a staged rollout beginning in May 2017 and Measles-Rubella (MR) campaigns [2,10]. Nevertheless, the local obstacles of urban slums, migrant population, and controlling high dropout rates remain one of the barriers to a universal coverage [4,11].

2.2 Regional Disparities in North Bihar

Table 1 below shows that there are strong intra-state inequalities on the basis of NFHS-5 data of North Bihar. The lowest FIC rates are recorded in the Seemanchal/Kosi belt with 59.5 in Purnia, 61.6 in Kishanganj and 62.4 in Araria, where Saran district is providing 83.5, clearly indicating that almost complete coverage can be realized even within the same state [4, 5]. The existence of these disparities can be explained by their shared vulnerabilities: high seasonal migration rates, underdeveloped transport infrastructure, and other socio-economic characteristics associated with the marginalized status in the past. This heterogeneity provides the need of locally adapted strategies, and CHWs, with their close knowledge of the community, are on the vanguard of directed outreach.

Table 1: Full Immunization Coverage (FIC) in North Bihar Districts (NFHS-5, 2019–21)

Division	District	FIC % (NFHS-5, 2019–21)
Kosi/Purnia	Purnia	59.5%
Kosi/Purnia	Kishanganj	61.6%
Kosi/Purnia	Araria	62.4%
Kosi/Purnia	Saharsa	68.9%
Kosi/Purnia	Supaul	73.3%
Kosi/Purnia	Katihar	74.8%
Darbhangha	Madhubani	75.2%
Darbhangha	Darbhangha	79.5%

Darbhanga	Samastipur	81.6%
Tirhut (Muzaffarpur)	Muzaffarpur	74.5%
Tirhut (Muzaffarpur)	Sitamarhi	75.3%
Tirhut (Muzaffarpur)	Vaishali	77.0%
Tirhut (Muzaffarpur)	Sheohar	77.1%
Tirhut (Muzaffarpur)	Purba Champaran	79.2%
Tirhut (Muzaffarpur)	Pashchim Champaran	79.7%
Saran	Gopalganj	76.8%
Saran	Siwan	77.1%
Saran	Saran	83.5%
Munger/Begusarai	Begusarai	75.9%
Munger/Begusarai	Khagaria	80.2%
State Average (Bihar)	—	71.0%

Source: International Institute for Population Sciences (IIPS) & MoHFW, NFHS-5 (2019–21) [5]

3. Role Of Community Health Workers in the Immunization Programme

The ASHA was envisioned by the NRHM as the foundation of primary healthcare provision, "a social health activist" who is also a member of the community and a state-approved health resource [6]. About their operation, the ASHAs act as health educators and mobilizers, data collectors, and referral builders. Their roles include: pregnant women and newborns registration, family guidance on the entire immunization schedule, mobilizing communities in regards to Routine Immunization (RI) sessions and campaign days; keeping track of zero-dose and partially vaccinated children; and following up on them [12,13].



Figure 1: Organizational Framework — Role of CHWs in the National Immunization Structure (Source: MoHFW NRHM Framework for Implementation, 2005; ASHA Guidelines, 2005)

The effectiveness of the ASHA in the sociological context is based on her social capital body. She has a support system of kinship networks, caste relations and village religious leaders to rely on as a resident of the same village. This trust is a kind of social currency, which cannot be easily imitated by formal health workers that are posted to the community by outside [11]. In societies where pro-illness views are a traditional factor, and adverse side-effects of immunization are accredited with supernatural entities, the

ASHA presence, combined with substantial social reputation, can be easily repeated to induce formal contact to persuade [8].

The organization structure is shown in figure 1 below that gives the position of CHWs in the national immunization system in India that illustrates the tiered relationship among ASHAs, Auxiliary Nurse Midwives (ANMs), the sub-centers and an overall health system.

4. Methodology

The given research utilizes a sociologically-grounded research design. The qualitative approach was adopted to give a rich contextual insight about the lived experiences of CHWs, the cultural politics of immunization, the grassroots level dynamics of health service provision, aspects that cannot be adequately informative by the use of numerical data [4].

Purposive inclusion of the respondents was done to include a total of 200 respondents. The whole sample consisted of the ASHA community health workers of four districts of North Bihar, (namely: Darbhanga, Madhubani, Samastipur and Sitamarhi) were selected due to their intermediate to low immunization coverage as well as due to their relevance to the purpose of the study. Fifty ASHAs were sampled out of every district by systematic random sampling. Structured semi-structured interviews and observational data collection was used to collect the data. The whole ethical procedures such as informed consent, confidentiality and right to withdraw were also followed during the data collection process.

5. Results

5.1 Socio-Demographic Profile of ASHA Respondents

Table 2 below gives the socio-demographic attributes of 200 ASHA participants. The age group that comprises 31-40 age group (50) and the 41-50 age group (35) has overwhelming concentration on the workforce since the programme targets mature and socially established ladies. Respondents were all (100% female) who were targeted by the ASHA scheme design, which is gender related. In terms of education, 52.5 percent had attained matriculations (10th standard) and 32.5 percent had attained education up to 8th standard, but few 15 percent had a formal degree- indicating the community based philosophy of the programme on the need to have an academic qualification [6].

Table 2: Socio-Demographic Distribution of ASHA Respondents (n = 200)

Variable	No. of Respondents (n=200)	Percentage (%)
Age: 21–30 years	30	15%
Age: 31–40 years	100	50%
Age: 41–50 years	70	35%
Sex: Female	200	100%
Education: Up to 8th Standard	65	32.5%
Education: Matriculation (10th)	105	52.5%
Education: Degree	30	15%

Source: Primary data collected from 200 ASHA workers across four North Bihar districts, 2023–24

5.2 Knowledge, Practice, and Work Experience

The results in Table 3 below indicate CHW knowledge on the Routine Immunization (RI) schedule, practical implementation, and work experience. A high score of 89% of ASHAs shown good knowledge on immunization schedule, indicating the training infrastructure in place under NRHM. The extent to which they reported having a good practice of RI protocols was however only 56 per cent showing a knowledge-practice gap of 33 percentage points. Such difference implies that there are external factors to knowledge

acquisition that limit field-level implementation such as workload as well as resource limitations and structural blocks [4,11]. Experience is concerned, 40% of the sampled had a period of service of 3-5 years and 35% had a period of 1-3 years producing a moderately experienced cadre. Only a fifth (20) were experienced (more than 5 years) which implies that a retention strategy will be necessary to retain the institutional memory.

Table 3: Knowledge, Practice, and Work Experience of ASHA Workers (n = 200)

Parameter	Category	No. of Respondents	Percentage (%)
Knowledge of RI Schedule	Good	178	89%
Knowledge of RI Schedule	Poor	22	11%
Practice of RI	Good	112	56%
Practice of RI	Poor	88	44%
Work Experience	< 1 year	10	5%
Work Experience	1–3 years	70	35%
Work Experience	3–5 years	80	40%
Work Experience	> 5 years	40	20%

Source: Primary data collected from 200 ASHA workers across four North Bihar districts, 2023–24

5.3 Systemic Challenges: Remuneration, Motivation, and Workload

The following table 4 summarizes that the structural challenges of the ASHA workers in terms of remuneration satisfaction, level of motivation, and effect of workload on performance. Most (62.5) of them complained that they were not satisfied with their incentive-based remuneration with only 37.5% arguing that they were satisfied; this is similar to the national disapproval of the performance-linked remuneration model [11,13]. Nevertheless, 56 percent of the respondents were highly motivated, which highlights the level of intrinsic determination of the workforce despite the unfavorable conditions. Nevertheless, 44% said that they were poorly motivated which is a considerable percentage of the frontline cadres who are at risk of draining or non-performance.

On workload and its influence on performance, a large 47.5% of ASHAs commented on below-average performance due to excessive workload, and only 10% of ASHAs indicated that they could cope with their workload. The componential roles of ASHAs, including immunization, maternal health, nutrition, sanitation, and disease surveillance, squeeze time to have in-depth community outreach and immunization mobilization in the long-run.

Table 4: Challenges of ASHA Workers — Remuneration, Motivation, and Workload (n = 200)

Parameter	Category	No. of Respondents	Percentage (%)
Remuneration Satisfaction	Yes	75	37.5%
Remuneration Satisfaction	No	125	62.5%
Motivation Level	Good	112	56%
Motivation Level	Poor	88	44%
Workload Impact on Performance	Good	20	10%
Workload Impact on Performance	Average	85	42.5%
Workload Impact on Performance	Below Average	95	47.5%

Source: Primary data collected from 200 ASHA workers across four North Bihar districts, 2023–24

6. Discussion

The results bring about a subtle description of the ASHA cadres in North Bihar: a socially entrenched, and mainly aged woman workforce that have broad programmatic knowledge but is facing serious institutional prisons that dull their field performance. The difference between knowledge (89 percent) and practice (56 percent) at 33 percentages is indicative. It indicates that the bottleneck to the delivery of immunization does not exist in informational deficits of CHWs but in structural and logistical barriers: discontinuous supply of vaccines, absence of well-built infrastructure related to the site of the session, transportation barriers, and inadequate enabling supervision. The continuity (62.5) of remuneration dissatisfaction echoes a larger literature questioning the ASHA scheme as the demonstration of the so-called volunteerism. The state successfully externalizes the cost of labor delivery of the health services of the state by defining ASHAs as community volunteers whose remuneration is not based on salaries, but determined by the count of jobs done. This gendered aspect of the CHW economy, where health labor of women is undervalued in a systematic manner, constitutes a political economy of care that harms gender inequality and fragmented health system. However, this continuation of good motivation among 56% of those asked to continue the work despite structural adversity reflects the relational and moral aspects of ASHA work. Numerous ASHAs rely on community cohesiveness, social identity, and civic obligation to keep them involved- assets which cannot be engineered by policy but must be actively preserved. The danger is that these internal drives wear out with time in the event of no external reward, which results in burnout and turnover that are not well represented in quantitative immunization models.

7. Conclusion

The analysis finds that ASHA workers in North Bihar are indispensable in helping to design the routine of immunization delivery to hard-to-reach households with the help of social capital, a sense of community trust, and household understanding of local knowledge to overcome the critical divide between the formal health infrastructure and the underserved household. Programmatic knowledge (89) makes them relatively successful, whereas the knowledge-practice gap and general dissatisfaction with remuneration (62.5) prove that training systems are vulnerable, and the existing issue cannot be overcome by training only. The workload of these three sectors, paying based on incentives and the gendered underestimation of CHW labor are all challenges to the sustainability of this frontline cadre. To obtain universal immunization coverage in Bihar, the policy has to change decisively: the existing model of under-resourced volunteerism needs to be replaced by the new one based on equitable yet regularized pay, a shorter workload accompanied by reduced and more rationalized workloads, effective supervisory guidance, and the establishment of the professional role of the ASHA cadres in population health within the institutionalized system. It is only in this fashion that the final mile of India immunization programme would be reliably manned by empowered motivated and well-supported community health workers.

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