



**INDIAN INSTITUTE OF TECHNOLOGY GUWAHATI
SHORT ABSTRACT OF THESIS**

Name of the Student : Jith J R

Roll Number : 186141106

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Thesis Title : Prevalence, Distribution, and Determinants of Child Undernutrition in India: A Study with Focus on Aspirational Districts of Assam

Name of Thesis Supervisor(s) : Prof. Rajshree Bedamatta

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SHORT ABSTRACT

Background: This thesis attempts to contribute to achieving SDG 2.2, which aims to address malnutrition across different life stages and the closely aligned national targets of child undernutrition in India. There is a need to study the scale and distribution of total undernutrition prevalence in India to understand the magnitude of the problem and monitor progress over time. Existing studies have primarily focused on traditional indicators, and there is also a significant research gap in understanding child undernutrition in Assam comprehensively. An underexplored yet critical dimension in the existing literature is examining nutrition interventions from a systems perspective. Understanding the interactions and relationships between frontline workers, the community, and other stakeholders is particularly important as these dynamics significantly influence the effectiveness of interventions.

Objectives: To study the scale, distribution, determinants, and change in the undernutrition problem in India. To study the scale and distribution of the undernutrition problem in Assam, focusing on aspirational districts. To understand the challenges in implementing evidence-based nutrition interventions in Assam in the context of village-level health systems considering the social construct nature of health systems. To understand the pathways through which nutrition-specific interventions reach women and children and the interconnections between them.

Methods: Mixed methods are used to meet the research objectives. Secondary data from three rounds of the National Family Health Survey (NFHS), primary survey data collected from seven select districts of Assam, and primary qualitative data collected from the Dhubri district of Assam through In-Depth Interviews, Key Informant Interviews, and Focus Group Discussions are used for analysis.

Key Findings: The total prevalence of child undernutrition is significantly higher than estimations using traditional indicators and varies significantly. Reductions in indicators are not uniform and are inadequate to achieve nutrition targets. Assam has a higher incidence of anthropometric failure in all categories than the national average, and most

aspirational districts have a higher incidence of anthropometric failure than the Assam state average. Among the survey districts, Barpeta, Goalpara, and Darrang have a high prevalence of anthropometric failures and fare poorly in different basic, underlying, and immediate determinants. The comparatively better-performing districts were Udalguri, Kokrajhar, and Bongaigaon. Coordination of nutrition interventions at the grassroots level is facilitated by interpersonal relationships among frontline workers and through informal communication platforms. In addition, the performance of frontline workers is influenced by the quality of interpersonal relationships between the workers and the community and the workers' relationship with department officials. Delays in salary disbursement, high work burden, and involvement of family members of frontline workers in implementing interventions pose significant challenges. Cultural factors, misconceptions, superstitions, and manifestations of poverty pose challenges at the family level of beneficiaries. Connectivity issues, resistance from the community, resource constraints, undesirable effects of community participation, and gaps in service delivery, particularly in immunisation and distribution of rations, are significant challenges.

Conclusions: Targeted and context-specific interventions, multi-faceted and integrated interventions, and interventions addressing basic determinants are needed to tackle the challenge of child undernutrition. An often ignored but critical aspect of nutrition interventions is the interaction and relationship between frontline workers and the community. Enabling strong interpersonal relationships among frontline workers and the community, ensuring timely salary disbursement, addressing the high work burden of frontline workers, and engaging with family members of frontline workers and beneficiaries to reduce cultural barriers and misconceptions are needed to address the challenges in implementing nutrition interventions. This comprehensive approach may provide a more holistic solution to the multifaceted problem of child undernutrition, recognizing not only the technical and logistical aspects but also the human and sociocultural dimensions.