

Synopsis for Dissertation

Title:

Digital Health Transformation in India: Adoption, Barriers, and Pathways to Universal Health Coverage

Background:

India's healthcare system, serving more than 1.4 billion people, continues to grapple with persistent structural inequities—including stark urban–rural disparities, constrained public expenditure, overburdened facilities, and fragmented service delivery. Digital transformation has emerged as a high-potential mechanism to address these systemic deficiencies. Catalysed by the COVID-19 pandemic and underpinned by flagship government programmes such as the Ayushman Bharat Digital Mission (ABDM), India's health-technology landscape is evolving rapidly. Government-backed platforms like eSanjeevani (facilitating over 250 million teleconsultations), CoWIN, and Aarogya Setu have demonstrated that scalable digital health infrastructure is achievable in India. However, empirical evidence on adoption patterns, perceived benefits, and contextual barriers at the stakeholder level remains limited, particularly in the post-ABDM operational phase.

Problem Statement:

Although digital health technologies hold considerable transformative potential for India's healthcare system, their adoption remains geographically and socio-economically uneven. Significant barriers—including inconsistent internet connectivity, limited digital literacy among older and rural populations, data privacy concerns, and low awareness of government initiatives such as ABDM—continue to impede equitable adoption. There is a need to systematically assess current adoption levels, perceived benefits, and multi-dimensional barriers across diverse stakeholder groups to inform evidence-based strategies for inclusive digital health integration.

Research Question:

What are the current levels of digital health adoption, perceived benefits, and key barriers among healthcare professionals, students, and the general public in India, and how can evidence-based, multi-stakeholder strategies accelerate equitable and sustainable digital health integration toward Universal Health Coverage?

Objectives:

1. To examine the current state of digital health adoption in India, including the most widely used tools and platforms across public and private healthcare settings.
2. To evaluate the perceived impact of digital technologies on healthcare accessibility, efficiency, and patient outcomes, with particular attention to rural and underserved populations.
3. To analyse the key technological, infrastructural, policy, financial, and human resource barriers impeding digital health implementation.
4. To explore user perceptions, trust levels, and satisfaction with digital health tools among healthcare providers, students, and the general public.
5. To propose evidence-based, stakeholder-specific recommendations to accelerate sustainable and equitable digital health integration in India.

Methodology:

- **Study Design:** Cross-sectional, mixed-methods research combining quantitative survey analysis with qualitative thematic analysis.
- **Data Sources:** Primary data via structured online questionnaire distributed to healthcare professionals, management students, and members of the general public; supplemented by secondary literature from PubMed, Scopus, Google Scholar, government reports (MoHFW, NITI Aayog), WHO, and World Bank publications.
- **Inclusion Criteria:** Studies and policy documents from 2016 onwards focused on digital health, telemedicine, EHRs, mHealth, AI diagnostics, and IoMT in India and comparable LMICs.
- **Theoretical Frameworks:** Technology–Organisation–Environment (TOE) Framework

(Tornatzky & Fleischer, 1990) and Rogers' Diffusion of Innovation (DOI) Theory (2003).

- **Data Analysis:** Descriptive statistics, cross-tabulations, and data visualisations for quantitative data; inductive thematic analysis for open-ended qualitative responses; urban–rural and demographic subgroup comparisons.

Implications of Study:

This study will contribute original, context-sensitive empirical evidence on digital health adoption dynamics in post-pandemic, post-ABDM India—a phase that is both distinct from the pandemic-era adoption environment and critically underexplored in the existing literature. The findings will provide actionable, multi-stakeholder recommendations for policymakers, healthcare administrators, and technology developers committed to advancing Universal Health Coverage through inclusive digital transformation. By mapping the road from the ambitious policy vision of ABDM to ground-level adoption realities, this

study aims to bridge the frequently observed gap between research evidence and implementation practice, offering insights of relevance not only for India but for other low- and middle-income countries navigating their own digital health journeys.

