



Bridging Gender Gaps in Telemedicine through Legal Policy in India

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How to Cite this Article:

Ahmad, S. & Shah, I. N. (2026). Bridging Gender Gaps in Telemedicine through Legal Policy in India. International Journal of Creative and Open Research in Engineering and Management, 2(6).
<https://doi.org/10.55041/ijcope.v2i6.228>

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<https://doi.org/10.55041/ijcope.v2i6.228>

Abstract

India's eSanjeevani platform has enabled over 276 million telemedicine consultations, yet this scale masks a stratified access landscape that systematically excludes women. This paper examines the intersection of gender, digital access, and telemedicine governance in India through secondary analysis of government reports, international publications, and peer-reviewed literature. The Telemedicine Practice Guidelines (TPG, 2020), Ayushman Bharat Digital Mission (ABDM), and Digital Personal Data Protection Act (DPDP Act, 2023), though structurally progressive, remain gender-blind in implementation and fail to address socio-cultural, economic, and infrastructural barriers constraining women's access. Applying intersectional feminist legal critique, the analysis shows that women from Scheduled Caste (SC) and Scheduled Tribe (ST) communities, rural areas, and low-income households face compounded exclusion. Nationally, only 33.3 per cent of women have used the internet compared to 57.1 per cent of men (NFHS-5, 2022), while India's gender gap in mobile internet adoption reached 30 per cent in 2023, the highest among surveyed nations (GSMA, 2024). Governance failures, including fragmented coordination, absent gender representation in policy bodies, and inadequate health data protection, exacerbate this divide. Drawing on comparative evidence from Rwanda, Bangladesh, and OECD frameworks, the paper proposes evidence-based recommendations focused on

gender-responsive governance, targeted digital literacy investment, and feminist legal reform. Without deliberate intervention, India's telemedicine expansion risks deepening health inequities.

Keywords: Telemedicine; Gender Digital Divide; India; Health Governance; Digital Health Policy



1. Introduction

Telemedicine, as defined in India's TPG (2020) following the WHO formulation, involves delivery of healthcare services using information and communication technologies where distance is a critical factor (Ministry of Health and Family Welfare [MoHFW], 2020; World Health Organisation [WHO], 2020a). Digital health encompasses mobile health, electronic health records, telehealth, and AI-driven diagnostics (WHO, 2021). The gender digital divide refers to systematic disparities in access, use, skills, and agency over digital technologies across economic, social, cultural, and institutional dimensions (World Bank, 2023). Digital health governance includes the regulatory, institutional, and normative frameworks guiding policy design, implementation, and accountability (WHO, 2020a). Feminist legal critique challenges law's purported neutrality, arguing that frameworks reproduce patriarchal hierarchies unless actively designed to address gender inequity (MacKinnon, 1989; Menon, 2012; Nussbaum, 2000).

Globally, telemedicine adoption accelerated by five years within two months of the COVID-19 pandemic (McKinsey Global Institute, 2021). By 2023, 1.5 billion women in low- and middle-income countries (LMICs) used mobile internet, yet 785 million remained unconnected, with 60 per cent in South Asia and Sub-Saharan Africa (GSMA, 2024). In 2024, women were 14 per cent less likely than men to use mobile internet, leaving 235 million fewer women online (GSMA, 2025). India presents a paradox: it hosts the world's third-largest digital economy and largest government-led telemedicine programme, yet records one of the widest gender digital gaps. Its mobile internet gender gap stood at 30 per cent in 2023, double the LMIC average of 15 per cent (GSMA, 2024). NFHS-5 data show only 33.3 per cent of women had used the internet versus 57.1 per cent of men; in rural areas, 24.6 per cent of women versus 48.7 per cent of men (International Institute for Population Sciences [IIPS] & ICF, 2022). These conditions create the primary structural precondition for systemic telemedicine exclusion.

2. Methodology

This study uses qualitative secondary data analysis to synthesise empirical, legal, and policy evidence through a critical interpretive lens grounded in feminist epistemology, treating gender as a structural category (Harding, 1987; Heaton, 2008). Secondary analysis leverages authoritative datasets for policy relevance. Data sources include: (i) government records such as NFHS-5, ABDM Dashboard, eSanjeevani reports, TPG, Digital India, and NITI Aayog documents; (ii) international agencies (WHO, GSMA Mobile Gender Gap Reports 2023–2025, World Bank, UNFPA, UN Women); (iii) peer-reviewed literature from PubMed, Scopus, BMC Digital Health, PLoS Digital Health, Journal of Medical Internet Research, and related journals; and (iv) legal instruments including the IT Act (2000), DPDP Act (2023) and Rules (2025), GDPR, and OECD frameworks.

Analysis combined thematic coding and policy evaluation. Thematic analysis identified patterns in gender gaps, governance weaknesses, and policy design using intersectionality to avoid homogenising women's experiences (Braun & Clarke, 2006; Crenshaw, 1989; Collins, 2019). Policy evaluation compared telemedicine frameworks against WHO and OECD benchmarks for gender equity, inclusivity, data protection, and effectiveness. Limitations include incomplete gender-disaggregated data in ABDM and eSanjeevani, NFHS-5's 2019–21 period, GSMA's limited intra-national detail, and reliance on stated policy outcomes. Findings are interpreted transparently within these constraints.

3. Literature Review

Scholarly work on India's telemedicine gender gap has increased since 2020 but remains fragmented. Verma et al. (2023) reported 74 per cent diagnostic concordance between teleconsultation and in-person care in rural India, yet did not disaggregate by gender. Sharma et al. (2024) identified provider barriers such as institutional resistance and infrastructure deficits without addressing gendered patient access. A 2023–2024 retrospective study of 286,196 teleconsultation records found gender concordance between patient and physician influenced satisfaction in gynaecology, psychiatry, and dermatology (Sharma et al., 2026). Mishra et al. (2024) noted 48 per cent of 376.2 million ABHA registrations were female, masking usage disparities. Ahmed and Mahapatro



(2023) showed SC/ST women face the deepest healthcare deprivation at the caste-gender intersection, with direct relevance to telemedicine.

Three gaps persist: (1) absence of feminist legal analysis of Indian telemedicine policy; (2) rarity of intersectional analysis integrating gender, caste, class, and geography; and (3) lack of evidence-based futuristic projections. This paper addresses all three. India's digital health sector is projected to grow from USD 2.6 billion in 2022 to USD 11.2 billion by 2027 (P4i, 2025); without gender-inclusive reform, this growth will deepen inequality.

4. Conceptual and Theoretical Framework

Theory Applied to Telemedicine

Liberal feminism, drawing on Nussbaum's (2000) capabilities approach, views women's access to healthcare technology as a fundamental capability requiring state enablement. Radical feminist critique (MacKinnon, 1989) examines how institutions encode patriarchal hierarchies in facially neutral policies. Socialist feminist analysis locates technology exclusion within the political economy of labour and class (Wajcman, 2004). Applied to telemedicine, these frameworks question platform design assumptions regarding user autonomy, literacy, device ownership, and safety. India's TPG (2020) targets registered medical practitioners rather than citizens and remains silent on gender, caste, disability, and rural-urban disparities, reflecting the default male legal subject (Smart, 1989).

Gender-Sensitive Legal Critique and Data Protection

The DPDP Act (2023) treats all data principals equally but ignores women's heightened vulnerability regarding reproductive, sexual, and mental health data (PMC, 2025). Unlike GDPR Article 9, it lacks special category protection for health data requiring explicit consent. In patriarchal contexts, disclosure risks domestic violence, ostracism, insurance denial, and employment discrimination. The Act's consent framework assumes informed, autonomous, literate users, conditions often absent for rural women (IIPS & ICF, 2022; PRS India, 2023).

4.3 Governance Theory, Intersectionality, and Public Health

The WHO Global Strategy on Digital Health 2020-2025 requires governance to strengthen gender equality and prevent aggravation of inequalities (WHO, 2020a). Crenshaw's (1989) intersectionality recognises multiple overlapping systems of power. In India, a Dalit rural woman faces a different position than an upper-caste urban professional; uniform policy fails the former while appearing to serve the latter (Ahmed & Mahapatro, 2023). NFHS-5 data indicate only 9 per cent of women in the lowest wealth quintile used the internet versus 26 per cent of men; SC/ST communities report higher unmet healthcare needs (BMC Digital Health, 2024; Mishra et al., 2021). Intersectionality must inform telemedicine design.

5. Legal and Policy Framework in India

Telemedicine Practice Guidelines, 2020

Issued 25 March 2020, the TPG amended the Indian Medical Council Regulations 2002 to legitimise teleconsultation by registered practitioners across text, audio, and video modes, including first consultations without prior in-person contact (MoHFW, 2020; Venkatesh et al., 2022). From a feminist perspective, it omits gender-specific needs, privacy for gynaecological/reproductive/mental health consultations, and barriers to autonomous device access or private spaces (Naskar et al., 2023). A 2024 study found over 90 per cent of eSanjeevani requests were text-based, with 13.5 per cent limited to minimal words and only 20.9 per cent involving appropriate specialty and audio-visual engagement (PMC, 2024). Ethical implications for women's sensitive health needs remain unaddressed.

Digital Personal Data Protection Act, 2023 and DPDP Rules, 2025

Enacted 11 August 2023 and operationalised via rules notified 13 November 2025, the DPDP Act establishes India's first comprehensive data protection framework (Hogan Lovells, 2025). Strengths include consent as primary ground, emergency health data use under Section 7, and privacy notices in 22 languages. ABDM aligns with DPDP through federated architecture (MoHFW, 2024). However, it does not designate health data as a special category (unlike GDPR Article 9), and empowers government exemptions on national security grounds. Implementation extends to May 2027, leaving protection prospective.



5.3 Government Programmes

ABDM (launched 2021) seeks an interoperable digital health ecosystem via ABHA, registries, and consent-based exchange (MoHFW, 2024). By November 2024, 689.7 million ABHA accounts existed, with ~48 per cent female-registered (though usage data lag). eSanjeevani delivered over 276 million consultations, 93 per cent via provider-assisted AB-HWC model, concentrated in four southern states (Andhra Pradesh 36.8 per cent, Karnataka 16.4 per cent, Tamil Nadu 14.8 per cent, Telangana 12.1 per cent) (Oxford Open Digital Health, 2025). Low patient awareness and privacy concerns, especially among women, persist even in urban areas (PMC, 2024).

6. Gender Gaps in Telemedicine Access

Digital Access Divide

Digital connectivity is foundational for telemedicine. NFHS-5 shows 33.3 per cent of women versus 57.1 per cent of men had used the internet; rural figures were 24.6 per cent versus 48.7 per cent. In the lowest wealth quintile, 9 per cent of women versus 26 per cent of men had access (IIPS & ICF, 2022; BMC Digital Health, 2024). GSMA (2024) reported a 30 per cent mobile internet gender gap (double the LMIC 15 per cent) and 12 per cent mobile ownership gap (above LMIC 8 per cent). Women's mobile internet awareness was only 58 per cent (GSMA, 2023).

Table 1: Gender Gaps in Digital Access: India vs. LMIC Benchmarks (2022-2023)-(Percentage)

Indicator	India	LMIC Average	Source
Gender gap in mobile internet adoption	30	15	GSMA (2024)
Gender gap in mobile ownership	12	8	GSMA (2024)
Women who have ever used internet	33.3	45	NFHS-5 (2022)
Rural women internet usage	24.6	N/A	NFHS-5 (2022)
Lowest quintile women internet usage	9	N/A	BMC Digital Health (2024)
Women aware of mobile internet	58	>80	GSMA (2023)

**Approximate weighted estimate across comparable survey nations. Sources: GSMA Mobile Gender Gap Reports 2023-2025; IIPS & ICF (2022); BMC Digital Health (2024).*

India's gender digital gap is not merely comparable to LMIC averages; it is substantially worse across every metric. Any telemedicine policy framework that does not begin from this premise is not neutral; it is structurally gendered in favour of the already-connected.

Digital Literacy, Socio-Cultural, and Economic Barriers

Device access does not ensure autonomous use. GSMA (2023) identified literacy and skills as the second major barrier after affordability. Rajasthan village bans on mobile use for unmarried women illustrate coercive controls (Mobile World Live, 2023). Over 55 per cent of rural users discontinued telemedicine due to literacy, connectivity, and privacy issues (Digital Empowerment Foundation, 2025). Male gatekeeping and family surveillance shape women's technology use. Gender concordance influenced satisfaction in sensitive specialties (Sharma et al., 2026). Economically, smartphones cost 24 per cent of women's monthly income versus 12 per cent for men in LMICs; in India, male control over resources renders women's access discretionary (GSMA, 2025; World Bank, 2023). Privacy risks deter women with reproductive or sexual health needs.

7. Governance Challenges

Gender Blindness in Policy Design

India's digital health architecture is sophisticated yet gender-blind. TPG (2020), ABDM (2021), and DPDP Act (2023) lack gender-disaggregated targets, responsive mandates, or monitoring of women's utilisation. ABDM's inclusivity is not operationalised for SC/ST or low-wealth groups. WHO's mandate against aggravating gender inequalities remains untranslated into mandatory impact assessments (WHO, 2020a).

Urban-Rural Disparities and Institutional Fragmentation



eSanjeevani's 80 per cent concentration in four southern states highlights implementation failure, while Hindi Belt states with high patriarchal constraints and digitally excluded women contribute little. Governance fragmentation across ministries impedes reform. The National Health Authority publishes limited gender-disaggregated data. Health leadership remains male-dominated despite medical education parity (Gideon et al., 2024). One million ASHA workers (all women) support delivery yet occupy poorly remunerated roles, undermining equity.

7.3 Ethical Gaps: Algorithmic Bias and Data Sovereignty

DPDPA overrides consent for state benefit processing, potentially affecting women in government programmes (PRS India, 2023). AI systems trained on skewed data risk perpetuating gender and caste bias. No algorithmic accountability framework exists.

Table 2: Key Governance Gaps and Recommended Responses

Policy/Programme	Strength	Gender Gap	Recommendation
TPG 2020	Legitimises teleconsultation nationally	Silent on gender, literacy and caste barriers	Mandatory gender equity annex
ABDM 2021	Interoperable digital health ecosystem	No gender-disaggregated utilisation targets	Gender KPIs in national dashboard
eSanjeevani	276 million consultations; free access	South India concentration; falling footfall	Gender-sensitive ASHA integration
DPDP Act 2023	First comprehensive data protection law	No special category for health data	Feminist amendment for sensitive data
Digital India	Infrastructure and connectivity expansion	No gender-specific digital health targets	Women-led digital health clusters

Source: Author's synthesis from MoHFW (2020, 2021, 2024); PRS India (2023); Oxford Open Digital Health (2025); Hogan Lovells (2025).

8. Comparative Global Perspective

The WHO Global Strategy on Digital Health 2020-2025 (extended to 2027) designates gender equality as a strategic objective and requires states to prevent aggravation of inequalities (WHO, 2020a). India aligns nominally but has not operationalised this in telemedicine. Rwanda's Babyl platform used voice interfaces, community health worker facilitation, and women's cooperative outreach, serving over 2 million users. Bangladesh integrated gender-sensitivity into frontline programmes. Kerala's higher female digital literacy correlates with better utilisation, confirming baseline equity drives adoption. The OECD Digital Government Policy Framework (2021) mandates gender-disaggregated monitoring, co-design, and equity audits. The European Health Data Space offers stronger privacy-by-design and sensitive data protections.

Lessons: (1) gender-inclusive telemedicine needs demand-side investment in literacy, devices, and facilitation; (2) accountability requires mandatory gender-disaggregated monitoring; (3) legal frameworks must address women's heightened data vulnerability.

9. Way Forward

Immediate Legal and Policy Reforms (2025-2027)

Add a mandatory gender equity annex to TPG (2020) via participatory consultation, specifying protocols for sensitive specialties, women provider availability, literacy assessments for consent, and enhanced protection for reproductive, sexual, mental health, and gender-based violence data (equivalent to GDPR Article 9). Amend DPDP Act to classify health data as special category requiring explicit consent, with proportionate penalties. Include health equity and gender rights experts on the Data Protection Board.

Medium-Term Governance Reform (2027-2030)

Incorporate mandatory gender KPIs into ABDM dashboard (sex-disaggregated ABHA usage, eSanjeevani rates by gender/caste, literacy coverage). Publish quarterly sex-disaggregated reports and commission annual gender audits. Establish a Gender and Digital Health Unit in MoHFW with procurement authority. Train one million ASHA and Anganwadi workers in gender-sensitive facilitation for private, secure teleconsultations.



Long-Term Transformative Investments (2030-2035)

Embed gender-prioritised digital literacy in National Education Policy (2020) and Digital India from primary level. Subsidise smartphones and data for women below poverty line via Universal Service Obligation Fund. Scale women's digital literacy programmes nationally with health content. Operationalise a National Women's Digital Health Programme coordinating fragmented initiatives.

10. Conclusion

India's telemedicine achievements, world's largest government platform, first comprehensive data law, and ambitious digital health mission, are real yet structurally incomplete. They advantage digitally embedded populations while excluding others. Evidence is clear: 33.3 per cent women versus 57.1 per cent men internet users; 9 per cent of lowest-quintile women with access; 30 per cent mobile internet gender gap (highest globally); and southern concentration of eSanjeevani use. Through feminist legal, governance, and public health analysis, this paper demonstrates these gaps are structural, not incidental. TPG (2020), ABDM, and DPDP Act (2023) encode a default male user whose circumstances differ from those of India's 700 million women. Intersectionality reveals compounded exclusion at gender-caste-class-rural nexuses. Policy treating women homogeneously serves dominant groups more than marginalised ones. Comparative evidence from Rwanda, Bangladesh, and OECD shows gender-inclusive telemedicine is achievable via demand-side investment, inclusive design, and accountability. India possesses institutional capacity and commitments (G20 Women20, WHO Strategy) for transformative reform. Required now is political will, intersectional design, and gender-disaggregated monitoring. India's demographic dividend depends on its gender dividend (UNFPA India, 2023). An exclusionary digital health ecosystem cannot achieve universal coverage or Sustainable Development Goals. Inclusive governance could realise the USD 1.3 trillion GDP gain projected from closing the mobile gender gap (GSMA, 2025). The choice concerns the digital health equity India seeks to build.

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