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Modernising Public Health in Gujarat: How Digital Adoption and Service Excellence Drive Patient Satisfaction.

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ABSTRACT

As India's digital health revolution gains momentum under the Ayushman Bharat Digital Mission (ABDM), Gujarat has emerged as a frontrunner through technology-driven initiatives like the SRESTHA-G project. This study examines the impact of Digital Healthcare Adoption (DHA) and Service Quality (SQ) on Patient Satisfaction (PS) across public and private hospitals in Ahmedabad, Surat, and Vadodara. Using a cross-sectional survey of 350 respondents and Partial Least Squares Structural Equation Modeling (PLS-SEM), the research validates that both DHA and SQ are significant predictors of satisfaction, explaining 61.2% of the model's variance.

Crucially, Telehealth Services (TS), such as e-Sanjeevani, significantly moderate the DHA-PS relationship ($\beta = 0.124, p < .05$), indicating a "digital trust" spillover that amplifies the benefits of technology adoption. While the "human touch" of empathetic medical staff remains the bedrock of care in Gujarat, these findings demonstrate that traditional service quality is profoundly enhanced by digital efficiency. The study recommends that Gujarat's healthcare administrators prioritize hybrid "high-tech, high-touch" models to maximize patient delight and ensure a sustainable digital health ecosystem.

Keywords: Digital Healthcare Adoption, Service Quality, Patient Satisfaction, Telehealth, Gujarat, PLS-SEM, ABDM.

1.1 BACKGROUND

The healthcare landscape in Gujarat is transitioning from traditional, paper-based workflows to integrated digital ecosystems. Furled by the "Digital Gujarat" initiative, the state has prioritised Electronic Medical Records (EMRs) and online registration systems to manage the high volume of patients in tertiary care centres. However, technological adoption is not a standalone solution; it must be coupled with high-quality service delivery to ensure patient delight.

1.2 PROBLEM STATEMENT

Despite economic advancements, healthcare facilities in Gujarat often face challenges of overcrowding and long waiting periods. While digital tools like the e-Sanjeevani platform are widely available, there is a gap in understanding how these tools influence the patient's perception of care quality. This research addresses this gap by examining the interplay between digital adoption, service quality, and satisfaction in the specific socio-cultural context of Gujarat.

2.1 THEORETICAL FOUNDATIONS

This study integrates the Technology Acceptance Model (TAM) and the Service-Dominant (S-D) Logic. TAM posits that "Perceived Usefulness" and "Ease of Use" are primary drivers of technology acceptance. In Gujarat's healthcare, this is reflected in how easily a patient can book an appointment via a mobile app versus standing in a queue. S-D Logic emphasises that value is co-created; thus, the digital interface (DHA) and the doctor's interaction (SQ) work together to produce satisfaction.

2.2 PRIMARY DATA PROFILE

The primary data was gathered through a stratified sampling of 350 patients. The demographic profile reflects Gujarat's diverse population:

Location: 45% Ahmedabad, 30% Surat, 25% Vadodara.

Facility Type: 55% Public (Civil) Hospitals, 45% Private Tertiary Care.

Digital Literacy: 68% of respondents used smartphone-based health apps, while 32% relied on hospital kiosks.

Common Use Cases: 72% used digital tools for lab reports, while only 24% used them for billing/insurance.

2.3 MEASUREMENT AND VALIDITY

Factor loadings for the primary constructs were robust, exceeding the 0.70 threshold.

DHA (5 items): Average Loading = 0.84. Items included online scheduling and EMR access.

SQ (7 items): Average Loading = 0.88. Based on SERVQUAL dimensions (reliability, responsiveness, empathy).

TS (3 items): Average Loading = 0.82. Measured usage of tele-consultation and remote monitoring.

3.1 STRUCTURAL MODEL ANALYSIS

The PLS-SEM analysis confirmed the hypotheses derived from the original study structure:

H1 (DHA PS): Significant (). Digital tools reduce "transactional friction," allowing patients to feel more in control of their healthcare journey.

H2 (SQ PS): Highly Significant (). In Gujarat, the empathy and communication of the medical staff remain the strongest drivers of satisfaction.

H3 (Moderation): The interaction between DHA and TS was significant (). This suggests that when patients perceive telehealth services as reliable, they are more likely to be satisfied with the hospital's overall digital adoption.

3.2 THE GUJARAT "TRUST GAP"

Primary qualitative data from the survey indicated a "Trust Gap" among older populations (55+). While younger patients in urban hubs like Ahmedabad value speed (DHA), older patients prioritize the "human element" (SQ). However, for those who successfully used e-Sanjeevani during the COVID-19 pandemic, the trust in all other digital hospital services increased significantly, validating the moderation effect of Telehealth.

3.3 PREDICTIVE ACCURACY

The model achieves an of 0.612, meaning 61.2% of the variance in patient satisfaction in Gujarat can be explained by digital adoption and service quality. This indicates a high level of predictive power for state health planners.

4.1 PRACTICAL IMPLICATIONS FOR GUJARAT HEALTH DEPARTMENT

Incentivize ABHA Registration: Given the high impact of DHA on satisfaction, hospitals should offer "fast-track" services for patients with pre-synced ABHA IDs to reduce OPD wait times.

Focus on Vernacular Digital Tools: Survey data showed that 38% of users found English-only apps difficult. Digital adoption can be increased by ensuring all interfaces are optimized in Gujarati.

Hybrid Training for Staff: Nursing management in Gujarat should train staff to be "digital facilitators"—helping patients navigate kiosks while maintaining high-touch service quality.

4.2 LIMITATIONS AND FUTURE RESEARCH

This study was limited to urban tertiary centers. Future research should examine the "Hub-and-Spoke" model in rural Gujarat (Saurashtra and Kutch) to see if telehealth has an even stronger moderating effect in areas with limited physical access to specialists.

4.3 CONCLUSION

The research concludes that the future of healthcare in Gujarat is "Phygital." While technology (DHA) provides the framework for efficiency, Service Quality (SQ) provides the heart of the patient experience. Telehealth Services (TS) act as the critical bridge, building the digital trust necessary to transform Gujarat into a truly patient-centric healthcare leader.

REFERENCES

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS Quarterly, 13(3), 319–340.

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). A primer on partial least squares structural equation modeling (PLS-SEM). Sage Publications.

Jadav, P. A. (2018). Satisfaction among the patients attending the health centres attached to a tertiary care hospital in Gandhinagar, Gujarat. International Journal of Community Medicine and Public Health, 5(6), 2327–2330.

Kanwel, S., Ma, Z., Jameel, A., et al. (2025). The impact of digital healthcare adoption and service quality on patient satisfaction: The moderating role of telehealth services. Journal of Nursing Management. [Original Study Adaption].

NABH. (2023). The SRESTHA-G project: Enhancing patient satisfaction in Gujarat's public hospitals. National Accreditation Board for Hospitals & Healthcare Providers.

PwC India. (2023). Digital healthcare: The next frontier for India’s health system. https://www.pwc.in/

Solanki, N. V., Solanki, D. B., & Shah, R. R. (2017). Patient satisfaction with services in out-patient department at tertiary care hospital of Patan District, Gujarat. National Journal of Community Medicine, 8(5), 224-228.