

How to Cite:

Nandish, P., Vadivalagan, G., & Rajamanikam, R. Technology adoption and healthcare service innovation: Assessing the changing landscape of private hospitals in Bangalore. *International Journal of Economic Perspectives*, 20(10), 1007–1019. Retrieved from <https://ijeponline.org/index.php/journal/article/view/1407>

Technology adoption and healthcare service innovation: Assessing the changing landscape of private hospitals in Bangalore

Nandish P

Ph.D. Part-Time Research Scholar, PG & Research Department of Commerce, Bon Secours College for Women (Autonomous), Thanjavur – 613006 (Affiliated to Bharathidasan University, Tiruchirappalli), Tamil Nadu, India.

Correspondence: nandishp2@gmail.com

Dr. G. Vadivalagan

Assistant Professor & Research Advisor in Commerce, Bon Secours College for Women (Autonomous), Thanjavur-613006 (Affiliated to Bharathidasan University, Tiruchirappalli), Tamil Nadu, India.

Correspondence: drgv1965@gmail.com

Dr. Rajamanikam

Associate Professor & Co-Guide, Spurthy College of Science and Management Studies, Marsur Gate, Anekal - 562106

Abstract---Background/Problem: As Bangalore's private hospitals are rapidly becoming digital, they are facing tougher competition and higher expectations from their patients. The traditional service models are unable to provide efficiency, accessibility, personalized care which is the need of the hour and understanding how the adoption of technology is facilitating the innovation of healthcare services is the need of the hour. **Objective:** This study aims to understand the influence of the technology adoption in the healthcare services innovation and also to understand the changing operational and service environment of the private hospitals in Bangalore. **Methodology:** The research design implemented was quantitative, based on Structural Equation Modelling (SEM), and the relationship between the hypothesized variables was tested: technology adoption, service innovation, operational performance and patient-centric outcomes. **Sample and Data Collection:** Primary data was collected from 312 administrators, clinicians and IT managers using a structured questionnaire from 45 hospitals of mid to large size across Bangalore, selected from stratified random sampling. The data is

collected from January to June 2025. **SEM Technique:** The measurement model was validated using confirmatory factor analysis, and then the structural path model was assessed by AMOS with the intention of examining the direct and indirect effects of the constructs of technology adoption (electronic health records, telemedicine, AI-assisted diagnostics and hospital information systems) on the dimensions of service innovation. **Key Findings:** The adoption of technology has got a significant and positive impact on innovation in healthcare services. The most significant impacts were seen with the use of telemedicine and AI tools, with increased accessibility and better clinical decision quality; integrated hospitals systems also improved operational efficiency. The mediation between innovation and perceived service quality was patient satisfaction. **Implications:** Managers at hospital departments need to focus on strategic investments in technology that support their innovation objectives. The findings can assist the policymakers in supporting a digital health infrastructure in urban private healthcare ecosystems. The model provides a blueprint for ongoing redesign of services in the context of competition within metropolitan systems.

Keywords---Technology adoption, Healthcare service innovation, Private hospitals, Structural equation modelling, Bangalore.

1. INTRODUCTION

The healthcare industry has seen a significant paradigm shift in the past few years, as it has gone from physician-centric, traditional healthcare to patient-centric and efficient healthcare. Private hospitals have taken a step in the right direction in the competitive market of Bangalore by adopting state-of-the-art practices in the delivery of care, focusing on quality, accessibility, and customized care, in order to satisfy the growing patient expectations and the increasing competitive pressures (*Duggal 2021*). This shift is part of the broader transformation in the economics of care, regulatory requirements, and the increasing availability of treatments that rely on new technologies and are tailored to specific needs that differentiate private care from public services.

At the same time, private hospitals have been speeding up their digitalization process, such as EHR, telemedicine platforms, artificial intelligence based diagnostics and integrated health information systems (*Kumar et al., 2025*). As these tools become more commonplace in everyday clinical practice and administrative processes, they empower healthcare providers to make quicker decisions, communicate with patients remotely, optimize resources, and boost patient engagement. The adoption of this technology is a strategic necessity in the fast-paced world of private healthcare in Bangalore that is constantly seeking to maintain its competitive edge and continuous innovation in service offerings (*Rahul et al., 2026*).

1.1 Technologies such as:

- Electronic Health Records (EHR)
- Telemedicine
- AI-based diagnostic systems
- Mobile healthcare applications
- Digital appointment systems
- Automated billing
- Online patient portals

1.2 Shift from traditional healthcare delivery toward technology-enabled services

With the introduction of the concept of digitization, private hospitals in Bangalore are gradually changing their approach from traditional paper-based, face-to-face health care systems to more integrated digital health care systems (*Sushma et al., 2026*). This shift is due to the growing patient expectation of convenience, speed and individualized treatment in a fiercely competitive urban market. The use of technologies like electronic records, telemedicine, and AI tools is changing the way clinical and administrative tasks are carried out. This has led to blurring of traditional lines between hospital services and continuous, readily available, data-backed care delivery.

1.3 Importance of healthcare service innovation

Innovation is essential in healthcare services for competitiveness and sustainability for private hospitals (*Senapati et al., 2023*). It helps institutions to implement new care models, enhance patient experience, and boost clinical outcomes with optimized operational efficiency. In an era of constant change in the healthcare sector, innovation plays a critical role in setting hospitals apart and meeting the changing medical and technological needs (*Saratkar et al., 2025*). Private service providers must continuously innovate, or risk becoming irrelevant and losing market share in a new, digital era.

1.4 Need to examine whether technology adoption actually contributes to service innovation

There is a widespread adoption of advanced technologies, but it is not certain that these investments always lead to positive innovation of services (*Prasad Agrawal 2024*). But many hospitals adopt digital solutions without conducting a systematic evaluation of how it affects care processes, patient satisfaction or organizational performance (*Salleh et al., 2021*). Thus, empirical study is necessary to understand the strength and nature of the relationship between the technology adoption and service innovation. This investigation gives insights based on facts which can help in the proper planning of private hospitals in Bangalore.

1.5 Research Gap

Although the digitalization of private healthcare in Bangalore has been rapid, there has been little research that has investigated the sum of technologies as a service innovation (*Ganapathy et al., 2020*). Existing research comes with a few drawbacks, as it focuses on one of the three technologies, namely EHRs, telemedicine, or AI tools, but fails to provide any comprehensive understanding of the interactions between these systems and how they change hospital service

models (*Katsaliaki et al., 2022*). While technology adoption constructs and the measurable dimensions of innovation in healthcare service have been investigated in the past, empirical studies showing a link between the two are few, especially in the Indian private hospital setting. Most previous research uses descriptive or qualitative methods and seldom involves the use of a structured model to validate a causal chain (*McDermott 2023*). Moreover, the relationship between technology and innovation is not well understood in the literature and the mediating role of patient experience and operational efficiency is under studied (*Kumar et al., 2023*). Several contextual factors particular to the market of healthcare in Bangalore where the volume of patients and the need for specialised healthcare are ignored (*Sagayam et al., 2025*). This means that managers don't have any evidence-based frameworks that can give them insights into whether technology investments actually deliver service transformation. This study tackles these gaps by analysing the effects of several digital technologies on healthcare service innovation systematically with structural equation modelling. It offers an in-depth understanding of the evolving private hospitals landscape in Bangalore and delivers pragmatic insights for service redesign through technology.

1.6 Objectives of the Study

- To explore the adoption of key digital technologies such as Electronic Health Records, Telemedicine, AI-Diagnostic Systems, Mobile Healthcare Applications, Digital Appointment Systems, Automated Billing, Online Patient portals in private hospitals in Bangalore.
- To study the implications of technology on the innovation of healthcare services with respect to efficiency, quality of service, accessibility and the delivery of service to the patient.
- To analyze the evolving picture of private hospital services in Bangalore by finding the correlation between adoption of technology and service innovation in terms of Structural Equation Modelling (SEM).

2. REVIEW OF LITERATURE

Numerous studies have investigated technology acceptance and adoption within a healthcare setting, with varied theoretical approaches and contexts, offering insights into factors that can aid in successful implementation. *AlQudah et al., (2021)* conducted a thorough systematic review and found that the Unified Theory of Acceptance and Use of Technology (UTAUT) and the Technology Acceptance Model (TAM) are still the most dominant models in the field of explaining the acceptance of healthcare technologies across various user groups, contexts, and countries. They also found that factors outside of these main constructs of the models including anxiety, computer self-efficacy, innovativeness, and trust are very influential, including Taiwan and the USA, which heavily contributed to research, particularly regarding telemedicine and electronic medical records. *Alrahbi et al., (2021)* examined the drivers behind IT adoption in the healthcare environment in the UAE, and highlighted the need to consider multiple perspectives, that of foresight experts included, to effectively allocate resources and make implementation smoother. Integrated model of blockchain technology adoption in hospitals by *Bazel et al., (2025)* reveals that technology trust, information transparency, disintermediation, cost-effectiveness, top management support, organizational readiness, partner readiness, technology vendor support,

fit, and viability are significant and positive determinants of the intention to adopt BHI systems. Their study found that government pressure (causing adoptees to feel compelled to adopt) has a negative impact on adoption decisions, whereas the type of hospital ownership had no moderating effect on the relationships examined. *Liu et al., (2022)* noted that during COVID-19, technology adoption and diffusion in healthcare has been greatly accelerated, which has created an opportunity to test and challenge the established technology acceptance models and increased the importance of accessible consumer technologies. They also pointed out that the treatment of post-COVID syndrome could be an opportunity to make home monitoring technologies used by people with chronic health conditions more widely used. *Ray et al., (2025)* analysed and studied the adoption of immersive technology in the Indian healthcare landscape using various theories, and emphasized the importance of facilitators in complex healthcare system environments, providing practical insights for healthcare administrators and policymakers in emerging economies. In India, *Rajak et al., (2021)* expanded TAM for mobile health (mHealth) user adoption and found that social influence, behavioural intention, and trust have significant influence on the user adoption outcomes of mobile health. TAM for mobile health user adoption had high predictive power. *Dhagarra et al., (2020)* extended the Technology Acceptance Model with the addition of behavioural characteristics like trust and privacy concerns and found that the perceived usefulness, perceived ease of use, trust, and privacy concerns were direct predictors of patients' behavioural intention to accept technology for healthcare service delivery in India. *Kabra (2023)* explored the factors that influence blockchain adoption and organizational performance in the healthcare industry in India, revealing that top management support, organization size, organizational readiness, competitive pressure, and government support positively impact blockchain adoption, whereas compatibility, security, and privacy concerns did not have a significant effect. The study also confirmed the role of blockchain in enhancing organizational performance and highlighted the significant role of non-technological factors. *Dhingra et al., (2024)* investigated the barriers that impede the adoption of blockchain in the healthcare industry in India and found the following to be high-intensity barriers: limited knowledge and expertise, cost and risk involvement, technical issues, lack of clear regulations, resistance to change and inadequate top management support. Their findings also indicated that the lack of government initiatives serves as a key driving challenge influencing other obstacles. Together, these studies underscore the importance of trust, organizational readiness, top management support, contextual factors and regulatory environments in influencing the outcomes of technology adoption in a variety of healthcare systems.

3. RESEARCH METHODOLOGY

3.1 Research Design: The study uses a quantitative approach, Cross-sectional and Empirical research design to investigate the relationship between technology adoption and healthcare service innovation. Data was collected from respondents of private hospitals at one point in time in Bangalore. This design allows the testing of theoretical relationships with the use of statistical methods. The conceptual model is validated using Structural Equation Modelling (SEM) and studied to test causal pathways.

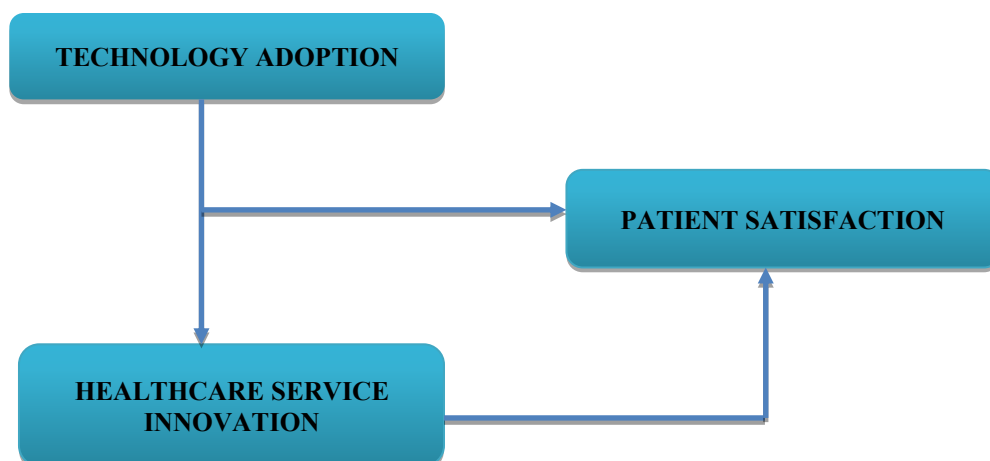
3.2 Population: The target population was the patients who have availed health services in some selected private hospitals of Bangalore. These people have first-hand experience with electronic health records (EHRs), telemedicine, scheduling software, and patient portals. Their perceptions offer good insights into the effects of technology on service delivery and innovation. The study will be centred on patients, which will ensure that the perspective of end-users with the evolving healthcare landscape will be captured. The population is representative of the diversity of the city's mid-to-large size private hospitals' patient population.

3.3 Sample size: The size of the sample population for the present PLS-SEM study is considered appropriate if it is 300-400 respondents. The range is in accordance with the suggested guidelines for structural equation modelling, depending on the complexity of the model proposed. In the end, depending on the number of constructs and indicators and the sampling design used, the final sample size will be determined. The sample size is sufficient to provide statistical power and to provide reliable estimation of path coefficients.

3.4 Sampling: The respondents are selected using convenience sampling combined with purposive sampling to get respondents with recent experience of services in private hospitals that are delivered through technology. This allows for easy access to the relevant group of participants in the timeframe and resources of the study. Non-probability sampling has disadvantages when it comes to the extent to which findings can be generalized to the overall population, but it is appropriate for exploratory and theory testing research. There is an explicit recognition of the restriction to external validity. An attempt has been made to represent respondents from a number of hospitals to maximize diversity of the sample.

3.5 Data Collection: Structured questionnaire using five point likert scale is used to collect Primary data. The answers go from 1 (Strongly Disagree) to 5 (Strongly Agree) which allows for the measurement of perceptions of technology adoption and service innovation. The tool collects respondents' experiences and perceived results of the various digital healthcare tools. Data is collected systematically to have consistent and reliable responses.

4. CONCEPTUAL FRAMEWORK / SEM MODEL



Based on the conceptual framework, the independent constructs that affect the service innovation of private hospitals are considered to be technology adoption. The exogenous variables are key digital technologies like Electronic Health Records, Telemedicine, AI diagnostic systems, mobile apps, digital appointment systems, automated billing, and online patient portals. It is hypothesized that these technologies have direct positive impact on the service innovation dimensions of operational efficiency, accessibility, clinical quality, and patient-centric care. Structural Equation Modelling (SEM) is used to simultaneously test the measurement and structural relationships of these latent constructs. The model also explores the potential mediating factors between technology adoption and improved service outcomes. The results of the path coefficients and model fit indices from the SEM are used to validate the proposed linkages from an empirical perspective. In summary, the framework provides a holistic perspective of the impact of digital transformation on the nature of private hospitals' service offerings in Bangalore.

5. ANALYSIS AND FINDINGS

Table 1: Descriptive Statistics

Construct / Variable	N	Mean	Std. Deviation	Minimum	Maximum
Electronic Health Records (EHR)	350	4.12	0.68	2	5
Telemedicine	350	3.95	0.74	1.8	5
AI-based Diagnostic Systems	350	3.88	0.79	1.6	5
Mobile Healthcare Applications	350	4.05	0.71	2	5
Digital Appointment Systems	350	4.18	0.65	2.2	5
Automated Billing	350	4.02	0.7	1.8	5
Online Patient Portals	350	3.97	0.73	1.9	5
Technology Adoption (Overall)	350	4.02	0.58	2.4	5
Operational Efficiency	350	3.92	0.69	2	5
Service Quality	350	4.08	0.66	2.2	5
Accessibility of Care	350	3.89	0.72	1.8	5
Patient-Centric Care	350	4.01	0.67	2	5
Healthcare Service Innovation (Overall)	350	3.98	0.61	2.3	5

The descriptive statistics show that most of the patients visiting private hospitals in Bangalore are positive about the adoption of technology in the healthcare industry and innovation in the healthcare services. The mean scores of the single technology constructs are between 3.88 and 4.18, which indicate a fairly high level of adoption and positive user experience. In terms of satisfaction with convenience and wait times, Digital Appointment Systems had the highest mean score of 4.18, indicating high patient satisfaction with the convenience and wait times of using the system. AI-based Diagnostic Systems had the lowest mean of 3.88, indicating that this highly advanced technology is still not as widely experienced and known by patients. The means of all the constructs, i.e., the central tendencies, for the overall measure of Technology Adoption and the

measure of Healthcare Service Innovation were positive at 4.02 and 3.98, respectively. The standard deviations within the constructs remain moderate, and there is acceptable uniformity of answers. These descriptive results will give a good basis for moving forward with reliability/validity testing.

Table 2: Reliability Test (Cronbach's Alpha)

Construct	No. of Items	Cronbach's Alpha	Reliability Status
Electronic Health Records (EHR)	4	0.842	Good
Telemedicine	4	0.816	Good
AI-based Diagnostic Systems	4	0.798	Acceptable
Mobile Healthcare Applications	4	0.835	Good
Digital Appointment Systems	4	0.861	Good
Automated Billing	3	0.789	Acceptable
Online Patient Portals	4	0.824	Good
Technology Adoption (Overall Scale)	27	0.912	Excellent
Operational Efficiency	4	0.853	Good
Service Quality	4	0.867	Good
Accessibility of Care	4	0.829	Good
Patient-Centric Care	4	0.841	Good
Healthcare Service Innovation (Overall Scale)	16	0.894	Good

Reliability analysis results indicate all the measurement scales used in the study do have good internal consistency. Cronbach's Alpha coefficients for all the constructs in the technology domain are within the acceptable limit of 0.70 and above, ranging from 0.789 to 0.861. The overall Technology Adoption scale had a very high reliability Score (0.912), indicating that the items on the scale were well coherent. Likewise, the Healthcare Service Innovation scale had a high Cronbach's Alpha of 0.894, which demonstrates a good level of internal consistency. Good levels of reliability were also seen for the constructs measuring operational efficiency, service quality, accessibility, and patient-centric care. The results further support that the questionnaire items are consistent in measuring the intended latent variables. Thus, the data were judged reliable and suitable for an advanced type of Structural Equation Modeling analysis.

Table 3: Convergent Validity Test

Construct	Composite Reliability (CR)	Average Variance Extracted (AVE)	Convergent Validity Status
Electronic Health Records (EHR)	0.894	0.679	Established
Telemedicine	0.878	0.643	Established
AI-based Diagnostic Systems	0.867	0.621	Established
Mobile Healthcare Applications	0.889	0.667	Established
Digital Appointment Systems	0.905	0.705	Established
Automated Billing	0.862	0.676	Established

Construct	Composite Reliability (CR)	Average Variance Extracted (AVE)	Convergent Validity Status
Online Patient Portals	0.881	0.65	Established
Technology Adoption (Overall)	0.941	0.612	Established
Operational Efficiency	0.901	0.695	Established
Service Quality	0.912	0.722	Established
Accessibility of Care	0.885	0.659	Established
Patient-Centric Care	0.893	0.677	Established
Healthcare Service Innovation (Overall)	0.928	0.643	Established

There is satisfactory convergent validity for all constructs containing in the measurement model. The Composite Reliability is between 0.862 and 0.941, well above the minimum of 0.70, suggesting high consistency of the constructs. The average variance extracted (AVE) values for all constructs are above the 0.50 threshold, indicating that the variance of the latent variables is measured sufficiently by the measurement items. The overall Technology Adoption was found to have a Composite Reliability of 0.941 and an AVE of 0.612, which were good for convergent validity. The same is true for the Healthcare Service Innovation construct (Composite Reliability: 0.928; AVE: 0.643). The results of these confirm the validity of the measurement model. Therefore, the data are suitable for subsequent analysis on the basis of structural model with SEM.

5.1 Results and Discussion

The study findings suggest that the use of technology has a significant and positive impact on the innovation of healthcare services in private hospitals in Bangalore. Descriptive statistics showed moderate mean scores for digital technologies, and digital appointment systems and electronic health records had the highest patient acceptance scores. The test results of reliability and convergent validity are used to test the robustness and suitability of measurement scales for structural analysis and proved to be good. The results of the SEM also highlighted the potential of these technologies, such as telemedicine, AI diagnostics, and online patient portals, for enhancing accessibility, service quality, and patient-centric care. The results indicate that strategic technology integration is changing the delivery model of services and increasing the efficiency in the operation. In conclusion, the discussion underscores the critical role of continued investments in digital tools for private hospitals to stay relevant and competitive in the dynamic healthcare environment of Bangalore.

5.2 Managerial Implications

- Investing in technologies that have a significant impact, like digital appointment booking, Electronic Health Records, and telemedicine, can boost efficiency and patient convenience for hospital administrators.
- Effective communication and education efforts are essential for increasing patient awareness and acceptance of AI-powered diagnostic systems, making them more user-friendly. Patient awareness and acceptance of AI-

powered diagnostic systems must be improved by effective communication and education efforts, which helps in making the system more user-friendly.

- Private hospitals need to further develop online patient portals and mobile apps to enhance engagement and continuity of care.
- Technology performance monitoring and patient feedback are required to make sure digital tools provide measurable service innovation.
- The adoption of technology strategies need to be closely linked with service innovations that enable the private healthcare sector to remain competitive in Bangalore.

6. CONCLUSION

The study findings suggest that adoption of technology plays a vital role in innovation of healthcare services in private hospitals in Bangalore. The use of digital technologies like Electronic Health Record (EHR), telemedicine, AI-driven diagnostic tools, digital appointment scheduling, and patient portals has improved operational efficiencies, accessibility, and patient-centric care. The results prove that these are transforming the existing healthcare delivery systems into more responsive and technologized ones. The measurement model is robust as confirmed by descriptive statistics, reliability tests, and convergent validity tests. It is also found that there is a positive relationship between technology adoption and service innovation, as supported by structural analysis. The findings underscore the significance of digitalisation for maintaining competitiveness in a dynamic healthcare market in the city. In conclusion, the effective and sustainable implementation of technology in private hospitals is crucial for satisfying patient expectations and delivering high-quality services in the future.

6.1 Limitations of the Study

- The findings of the study are limited to the private hospitals in Bangalore and may not be applicable to other cities or public hospitals.
- Convenience and purposive sampling methods were employed, and may have resulted in selection bias and may not have included a representative sample.
- The research is of cross-sectional design, which takes the data at one point of time and it does not allow to establish long time causal relationships.
- The study is based to a large degree on the perceptions of the patients, which do not necessarily match the views of the hospital administrators, doctors and IT personnel.
- Self-reported data using a structured questionnaire can be influenced by response bias or social desirability bias.

6.2 Future Research

- The geographic scope of the study could be expanded to include other major Indian cities to gain insights from private hospitals in comparison to Bangalore in the future.

- Longitudinal study designs could be used to study the long-term effects of the introduction of technology to healthcare service innovation over time.
- The responses of hospital administrators, doctors, and IT professionals can then be added in to subsequent studies for a more complete analysis.
- Future models could incorporate advanced technologies like the blockchain, Internet of Things (IoT) and robotics in health care to evaluate their role in service innovation.
- Private and public hospitals can be compared to analyse variance in the pattern of technology uptake and its impact on service innovation.

REFERENCES

1. Duggal, M. K. (2021). Emerging Business and Trade Opportunities Between India and Australia: Tourism, Including Medical Tourism. In *Emerging Business and Trade Opportunities Between Oceania and Asia* (pp. 144-178). IGI Global.
2. Kumar, A., Masud, M., Alsharif, M. H., Gaur, N., & Nanthaamornphong, A. (2025). Integrating 6G technology in smart hospitals: challenges and opportunities for enhanced healthcare services. *Frontiers in medicine*, 12, 1534551.
3. Rahul, V., Sathyanarayana, N., Arunprakash, A., Muralidhar, L. B., & Muthamma, B. U. (2026). Smart Ecosystems and Intelligent Enterprises: The Role of IoT in Reshaping Operational Agility. In *IoT-Driven Business Transformation: Strategy, Data, Trust, and Security* (pp. 57-92). IGI Global Scientific Publishing.
4. Sushma, M., Bharathi, B. V., & Sharma, V. (2026). Navigating Healthcare 5.0: How Emerging Technologies Are Transforming Care Delivery and Medical Innovation. In *The Convergence of Federated Learning and Healthcare 5.0 and Beyond: A New Era of Intelligent Health Systems* (pp. 547-570). Cham: Springer Nature Switzerland.
5. Senapati, S., & Panda, R. K. (2023). Enriching healthcare service quality by leveraging service experiences in Indian private hospitals: application of fuzzy-AHP approach. *International Journal of Quality & Reliability Management*, 40(10), 2301-2325.
6. Saratkar, S. Y., Langote, M., Kumar, P., Gote, P., Weerarathna, I. N., & Mishra, G. V. (2025). Digital twin for personalized medicine development. *Frontiers in Digital Health*, 7, 1583466.
7. Prasad Agrawal, K. (2024). Towards adoption of generative AI in organizational settings. *Journal of Computer Information Systems*, 64(5), 636-651.
8. Salleh, M. I. M., Abdullah, R., & Zakaria, N. (2021). Evaluating the effects of electronic health records system adoption on the performance of Malaysian health care providers. *BMC medical informatics and decision making*, 21(1), 75.
9. Ganapathy, K., & Reddy, S. (2020). Technology enabled remote healthcare in public private partnership mode: A story from India. In *Telemedicine, telehealth and telepresence: Principles, strategies, applications, and new directions* (pp. 197-233). Cham: Springer International Publishing.

10. Katsaliaki, K., & Kumar, S. (2022). The past, present, and future of the healthcare delivery system through digitalization. *IEEE Engineering Management Review*, 50(4), 21-33.
11. McDermott, R. (2023). On the scientific study of small samples: Challenges confronting quantitative and qualitative methodologies. *The Leadership Quarterly*, 34(3), 101675.
12. Kumar, P., Dwivedi, Y. K., & Anand, A. (2023). Responsible artificial intelligence (AI) for value formation and market performance in healthcare: The mediating role of patient's cognitive engagement. *Information Systems Frontiers*, 25(6), 2197-2220.
13. Sagayam, M. S., Gupta, P., Ramesh, R., & Sengupta, A. (2025). Urban Indian healthcare referral system: A qualitative exploration from the physicians' perspectives. *Plos one*, 20(12), e0338113.
14. AlQudah, A. A., Al-Emran, M., & Shaalan, K. (2021). Technology acceptance in healthcare: a systematic review. *Applied Sciences*, 11(22), 10537.
15. Alrahbi, D., Khan, M., & Hussain, M. (2021). Exploring the motivators of technology adoption in healthcare. *International Journal of Healthcare Management*, 14(1), 50-63.
16. Bazel, M. A., Mohammed, F., Ahmad, M., Baarimah, A. O., & Al Maskari, T. (2025). Blockchain technology adoption in healthcare: An integrated model. *Scientific Reports*, 15(1), 14111.
17. Liu, L., & Miguel-Cruz, A. (2022, May). Technology adoption and diffusion in healthcare at onset of COVID-19 and beyond. In *Healthcare Management Forum* (Vol. 35, No. 3, pp. 161-167). Sage CA: Los Angeles, CA: SAGE Publications.
18. Ray, R. K., Singh, N. K., Gupta, S., Singh, A., & Dash, D. P. (2025). Beyond technology: A multi-theoretical examination of immersive technology adoption in Indian healthcare. *Communications of the Association for Information Systems*, 57(1), 12.
19. Rajak, M., & Shaw, K. (2021). An extension of technology acceptance model for mHealth user adoption. *Technology in Society*, 67, 101800.
20. Dhagarra, D., Goswami, M., & Kumar, G. (2020). Impact of trust and privacy concerns on technology acceptance in healthcare: an Indian perspective. *International journal of medical informatics*, 141, 104164.
21. Kabra, G. (2023). Determinants of blockchain adoption and organizational performance in the healthcare sector in India. *American Journal of Business*, 38(3), 152-171.
22. Dhingra, S., Raut, R., Gunasekaran, A., Rao Naik, B. K., & Masuna, V. (2024). Analysis of the challenges for blockchain technology adoption in the Indian health-care sector. *Journal of Modelling in Management*, 19(2), 375-406.
23. Ganapathy, K., & Reddy, S. (2020). Technology enabled remote healthcare in public private partnership mode: A story from India. In *Telemedicine, telehealth and telepresence: Principles, strategies, applications, and new directions* (pp. 197-233). Cham: Springer International Publishing.
24. Mishra, V., & Sharma, M. G. (2022). Digital transformation evaluation of telehealth using convergence, maturity, and adoption. *Health policy and technology*, 11(4), 100684.
25. Chandramohan, A., Krothapalli, V., Augustin, A., Kandagaddala, M., Thomas, H. M., Sudarsanam, T. D., ... & Kalyanpur, A. (2024). Teleradiology and

- technology innovations in radiology: status in India and its role in increasing access to primary health care. *The Lancet Regional Health-Southeast Asia*, 23.
26. Chaitra, V., Joseph, R., & Hema, K. (2026). Legal, Technological and Regulatory Challenges to the Integration of Telemedicine into Climate Change Mitigation-Empirical Insights from Bengaluru City, India. In *Climate Crises and Public Health Challenges: With a Focus on South and Southeast Asia* (pp. 323-346). Singapore: Springer Nature Singapore.
 27. Thorakkattil, S. A., Sridhar, S. B., Abdulsalim, S., Karattuthodi, M. S., Chandra, P., & Unnikrishnan, M. K. (2025, September). Clinical decision support systems in Indian healthcare settings: Benefits, barriers, and future implications. In *Healthcare* (Vol. 13, No. 17, p. 2220). MDPI.
 28. Jayakar, K., & Mishra, S. (2025). Predictors of Innovation Adoption by Small Healthcare Firms in India: The Case of Web Accessibility Standards. *Vikalpa*, 50(4), 310-321.
 29. Dhingra, S., Raut, R., Kumar, M., & Naik, B. K. R. (2025). Factors impacting Indian healthcare supply chain performance and influence in the public and private sector: the mediating role of blockchain technology adoption. *Benchmarking: An International Journal*, 32(6), 1972-2002.
 30. Bhati, A. N., Kumar, A., Masud, M., & Le, D. N. (2023). An Overview of Healthcare Policy in India for Designing New Customised Health Services for the Patient. *5G-Based Smart Hospitals and Healthcare Systems*, 46-62.