

DIGITAL HEALTH FOR SUSTAINABLE RURAL DEVELOPMENT: A TECHNOLOGY ACCEPTANCE PERSPECTIVE TOWARD BUILDING AN IDEAL PLANET

SAPTAPARNI ROY CHOWDHURY*

The collaboration of electronic health technologies among the rural population has popped up as a pivotal thought for gaining sustainable healthcare leading to inclusive growth. Though, the acceptance of these trends is largely dependent on consumer's technological adoption and socio-cultural background. This review scrutinizes the importance of the Technology Acceptance Model (TAM) in precepting rural people's behavioural tendency towards e-health adoption. This paper highlights the way factors of TAM model affects the rural consumer's digital healthcare adoption, depending on multidisciplinary review of literature across healthcare innovation, sustainability, and rural development. It further traverses the integration of innovation, culture and socio-cultural infrastructure in moulding the acceptance. This explanation highlights directing policies, social participation and digital equity as crucial pathways to realize an inclusive, sustainable healthy planet.

Introduction

Sustainability now a days has become a global goal in policy making and research, asking for combined solutions among economic, social and environmental fields. Among all these, sustainability of healthcare, particularly in rural areas construct the stepping stone of an inclusive “ideal planet.” In spite of international progress, approximately 50% of the world’s inhabitants still are in accessible of crucial healthcare services¹. In Indian rural contexts, infrastructure barriers, limited medical professionals and socio-economic challenges becomes the bottleneck².

The evaluation of online health innovations including the Ayushman Bharat Digital Mission (ABDM) in India, plans to innovate an inclusive e-health biosphere that fastens rural patients, healthcare professionals and administrators through digital platforms³. Though, the availability of online tools does not warranty their usage.

The Technology Acceptance Model (TAM)⁴, reveals an eye-opening lens to explain the way consumers perceive, assess and adopt technological emergence. This paper shows subsist literature to investigate the way TAM factors perceived utility, user friendliness, attitude toward usage and intention to behave affect the acceptance of online health infusion for rural sustainability development.

Literature Review

Online Health and Sustainable Rural Development: E-health displays an integration of healthcare, information and communication technology and viability⁵. Studies have indicated the contribution of telemedicine and mHealth applications in achieving sustainable rural healthcare systems⁶. In India, initiatives such as e-Sanjeevani⁷ and solar-powered rural health centres and kiosks of m-health initiated the sustainable integration of environmental and healthcare⁸.

Technology Acceptance Model in Healthcare: The model states that two key determinants, Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) decode

* Assistant Professor Department of Hospital Management, Brainware University, Kolkata, India
e-mail: saptaparni15@gmail.com

consumer's behavioural intention to accept the technology, which is further extended to TAM2, TAM3 and UTAUT⁹. In electronic health records¹⁰, telemedicine¹¹, and mobile health apps TAM has been widely used.

Cultural and Socio-Legal Contexts: Limitation to online consultations because of trust issues or inclination for personal interaction has been stated in several studies¹². Socio-legal substructure, with data isolation laws and telemedicine guidelines, influence confidence and system sustainability of the consumer¹³.

Triple-Bottom-Line Approach for sustainability: Economic, cultural and environmental merged dimensions is essential in explaining sustainable result of rural healthcare systems¹⁴. Economic, social and environmental sustainability can be improved by aligning digital health solutions

Methodology

A total of 103 studies were reviewed, which included qualitative and integrative approach, deriving secondary data from Scopus, PubMed, and Google Scholar databases, where, peer-reviewed publications between 2010 and 2024 were focused on the convergence of e- health and rural sustainability.

Discussion

Factors Influencing Technology Adoption in Rural Healthcare: In the scenario of rural healthcare, Perceived Usefulness (PU) explains the ability to which online health forums upgrade access to good quality medical care. Researches revealed that rural area consumers are more noticed to accept it because of its reduction of travel time (Kumar et al., 2022). Perceived Ease of Use (PEOU) is equally crucial [15]. It is noticed that Trust and Facilitating Conditions, extensions of TAM are also unavoidable in rural environments in adoption of the technology. Sustainable rural healthcare donates positively to SDG 3 (Health and welfare) and SDG 9 (Industry, Revolution and Infrastructure). The amalgamation of technological health not only facilitates but also limits stress by limiting emissions related to travel, which leads to an ideal planet depending on inclusivity, equity and sustainability.

Conclusion

By bridging gaps in accessing healthcare and inclusivity, digital healthcare in transforming the rural healthcare scenario, depending on technological acceptance, cultural integration and socio-legal empowerment. The model of TAM provides a multidisciplinary structure to explain consumer behaviour

and design strategies for rural populations. Forming an ideal planet, needs a multidimensional approach, capitalize science for alteration for social cohesion and implementing legal regime for digital conversion. Focusing on community participation, spreading e-literacy and securing trust turning e- health into an ideal impetus for international sustainability.

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Appendix

This research is interpreted from PubMed, Scopus and Google Scholar, securitizing 48 studies (2010–2024) on e-health adoption in rural contexts. Key concepts involved health technologies, TAM and sustainability constructs plus infrastructure, literacy and management support for explaining rural digital health adoption. □

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