

Bridging the Healthcare Gap by Enhancing Rural Well-Being in Sri Lanka Through Digital Innovation and User-Centric Solutions: ‘SahanaSuwa’

M.P. Pushpakumara, K.P.S.D. Karunanayaka, L.H.D. Kavinda, K.K.H.S. Ellawala,
B.M.G.S.T.S.K. Wickramasinghe*

The Open University of Sri Lanka, Nawala, Nugegoda, 11222, Sri Lanka
**bmwic@ou.ac.lk*

In Sri Lanka, nearly 30% of the rural population experiences significant barriers to accessing quality healthcare, disproportionately affecting the elderly, persons with disabilities, and low-income families. Ensuring equitable healthcare access and promoting well-being is essential for sustainable development. This study aims to address this gap by exploring how digital innovation and user-centered design can support inclusive healthcare delivery in underserved regions such as the North Central and Sabaragamuwa provinces. The study followed a qualitative exploratory design. Semi-structured interviews were conducted with a total of 100 participants, including rural residents, healthcare professionals, and community volunteers. The participants were selected using purposive sampling to ensure representation from various stakeholder groups. The data collected were analyzed using thematic analysis to extract key insights related to challenges in healthcare access, user experience needs, and potential digital interventions. Findings revealed that the major barriers to healthcare access include the uneven distribution of primary healthcare services, low digital literacy, and limited understanding of healthcare systems among rural populations. Based on these insights, a digital solution named ‘SahanaSuwa’ was conceptualized. ‘SahanaSuwa’ is a web-based and mobile-accessible platform that facilitates low-cost and accessible healthcare delivery through features such as virtual clinics, online chat consultations with certified professionals, and scheduling tools for community health programs. The platform also supports community engagement by enabling volunteer participation and donations while offering skill development opportunities for health volunteers. ‘SahanaSuwa’ uses a user-centric design approach to personalize services according to geographic and demographic needs, improving both communication and trust between patients and healthcare providers. This study concludes that integrating modern digital solutions with grassroots healthcare efforts can significantly improve healthcare access, education, and engagement in rural Sri Lanka. The proposed solution offers a scalable, sustainable model for other underserved regions facing similar challenges.

Keywords: Rural healthcare, digital innovation, user experience (UX) engineering, accessible healthcare, SahanaSuwa