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THE USE OF DIGITAL TECHNOLOGIES TO IMPROVE EARLY DIAGNOSIS AND INTERVENTION IN WOMEN'S HEALTH IN UNDERSERVED COUNTRIES, THEREBY REDUCING HEALTHCARE DISPARITIES [ABSTRACT]

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ABSTRACT

Aim/Purpose	This study aims to evaluate the effect of digital health technologies on women's health for early diagnosis and intervention in underserved countries. To understand how these technologies can improve access to healthcare, promote preventive care and personalized health monitoring, reduce healthcare disparities, empower women, and support gender equality by facil-
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	itating health education, skill acquisition, social engagement, and affordable healthcare support.
Background	There's a critical lack of women's health data from clinical trials, medical records, and research studies, shaping how we understand, treat, and care for the women's body. In underserved countries, where populations face economic, social, and infrastructural barriers, women often lack access to quality healthcare, increasing their risk of high mortality. Digital health technologies (DHTs) can enhance healthcare delivery by improving access, promoting preventive care, and supporting health education. However, these technologies are not equitably accessible, with vulnerable groups, including women, older people, and those with low socioeconomic status, often excluded due to limited internet access and digital skills.
Methodology	This study used a qualitative and quantitative analyses research design. Consequently, a scoping review was performed focusing on woman's health in low- and middle-income countries using digital technologies to ensure inclusive participation, barrier mitigation, and equitable access, promotion of women's health, empowerment, and gender equality worldwide.
Contribution	This paper contributes to the body of knowledge by evaluating the scientific literature on the association between digital technologies and women's health promotion, gender equality, and empowerment globally. It shows how focusing on making digital health technologies easier and more affordable for women in underserved communities is important. To improve digital skills so more women can use these technologies confidently. Researchers should examine how cultural and social barriers affect women's access to digital health services. The significance of protecting women's data privacy and ensuring safe use of these technologies. In addition, it shows how active involvement of women in the design and evaluation of digital health technologies makes interventions more responsive to their unique health needs and social engagement.
Findings	The findings show that digital technologies significantly improve women's health outcomes when inclusive participation, equitable access, and barrier mitigation are ensured. Interventions addressing cost, digital literacy, limited connectivity, and restrictive gender norms reduce disparities in access to health information and services. The convergence of inclusive participation and equitable access positions digital health as a powerful tool for enhancing women's health and advancing gender equality. However, obstacles such as low digital literacy, limited access to devices, cultural and social norm, and policy-related obstacles may limit equitable access and overall effectiveness.
Recommendations for Practitioners	For practitioners, this study recommends actively involving women in the design and evaluation of digital health technologies to ensure responsiveness to their needs. It advises implementing interventions that address barriers like cost, digital literacy gaps, connectivity issues, and restrictive gender norms. Additionally, it emphasizes supporting digital health technologies with policies that ensure affordability, protect data privacy, and promote gender-inclusive design.
Recommendations for Researchers	Future studies should create and test digital health programs that fit the needs of underserved communities and study their long-term effects on women's health, empowerment, and gender equality.

Impact on Society	The impact on society includes better health outcomes for women around the world, increased empowerment and social engagement, reduced health gaps, and progress in gender equality across different communities. The study shows that digital health technologies can be an effective tool for fair healthcare delivery and overall societal well-being.
Future Research	Future research should look at the long-term effects of digital health technologies on women's health, empowerment, and gender equality.
Keywords	health disparities, digital health technologies, women's health, gender equality and underserved countries

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Angela Wells is a distinguished scholar, innovator, and internationally acclaimed project coordinator. She possesses a Master of Computer Science from LSU Shreveport, Master of Business Administration (MBA) with specialization in Health/Health Care Administration/Management from Ashford University. In her quest for growth and development, she attended Harvard University for a specialized training at The Harvard Medical School and was certified with Advanced Teaching Skills certificate in 2016. Professionally, she is a Certified Project Management Professional, an Ethics Training for Public Servants Certified, Mediation Worlds, PLLC certified on Basic Mediation, Certified DevOps/Cloud Engineer, and Certified Fraud Examiner. Prof. Angela is an associate faculty (MBA Healthcare Administration) at the City University of Seattle and a visiting lecturer at CETYS University. Her career has been a journey from Education sector to medical sector to Computing and AI application and integration sector. She is passionate about women healthcare, robotics, and deployment of AI solutions across underserved communities.



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Courage Lekpa David is a registered nurse/midwife dedicated to providing compassionate, evidence-based care to people who are in need of it. Having obtained a Masters Degree in Midwifery, she extended her care to women through every stage of their lives. With a career spanning almost 10 years, she developed a deep expertise in navigating the complexities of female physiology, reproductive health, and the emotional transitions that accompany them. She specializes in gynecological screening, hormonal health and reproductive education. Her goal is to ensure that every woman she treat feels heard, respected, and equipped with the knowledge to manage her own healthcare journey.



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Elizabeth Omotoye is a healthcare scholar and doctoral candidate in Business Administration with specialization in Healthcare Administration at the University of the Cumberland. She earned her Master of Public Health through a joint program between Louisiana State University Shreveport and LSU Health Shreveport's School of Allied Health Professions and holds a bachelor's degree in microbiology. She has served as a Clinical Research Coordinator at Advocate Health, supporting NIH-funded clinical trials in aging and dementia prevention. Her research focuses on digital health equity, telemedicine utilization, and healthcare disparities, with an emphasis on improving access for underserved populations.



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