Conference Proceedings By
United Research Forum, London, UK

ORGANIZED BY
UNITED RESEARCH FORUM
(CONNECT WITH RESEARCH WORLD)

9th World Congress on
Public Health and Global Awareness
August 21-22, 2026 | Singapore



Grace Hicks

Liverpool John Moores University|UNICAF, UK

THE ROLE OF DIGITAL HEALTH TOOLS IN BRIDGING HEALTH INEQUALITY GAPS AMONG VULNERABLE WOMEN IN AFRICA: A SCOPING REVIEW

Background
Sub-Saharan Africa accounts for approximately 70% of global maternal deaths, with a maternal mortality ratio of 531 per 100,000 live births, over 50 times that of high-income countries. Despite rapid growth in digital health initiatives, vulnerable women remain consistently underserved. Studies say women are 36% less likely than men to use mobile internet. The relationship between digital health tools and health inequalities for vulnerable women in Africa is complex, bidirectional, and insufficiently mapped. This scoping review aimed to map the existing evidence and identify key barriers, facilitators, and knowledge gaps

Methodology
The scoping review followed the established methodological frameworks and PRISMA for Scoping Reviews. A Population, Concept, Context search was performed across five databases. A total of 2,104 records were identified; following deduplication and two-stage screening, 15 studies met the inclusion criteria. Data were extracted using a standardised charting form and analysed using six-phase thematic analysis.

Results
Fifteen studies across nine African countries (2015–2025) were analysed which generated 87 codes that were synthesised into five overarching themes: (1) the digital divide as a health inequality; (2) gendered power and cultural barriers; (3) network connectivity, infrastructure, and poverty; (4) community-centred design and human infrastructure; and (5) intersecting vulnerabilities and the limits of mobile health. Across the included studies, phone exclusion was associated with significantly lower odds of antenatal care attendance, skilled birth attendance, and modern contraceptive use. Poor network connectivity was the most frequently reported barrier, cited in nine of 15 studies. Bidirectional, community-embedded programmes demonstrated higher effectiveness than unidirectional technology-only approaches. Women with disabilities and displaced women were systematically absent from programme designs across the included literature.

Conclusions
Digital health tools can reduce health inequalities for vulnerable women in Africa when structural conditions such as equitable phone access, community infrastructure, gender-responsive design, and reliable connectivity are in place. Without meeting these conditions, digital health risks deepening existing inequalities. No included study measured the impact on maternal mortality, a critical evidence gap. Future research should prioritise outcomes, include women with disabilities, and expand geographic coverage. Policymakers should consider pairing digital health investment with infrastructure development, female digital literacy, and gender-transformative community engagement.

Keywords: digital health; mHealth; health inequalities; vulnerable women; Africa; gender digital divide; maternal health; scoping review; mobile phone access

ISBN: 978-1-917892-54-4