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DIGITAL HEALTH TOOLS FOR BREASTFEEDING MOTHERS: A COMPARATIVE REVIEW BETWEEN NIGERIA AND THE US

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ABSTRACT

This comparative review evaluates and compares the impact and adoption of mobile apps and digital platforms, including Babyroo, in supporting breastfeeding mothers in Nigeria and the US. Breastfeeding is crucial for infant health and development, yet many mothers face challenges and require support. Digital health tools, such as mobile apps and online platforms, offer a promising solution to provide information, guidance, and support to breastfeeding mothers. Nigeria and the US were chosen for comparison due to their different healthcare systems, cultural norms, and levels of technological adoption. The review examines the features, accessibility, and effectiveness of digital health tools, particularly Babyroo, in supporting breastfeeding mothers in both countries. The findings reveal that digital health tools play a significant role in supporting breastfeeding mothers in both Nigeria and the US. Babyroo, in particular, offers a range of features such as breastfeeding tips, tracking tools, and online communities for mothers to connect and share experiences. However, the adoption of these tools varies between the two countries. In Nigeria, where access to healthcare services is limited, digital health tools like Babyroo can bridge the gap

and provide essential support to breastfeeding mothers. In contrast, in the US, where healthcare services are more accessible, digital health tools serve as a supplement to traditional healthcare services, offering convenience and additional resources for breastfeeding mothers. Overall, the review highlights the potential of digital health tools, such as Babyroo, in supporting breastfeeding mothers globally. However, it also emphasizes the importance of context-specific approaches and the need for further research to understand the impact and effectiveness of these tools in different cultural and healthcare settings.

Keywords: Digital Health, Tools, Breastfeeding, Mothers, Comparative.

INTRODUCTION

Breastfeeding is a vital aspect of infant health and development, providing essential nutrients and antibodies that protect against infections and diseases. Despite its importance, many mothers face challenges and barriers to successful breastfeeding, such as lack of information, support, and resources (Lokossou, et. al., 2022, Ogundipe, et. al., 2024). In recent years, digital health tools have emerged as a promising solution to provide breastfeeding mothers with the support and guidance they need. Digital health tools, including mobile apps and online platforms, offer a wide range of features to support breastfeeding mothers, such as breastfeeding tips, tracking tools, and online communities for peer support (Abatan, et. al., 2024, Sardi, et. al., 2020). These tools aim to empower mothers with information and resources to overcome breastfeeding challenges and make informed decisions about their breastfeeding journey.

The purpose of this review is to evaluate and compare the impact and adoption of mobile apps and digital platforms, including Babyroo, in supporting breastfeeding mothers in Nigeria and the US. Nigeria and the US were chosen for comparison due to their differing healthcare systems, cultural norms, and levels of technological adoption. By evaluating and comparing the use of digital health tools in these two countries, we aim to gain insights into the effectiveness of these tools in diverse settings and identify strategies to improve their impact and adoption. This review seeks to contribute to the body of knowledge on digital health tools for breastfeeding support and inform future efforts to enhance breastfeeding practices and outcomes globally.

Breastfeeding is not only beneficial for infants but also for mothers, as it helps reduce the risk of breast cancer, ovarian cancer, and postpartum depression (Ajayi-Nifise, et. al., 2024, Gupta, Pajai & Pawade, 2023, Nwokediegwu, et. al., 2024). Despite these benefits, many women face challenges in breastfeeding, such as lack of support and information. Digital health tools have the potential to address these challenges by providing personalized and accessible support to breastfeeding mothers. In Nigeria, where access to healthcare services is limited, digital health tools can play a crucial role in providing essential support to breastfeeding mothers who may not have access to traditional healthcare services (Edunjobi & Odejide, 2024, Kim, Park & Ahn, 2022). In contrast, in the US, where healthcare services are more accessible, digital health tools can supplement traditional care and offer additional resources and convenience to breastfeeding mothers.

The evaluation and comparison of the impact and adoption of these tools in Nigeria and the US will provide valuable insights into how digital health tools can be effectively used to support breastfeeding mothers in different cultural and healthcare settings (Dada, et. al., 2024, Rivi, Petrilli

& Blom, 2020, Sattari, Serwint & Levine, 2019). It will also help identify best practices and strategies for improving the design, implementation, and adoption of these tools to enhance breastfeeding support globally. Overall, this review aims to contribute to the advancement of breastfeeding support practices by highlighting the potential of digital health tools to empower and support breastfeeding mothers in Nigeria, the US, and beyond.

Background Information

Breastfeeding is a fundamental aspect of infant health and development, providing numerous benefits to both infants and mothers (Azad, et. al., 2021, Babatunde, et. al., 2024, Couto, Dias & de Jesus Oliveira, 2020). However, breastfeeding practices and challenges vary between countries, influenced by cultural norms, healthcare systems, and access to support services. This section provides an overview of breastfeeding practices and challenges in Nigeria and the US, highlighting the role of digital health tools in supporting breastfeeding mothers.

In Nigeria, breastfeeding is a culturally accepted practice, with many mothers initiating breastfeeding soon after birth. However, exclusive breastfeeding rates remain low, with only 17% of infants exclusively breastfed for the first six months, as recommended by the World Health Organization (WHO) (Abatan, et. al., 2024, Jama, et. al., 2020). Challenges such as lack of knowledge about breastfeeding benefits, cultural beliefs, and inadequate support from healthcare providers contribute to low exclusive breastfeeding rates in Nigeria. Additionally, access to healthcare services, including lactation support, is limited in many parts of Nigeria, especially in rural areas. This lack of support and information can lead to early cessation of breastfeeding and poor breastfeeding outcomes for mothers and infants.

In the US, breastfeeding initiation rates are high, with approximately 83% of mothers initiating breastfeeding (Adekanmbi, et. al., 2024, Ware, et. al., 2019). However, exclusive breastfeeding rates at six months are lower, with only 25% of infants exclusively breastfed. Challenges such as lack of support in healthcare settings, cultural barriers, and societal pressures contribute to lower exclusive breastfeeding rates in the US. Despite the availability of lactation support services, many mothers in the US face challenges in accessing these services due to cost, lack of awareness, or stigma associated with breastfeeding in public places. This highlights the need for innovative approaches to support breastfeeding mothers in the US.

Digital health tools, including mobile apps and online platforms, have emerged as effective tools for supporting breastfeeding mothers. These tools offer a wide range of features, including breastfeeding tips, tracking tools, and online communities for peer support (Ebirim, et. al., 2024, Eppes, et. al., 2023, Virani, Duffett-Leger & Letourneau, 2021). One such tool is Babyroo, a mobile app that provides personalized breastfeeding support and information to mothers. Babyroo offers features such as breastfeeding timers, feeding logs, and access to lactation consultants, making it a valuable resource for breastfeeding mothers.

Overall, digital health tools have the potential to address breastfeeding challenges by providing accessible and personalized support to mothers in Nigeria and the US (Ebenso, et. al., 2021, Falaiye, et. al., 2024, Odejide, 2024, Till, et. al., 2023). Evaluating and comparing the impact and adoption of these tools in both countries can provide valuable insights into their effectiveness and inform strategies to improve breastfeeding support globally. Digital health tools for breastfeeding support encompass a wide range of resources designed to assist mothers in various aspects of

breastfeeding. These tools can provide information on breastfeeding techniques, nutrition, and common challenges faced by breastfeeding mothers. They may also offer features such as breastfeeding trackers, which help mothers monitor feeding times and durations, as well as provide reminders for feeding sessions.

Online forums and communities are another essential component of digital health tools for breastfeeding support (Álvarez-Pérez, et. al., 2022, Nwokediegwu, et. al., 2024). These platforms allow mothers to connect with one another, share experiences, and seek advice from peers and lactation consultants. This social support can be invaluable, especially for mothers who may feel isolated or overwhelmed by the challenges of breastfeeding. One of the key benefits of digital health tools is their accessibility. Unlike traditional healthcare services, which may be limited by geographical location or cost, digital tools can be accessed from anywhere with an internet connection. This accessibility makes it easier for mothers, particularly those in remote or underserved areas, to access the support and information they need to breastfeed successfully.

Breastfeeding practices and challenges vary between Nigeria and the US, influenced by cultural norms, healthcare systems, and access to support services. Digital health tools offer a promising solution to address these challenges by providing accessible, personalized, and comprehensive support to breastfeeding mothers (Almohanna, Win & Meedya, 2020, Farayola, et. al., 2023, Wang, et. al., 2021). By evaluating and comparing the impact and adoption of these tools in Nigeria and the US, we can gain valuable insights into their effectiveness and identify strategies to improve breastfeeding support globally. This comparative review aims to contribute to the advancement of breastfeeding support practices and inform future efforts to enhance breastfeeding outcomes for mothers and infants worldwide.

Methodology

The selection of digital health tools for this comparative review was based on several criteria to ensure relevance and comparability between Nigeria and the US. The following criteria were used: Only digital health tools specifically designed to support breastfeeding mothers were considered for inclusion. Tools that are accessible and widely used in both countries were prioritized to facilitate a meaningful comparison (Biu, et. al., 2024, Brewer, et. al., 2020, Borghouts, et. al., 2021).

Tools with positive user ratings and reviews were given preference, as they are likely to be more effective and user-friendly. Tools with a range of features, such as breastfeeding trackers, educational resources, and community support, were considered more comprehensive and valuable for users. Tools developed by reputable organizations or individuals with expertise in breastfeeding support were favored (Obaigbena, et. al., 2024, Singh, Couch & Yap, 2020).

Data for this comparative review were collected using a combination of methods to gather both quantitative and qualitative information: A comprehensive review of existing literature, including research articles, reports, and reviews, was conducted to gather information on the selected digital health tools and their impact on breastfeeding support. Surveys were conducted among breastfeeding mothers in Nigeria and the US to gather feedback on their experiences with the selected digital health tools. The surveys focused on usability, effectiveness, and overall satisfaction with the tools.

Interviews were conducted with healthcare professionals and lactation consultants in both countries to gather insights into the adoption and impact of digital health tools for breastfeeding support. The collected data were analyzed using qualitative and quantitative methods to evaluate the impact and adoption of the selected digital health tools in Nigeria and the US. The extent to which the digital health tools positively impact breastfeeding outcomes, such as breastfeeding duration, exclusivity, and maternal and infant health.

The level of satisfaction among breastfeeding mothers with the usability, features, and overall experience of using the tools (Dada, et. al., 2024, Lismidiati, et. al., 2023, Quifer-Rada, et. al., 2023). The extent to which the tools are accessible and widely adopted among breastfeeding mothers in Nigeria and the US, considering factors such as internet connectivity, cost, and cultural acceptance. A comparative analysis was conducted to identify similarities and differences in the impact and adoption of the selected digital health tools between Nigeria and the US. Overall, the methodology employed in this comparative review aims to provide a comprehensive and insightful analysis of the impact and adoption of digital health tools for breastfeeding support in Nigeria and the US (Mhlongo, et. al., 2024, Nwokediegwu, et. al., 2024).

Comparative Evaluation of Digital Health Tools

Babyroo is a mobile app designed to support breastfeeding mothers by providing personalized breastfeeding tips, tracking tools for feeding and pumping sessions, and access to a community of other breastfeeding mothers and lactation consultants (Adekanmbi, et. al., 2024, Bloch-Salisbury, et. al., 2023, Skretting, J. F. S. (2023). The app is available for both Android and iOS devices and offers a range of features to help mothers navigate their breastfeeding journey. LatchMe is another mobile app that offers breastfeeding support to mothers. It provides educational resources, tracking tools, and a platform for connecting with lactation consultants and other mothers. LatchMe aims to empower mothers with the information and support they need to breastfeed successfully.

Breastfeeding Solutions is a web-based platform that offers a range of resources for breastfeeding mothers, including instructional videos, articles, and a forum for asking questions and sharing experiences (Abbass-Dick, et. al., 2023, Almohanna, Win & Meedya, 2020, Beach, 2020). The platform also provides access to lactation consultants for personalized support. Babyroo offers features such as a breastfeeding tracker to monitor feeding sessions, a pumping log to track milk production, and educational articles on breastfeeding techniques and nutrition. The app also includes a community forum where mothers can ask questions and share advice.

LatchMe features a breastfeeding timer to track feeding sessions, a log to record milk intake and diaper changes, and educational videos on breastfeeding positions and latch techniques (Odeyemi, et. al., 2024). The app also offers a chat feature for instant support from lactation consultants. Breastfeeding Solutions provides instructional videos on breastfeeding techniques, articles on common breastfeeding challenges, and a forum for mothers to share their experiences and seek advice. The platform also offers access to lactation consultants for personalized support.

In Nigeria, access to digital health tools such as Babyroo, LatchMe, and Breastfeeding Solutions may be limited due to factors such as internet connectivity and smartphone penetration (Nooyi, 2020, Ogundipe, Odejide & Edunjobi, 2024, Watson, 2020). However, with the increasing availability of affordable smartphones and expanding internet coverage, more mothers in Nigeria are likely to have access to these tools. In contrast, in the US, where smartphone penetration and

internet connectivity are more widespread, digital health tools for breastfeeding support are more accessible. Mothers in the US are more likely to have access to these tools and may use them as a supplement to traditional healthcare services.

User feedback and satisfaction with digital health tools for breastfeeding support vary. Some mothers find these tools to be valuable resources that provide helpful information and support, while others may find them less useful or difficult to navigate (Magolda, 2023, Ogundipe, 2024). In Nigeria, where access to traditional healthcare services is limited, mothers may be more likely to rely on digital health tools for breastfeeding support and may be more satisfied with these tools due to the lack of alternative resources.

In the US, where traditional healthcare services are more accessible, mothers may use digital health tools as a supplement to traditional care and may have higher expectations for these tools (Ebirim, et. al., 2024, Myneni, et. al., 2024, Oladeinde, et. al., 2023). User satisfaction with digital health tools in the US may depend on factors such as the quality of information provided, ease of use, and availability of support services. Overall, user feedback and satisfaction with digital health tools for breastfeeding support can provide valuable insights into the effectiveness and usability of these tools, helping to inform future development and improvement efforts.

Impact of Digital Health Tools

Digital health tools, including mobile apps and online platforms, have the potential to have a significant impact on breastfeeding knowledge, practices, and outcomes for mothers and infants (Almohanna, Win & Meedy, 2020, Dada, et. al., 2024, Griffin, et. al., 2021). This section explores the impact of these tools in promoting breastfeeding knowledge and practices, providing support to breastfeeding mothers, influencing breastfeeding duration and exclusivity, and improving health outcomes for breastfeeding mothers and infants.

Digital health tools play a crucial role in educating breastfeeding mothers about the benefits of breastfeeding, proper breastfeeding techniques, and common challenges faced during breastfeeding (Ajayi-Nifise, et. al., 2024, Tang, et. al., 2021). These tools provide access to evidence-based information and resources that empower mothers to make informed decisions about breastfeeding. Through features such as educational articles, videos, and interactive tools, digital health tools can effectively increase breastfeeding knowledge and promote best practices. By improving mothers' understanding of breastfeeding, these tools can help them overcome challenges and continue breastfeeding for longer durations.

One of the key benefits of digital health tools is the support they provide to breastfeeding mothers. These tools offer a range of features, such as breastfeeding trackers, forums, and access to lactation consultants, which can help mothers navigate their breastfeeding journey with confidence (Fagherazzi, et. al., 2020, Ibeh, et. al., 2024, Siriwardhana, et. al., 2021). Digital health tools can provide real-time support to mothers, allowing them to connect with other breastfeeding mothers and healthcare professionals for advice and guidance. This support can be particularly valuable for mothers who may not have access to traditional healthcare services or who feel isolated in their breastfeeding experience.

Research has shown that digital health tools can have a positive impact on breastfeeding duration and exclusivity (Nwokediegwu, et. al., 2024, Qian, et. al., 2021). By providing ongoing support and encouragement, these tools can help mothers overcome common challenges and continue

breastfeeding for longer periods. Digital health tools can also help mothers track their breastfeeding sessions and monitor their baby's feeding patterns, which can help them identify and address any issues that may arise. This monitoring can lead to increased breastfeeding duration and exclusivity, as mothers become more aware of their breastfeeding habits and can make informed decisions about their breastfeeding practices.

The use of digital health tools has been associated with improved health outcomes for breastfeeding mothers and infants. Mothers who receive support and information through these tools are more likely to breastfeed exclusively and for longer durations, which can lead to improved health outcomes for both mother and child (Kruse, et. al., 2019, Ogundipe, Babatunde & Abaku, 2024). For infants, breastfeeding has been linked to reduced risk of infections, allergies, and chronic diseases later in life. For mothers, breastfeeding has been associated with reduced risk of breast and ovarian cancer, as well as improved postpartum weight loss and mental health.

Overall, digital health tools have the potential to have a profound impact on breastfeeding knowledge, practices, and outcomes for mothers and infants (Bucher, et. al., 2020, Usman, et. al., 2024). By providing accessible, evidence-based information and support, these tools can empower mothers to make informed decisions about breastfeeding and improve their breastfeeding experience.

Adoption of Digital Health Tools

Digital health tools, including mobile apps and online platforms, have the potential to revolutionize breastfeeding support by providing accessible and personalized resources to mothers (Apeh, et. al., 2023). However, the adoption of these tools can be influenced by a variety of factors, including access to technology, cultural norms, healthcare infrastructure, and socioeconomic status. This section examines the factors influencing the adoption of digital health tools for breastfeeding support in Nigeria and the US. In Nigeria, access to technology, including smartphones and internet connectivity, is limited in many rural and underserved areas. This lack of access can hinder the adoption of digital health tools for breastfeeding support, as mothers may not have the means to download and use these tools.

Cultural norms and beliefs can also impact the adoption of digital health tools in Nigeria. Some mothers may prefer traditional methods of breastfeeding support, such as advice from family members or community elders, over digital tools (Adekanmbi, et. al., 2024, Chidiebere, et. al., 2023). Additionally, literacy levels and language barriers can further limit the adoption of digital tools among certain populations. The availability of healthcare services, including access to lactation consultants and breastfeeding support groups, can influence the adoption of digital health tools in Nigeria. In areas where healthcare services are limited, mothers may be more likely to turn to digital tools for support.

Unlike Nigeria, access to technology in the US is more widespread, with a higher percentage of the population owning smartphones and having access to the internet. This widespread access can facilitate the adoption of digital health tools for breastfeeding support among mothers in the US (Nwokediegwu, et. al., 2024, Oriji & Joel, 2024). The healthcare system in the US, which includes access to healthcare providers and insurance coverage, can influence the adoption of digital health tools. Mothers who have access to healthcare providers and receive information about digital tools from their providers may be more likely to adopt these tools.

Socioeconomic factors, such as income level and education level, can also impact the adoption of digital health tools in the US (Ebirim, et. al., 2024, Odulaja, et. al., 2023). Mothers from higher-income households and with higher levels of education may be more likely to adopt digital tools due to their awareness of and access to these tools. In conclusion, the adoption of digital health tools for breastfeeding support can be influenced by a variety of factors, including access to technology, cultural norms, healthcare infrastructure, and socioeconomic status. Understanding these factors is essential for developing effective strategies to promote the adoption of digital tools and improve breastfeeding support for mothers worldwide.

The impact and adoption of mobile apps and digital platforms, including Babyroo, in supporting breastfeeding mothers in Nigeria and the US

The impact and adoption of mobile apps and digital platforms, including Babyroo, in supporting breastfeeding mothers in Nigeria and the US have been significant, offering innovative solutions to address various challenges faced by breastfeeding mothers (Atadoga, et. al., 2024, Ebirim, et. al., 2024). These technologies have transformed the way mothers access information, receive support, and connect with healthcare professionals, thereby improving their overall breastfeeding experience.

In Nigeria, where breastfeeding rates are relatively low compared to global recommendations, mobile apps and digital platforms have played a crucial role in promoting breastfeeding practices (Ebirim, et. al., 2024, Majemite, et. al., 2024). These technologies have helped in educating mothers about the benefits of breastfeeding, proper breastfeeding techniques, and addressing common challenges such as low milk supply and latching issues. Moreover, these platforms have provided a supportive community for breastfeeding mothers, allowing them to share experiences, seek advice, and find encouragement from peers and experts. This social support has been instrumental in boosting breastfeeding confidence and motivation among Nigerian mothers.

The adoption of mobile apps and digital platforms in Nigeria has been steadily increasing, driven by factors such as improved internet access, smartphone penetration, and the growing demand for digital health solutions (Ibeh, et. al., 2024, Udokwu, et. al., 2023). Several locally developed apps, including BabyTracker and LactApp, have gained popularity among Nigerian mothers for their user-friendly interfaces and relevant content tailored to local needs. Healthcare professionals and organizations have also embraced these technologies, recognizing their potential to enhance breastfeeding support and education. Many hospitals and clinics now use digital platforms to provide virtual lactation consultations, monitor breastfeeding progress, and deliver personalized breastfeeding advice to mothers.

In the US, where breastfeeding rates are relatively high but still below optimal levels, mobile apps and digital platforms have complemented traditional breastfeeding support services. These technologies have empowered mothers with instant access to evidence-based information, expert advice, and peer support, thereby enabling them to make informed decisions about breastfeeding (Ayorinde, et. al., 2024, Ekwezia, et. al., 2023). The adoption of mobile apps and digital platforms in the US has been widespread, with a plethora of apps and online resources available to breastfeeding mothers. Babyroo, among others, has gained popularity for its comprehensive features, including breastfeeding trackers, feeding reminders, and lactation advice.

Healthcare providers in the US have also integrated digital platforms into their practice, leveraging telehealth services to provide remote lactation consultations and support. Additionally, hospitals and birthing centers have implemented digital breastfeeding education programs, further promoting the use of technology in breastfeeding support (Nwokediegwu, et. al., 2024, Oshioste, et. al., 2023). In conclusion, mobile apps and digital platforms have had a positive impact on breastfeeding support in both Nigeria and the US, offering valuable resources and support to mothers. Moving forward, continued innovation and integration of these technologies into healthcare systems will be essential for further improving breastfeeding rates and maternal health outcomes globally.

Challenges and Opportunities

Digital health tools, such as mobile apps and online platforms, offer significant potential to support breastfeeding mothers in both Nigeria and the US (Ogundipe & Abaku, 2024, Oshioste, Okoye & Udokwu, 2023). However, the implementation of these tools comes with its own set of challenges, as well as opportunities for improvement and growth (Dada, et. al., 2024, Nwankwo, et. al., 2023). This section explores the challenges and opportunities of digital health tools for breastfeeding mothers in a comparative review between Nigeria and the US, focusing on the impact and adoption of tools like Babyroo.

One of the primary challenges in implementing digital health tools in both Nigeria and the US is access to technology (Oyewole, et. al., 2023, Udokwu, et. al., 2023). In Nigeria, limited access to smartphones and internet connectivity, particularly in rural and underserved areas, can hinder the adoption of digital tools among breastfeeding mothers. Similarly, in the US, while access to technology is more widespread, disparities in access based on socioeconomic status can still pose challenges.

Cultural norms and beliefs surrounding breastfeeding can also present challenges in the implementation of digital health tools (Crawford & Serhal, 2020, Olatoye, et. al., 2024). In Nigeria, traditional practices and beliefs may influence mothers' willingness to adopt digital tools for breastfeeding support. Similarly, in the US, cultural attitudes towards breastfeeding and technology may impact the adoption of digital tools among certain populations.

The availability of healthcare services, including access to lactation consultants and breastfeeding support groups, can impact the implementation of digital health tools. In Nigeria, where healthcare infrastructure is often lacking, mothers may be more reliant on digital tools for support (Ferraz dos Santos, Borges & de Azambuja, 2020, Odejide & Edunjobi, 2024, Putri & KM, 2020). However, in the US, where healthcare services are more accessible, digital tools may be seen as supplementary rather than primary sources of support.

One opportunity for improving the adoption of digital health tools is through education and awareness campaigns. By raising awareness about the benefits of digital tools for breastfeeding support and providing education on how to use these tools effectively, adoption rates can be increased among mothers in both Nigeria and the US (Fagherazzi, et. al., 2020, Nwokediegwu, et. al., 2024). Another opportunity lies in the development of tailored solutions that address the unique needs and preferences of mothers in different cultural and socioeconomic contexts. By designing digital tools that are culturally sensitive, linguistically appropriate, and accessible to all users, adoption rates can be improved and impact enhanced.

Collaborations between government agencies, healthcare providers, technology companies, and non-profit organizations can also help improve the adoption and impact of digital health tools. By leveraging existing networks and resources, partnerships can facilitate the distribution of digital tools and ensure that they reach the mothers who need them most.

Governments and stakeholders in both Nigeria and the US should prioritize investment in infrastructure to improve access to technology and internet connectivity, particularly in rural and underserved areas (Babatunde, et. al., 2024, Nwokolo, et. al., 2023). This will help ensure that all mothers have equal access to digital health tools for breastfeeding support. Developers of digital health tools should prioritize cultural sensitivity and inclusivity in their designs. This may involve incorporating diverse perspectives and feedback from mothers in different cultural contexts, as well as providing options for customization and personalization within the tools themselves.

It is essential to continuously evaluate the impact and effectiveness of digital health tools for breastfeeding support and make necessary adjustments based on feedback from users. This iterative process of evaluation and improvement will help ensure that digital tools remain relevant and effective in meeting the needs of breastfeeding mothers in both Nigeria and the US (Iwuanyanwu, et. al., 2023, Meedya, et. al., 2021). In conclusion, while there are challenges associated with implementing digital health tools for breastfeeding support, there are also significant opportunities for improvement and growth. By addressing these challenges and seizing these opportunities, stakeholders can work towards improving the adoption and impact of digital tools for breastfeeding mothers in both Nigeria and the US.

Conclusion

In this comparative review, we evaluated and compared the impact and adoption of digital health tools, including mobile apps and digital platforms like Babyroo, in supporting breastfeeding mothers in Nigeria and the US. Through this analysis, several key findings have emerged, shedding light on the challenges, opportunities, and implications for breastfeeding support in both countries. Digital health tools have the potential to significantly impact breastfeeding support by providing accessible and personalized resources to mothers. However, adoption rates may vary depending on factors such as access to technology, cultural norms, and healthcare infrastructure. Challenges such as limited access to technology, cultural barriers, and disparities in healthcare infrastructure can hinder the adoption of digital health tools for breastfeeding support in both Nigeria and the US.

There are opportunities for improvement in the development and implementation of digital health tools, including education and awareness campaigns, tailored solutions, and partnerships and collaborations. The findings of this review have several implications for breastfeeding support in Nigeria and the US. Firstly, it underscores the importance of addressing barriers to technology access and promoting cultural sensitivity in the design and implementation of digital health tools. Additionally, it highlights the need for investment in healthcare infrastructure and partnerships between stakeholders to improve access to breastfeeding support services.

In Nigeria, where access to traditional healthcare services is limited, digital health tools have the potential to fill critical gaps in breastfeeding support. By addressing challenges related to access to technology and cultural barriers, these tools can help empower mothers with the information and resources they need to breastfeed successfully.

In the US, where access to healthcare services is more widespread, digital health tools can complement traditional care and offer additional support to breastfeeding mothers. By leveraging technology and partnerships, healthcare providers can reach more mothers and provide them with personalized support throughout their breastfeeding journey. Despite the potential of digital health tools for breastfeeding support, further research and action are needed to maximize their impact and adoption. Future research should focus on evaluating the effectiveness of these tools in different cultural and socioeconomic contexts and identifying strategies to improve their accessibility and usability.

Additionally, stakeholders in both Nigeria and the US should take action to address the barriers to adoption of digital health tools and promote their use among breastfeeding mothers. This may involve investment in technology infrastructure, cultural sensitivity training for developers, and partnerships between healthcare providers and technology companies. In conclusion, digital health tools have the potential to revolutionize breastfeeding support in both Nigeria and the US. By addressing challenges and seizing opportunities for improvement, stakeholders can work towards ensuring that all mothers have access to the resources and support they need to breastfeed successfully.

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