
RESEARCH ARTICLE

Speaking Health through Culture: Designing Afrikan Symbols as Metaphors for Maternal Health Communication

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ABSTRACT

Across Afrika, cultural identity is expressed through symbols and objects that carry shared meanings within communities. These symbols, deeply rooted in tradition, have historically served as visual metaphors that simplify complex ideas and foster collective understanding. In countries such as Ghana, Nigeria, and South Africa, symbols continue to provide a cultural language through which values and knowledge are communicated. This study examines how such cultural symbols can be harnessed to support maternal health communication in alignment with Sustainable Development Goal (SDG) 3 on Good Health and Well-being and SDG 5 on Gender Equality. Focusing on underserved mothers in Grabouw, Western Cape, South Africa, the research engaged community caregivers in a participatory design process to explore the potential of Afrikan symbols as metaphors for health education. Through inductive, design methods, caregivers co-created low-fidelity prototypes that translated health-related concepts into culturally resonant visual forms. Findings demonstrate that cultural symbols offer meaningful entry points for maternal health communication, enabling mothers to connect health information with familiar cultural references. This not only improves comprehension but also empowers women to make informed decisions for their own well-being and that of their children. The study contributes to both design and health communication scholarship by showing how integrating cultural heritage into maternal health strategies can advance equity in resource-constrained contexts. It recommends further exploration of symbol-based communication tools as culturally grounded design interventions that align with the global agenda of reducing maternal mortality and promoting gender equality.

KEYWORDS

Afrika; Cultural symbols; Maternal health; Health communication; Participatory design; Sustainable Development Goals.

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1. Introduction

Health educators and promoters often communicate messages verbally or through a combination of spoken and visual modes (Figure 1). Research demonstrates that pairing oral communication with visual representation leads to stronger outcomes, enabling recipients to grasp health messages more effectively and retain them over time (Lester, 2004; Schiavo, 2020). For instance, studies in healthcare settings with children who had learning disabilities showed that visual symbols helped overcome communication barriers, improving comprehension and cooperation when combined with verbal instruction (Vaz, 2013; Lightfoot et al., 2021). Both clinicians and parents expressed enthusiasm for using symbols in hospitals, confirming their potential to strengthen patient-provider interactions (Figure 2 & 3).

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Oral and Visual Information: Percentage Retained

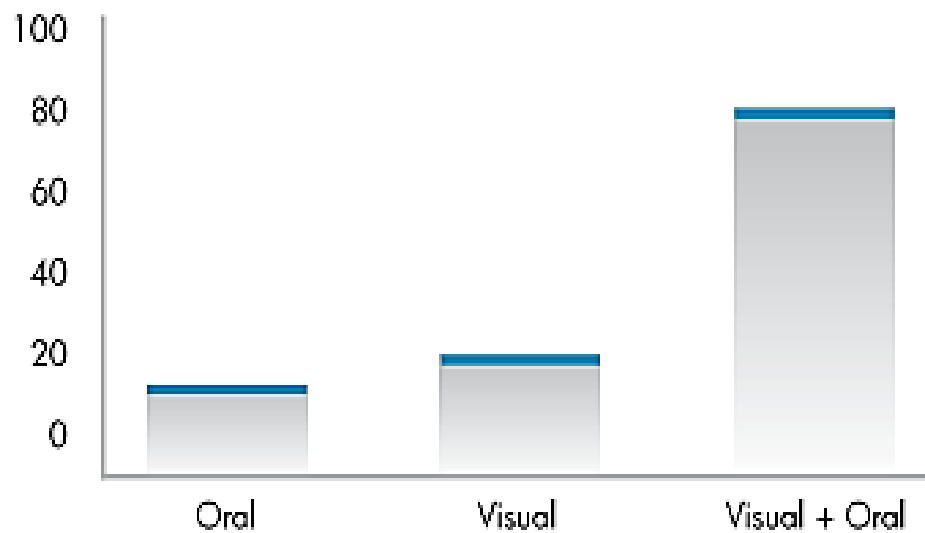


Figure 1: Syntactic theory of visual communication (Lester, 2004).

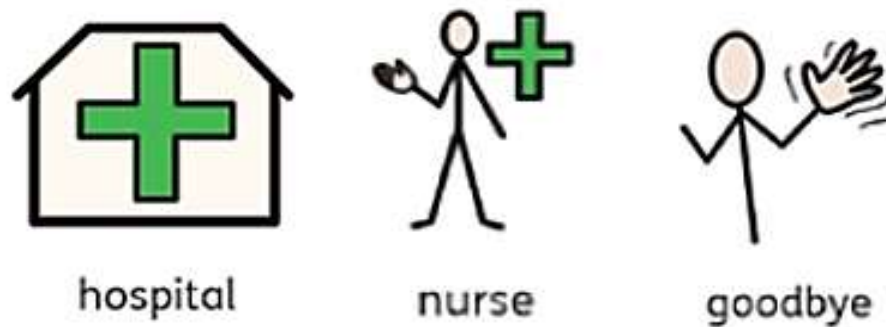


Figure 2: Symbols used for communication in healthcare settings for children with learning disabilities
(Adapted from Vaz, 2013).



Figure 3: Key FOG - a collection of symbols designed for communication with children with learning disabilities (Vaz, 2013).

Visual communication can be defined as the use of signs, symbols, icons, images, and other visual cues to convey information, has long been central to human interaction. When integrated with text, sound, and digital platforms, such cues form multimedia messages that improve understanding, sharing, and retention (Lester, 2004; Kress & van Leeuwen, 2021). Advances in information and communications technology (ICT) have accelerated this trend, making modern societies increasingly reliant on visual forms of communication.

Historically, symbolic communication can be traced back to prehistoric pictograms and ideograms, which represented ideas and collective values (Mafundikwa, 2004). The term “symbol” itself originates from the Latin symbolum and the Greek symbolon or symballo, meaning “to bring together” or “to make whole” (Young et al., 2013). Symbols therefore hold both linguistic and cultural weight, allowing communities to preserve shared knowledge and beliefs across generations (See Figure 4).



Figure 4: Official emblems of the International Red Cross and Red Crescent Movement, the Red Cross, Red Crescent, Red Lion and Sun and the proposed Red Crystal (Murungi et al., 2003).

Medicine provides notable examples of how symbols function in health communication. The **Red Cross**, **Red Crescent**, and more recent **Red Crystal** (Figure 4), serve as universally recognized emblems of humanitarian aid (Murungi et al., 2003). Serpent-based emblems have symbolized medicine and healing for more than 2,400 years. The Rod of Asclepius (Figure 5), featuring a single serpent entwined around a staff, remains the true symbol of medicine, while the Caduceus of Hermes, with two serpents and wings, traditionally represents commerce (Figure 6), though it is often mistakenly used in medical contexts (Antoniou et al., 2011; (Young et al., 2013; Gutiérrez & Vázquez, 2018).



Figure 5 (left): The Rod of Asclepius, a staff entwined with a single serpent (Young et al., 2013).
Figure 6 (right): The Caduceus, a staff entwined with two serpents (Young et al., 2013).

1.1 Symbols in Afrika

This paper adopts the indigenous spelling “Afrika,” reflecting the pronunciation used across many of the continent’s nearly 2,000 languages (Mafundikwa, 2004). Within Afrika, symbols function both as communicative tools and as carriers of philosophical ideas, proverbs, and cultural values. They embody knowledge related to health, religion, the environment, social structures, and economics, embedding meaning within cultural contexts. This symbolic tradition is shared across Northern, Eastern, Western, Southern, and Central Afrika (Mafundikwa, 2004; Oduro-Frimpong, 2020).

The present study explores how Afrikan cultural symbols may be applied as metaphors for maternal health communication. Focusing on caregivers in an underserved South African community, the research investigates how symbols can enhance dialogue between caregivers and women before, during, and after pregnancy. The objective is to strengthen maternal health communication through the integration of traditional cultural knowledge with contemporary health practices. To achieve this, the paper reviews maternal health in Afrika, approaches to health communication, the role of Afrikan symbols, and the methodological strategies applied in this study.

This study aligns with the Sustainable Development Goals, particularly SDG 3 (Good Health and Well-being), which seeks to reduce maternal mortality, and SDG 5 (Gender Equality), which emphasizes women’s empowerment and decision-making in healthcare. Exploring culturally rooted communication strategies contributes to advancing global commitments to health equity and gender equality.

2. Background

2.1 Maternal Health

The United Nations Sustainable Development Goals (SDGs) emphasize the importance of advancing maternal health within the broader agenda of reducing inequalities and promoting well-being. SDG 3 seeks to ensure healthy lives and promote well-being for all at all ages, with a particular focus on reducing maternal mortality, while SDG 5 underscores the need for gender equality and the empowerment of women and girls (United Nations, 2012; United Nations, 2015; WHO, 2022). Despite progress, many women in sub-Saharan Africa continue to experience unequal access to education, healthcare, and decision-making opportunities, leaving them vulnerable to preventable maternal deaths (United Nations, 2011; WHO, 2019).

Mothers in Low-Resource Communities (MLRCs) often face limited access to timely and adequate healthcare, compounded by under-education and structural inequalities. Obstetric haemorrhage, hypertensive disorders, sepsis, obstructed labour, unsafe abortion, malaria, and HIV remain leading contributors to maternal morbidity and mortality (WHO, 2022). Research shows that women with higher levels of education are more likely to utilize maternal healthcare services, access health information, and make informed decisions that improve their own survival as well as that of their children under five (United Nations, 2011; Hounton et al., 2021).

While maternal health indicators in sub-Saharan Afrika have improved over the past two decades, pregnancy and childbirth still pose significant risks. Persistent barriers, including limited healthcare infrastructure, low health literacy, and cultural or linguistic

mismatches between patients and providers continue to hinder progress toward achieving SDG 3 and 5. Addressing these barriers requires context-sensitive approaches that enhance communication, foster trust, and empower women to make informed maternal health choices.

2.2 Health Communication

Health communication is widely recognized as a cornerstone of effective public health strategies, particularly in maternal and child health. Communication interventions that are culturally relevant and grounded in local realities have proven more effective than generic, text-heavy health promotion campaigns (Prilutski, 2010; Dada et al., 2023). In many low-resource settings, health education materials are typically provided as posters or pamphlets in English, often with limited visual or symbolic support, making them less effective for women who are non-literate or who primarily speak indigenous languages (National Center for Biotechnology Information [NCBI], 2008; Koch et al., 2012; Kok et al., 2017).

Limited access to tailored educational materials reinforces communication barriers between healthcare providers and mothers in underserved communities, with direct implications for maternal morbidity and mortality. This raises critical questions: *How can healthcare workers adapt communication strategies to bridge linguistic and literacy divides? What role can indigenous knowledge and cultural symbolism play in making maternal health communication more effective and inclusive?*

The exploration of these questions directly aligns with the SDG agenda, particularly the call to reduce preventable maternal deaths (SDG 3) and to ensure women's full participation in decision-making processes related to their health and well-being (SDG 5). Developing innovative, culturally responsive communication methods has the potential to advance maternal health equity and accelerate progress toward these global goals.

2.3 Communication Process

Communication is a dynamic process involving the transfer of information between entities, requiring shared signs, codes, and interpretive rules (Nack, 2014; Littlejohn & Foss, 2017). It is not merely a linear exchange but a joint activity in which speakers and audiences interact, negotiate meaning, and create shared understanding through signs and symbols (Sjöström & Goldkuhl, 2003; Cordeiro & Filipe, 2004; Kushiator et al., 2020). In the context of this study, maternal health education is examined through the lens of semiotics, with the aim of identifying culturally grounded symbols that healthcare workers can use as effective communication tools.

2.4 Semiotics theory and Communication

Semiotics, broadly defined as the study of signs, symbols, and meaning-making, provides a framework for understanding how communication operates beyond language. It spans multiple disciplines, including linguistics, anthropology, design, media, and medicine (Parsa, 2004; Nack, 2014; Chandler, 2017). Semiotic analysis begins with the recognition that signs, whether visual, verbal, or material form the basis for knowledge exchange and interpretation (Eco, 1986; van Leeuwen, 2005). From a social semiotic perspective, texts and images are treated as contextualized units of meaning, shaped by cultural and social practices (Stamper, 1993; Rani, 2013; Bezemer & Kress, 2016).

Signs extend beyond spoken and written language to include sounds, gestures, objects, and images (Chandler, 2000; Chandler, 2017). Semiotics is typically divided into three main branches: semantics (the relationship between signs and their referents), syntactics (the relationships among signs), and pragmatics (the effect of signs on users and contexts) (Nack, 2014; Kukkonen, 2020). Effective communication depends on ensuring that signs carry shared meanings across users, minimizing the risk of misinterpretation and strengthening the connection between intention and understanding (Murungi et al., 2003).







In this study, symbols were selected from three Afrikan regions to explore their potential as metaphors in maternal health communication. Recognizing that interpretations may vary across cultural groups; the objective was not to preserve or impose original meanings but to investigate how caregivers could contextualize these symbols to support health promotion. A social semiotic lens highlights that meaning-making is shaped by both access and context, factors that are particularly critical in low-literacy communities where alternative visual and symbolic strategies may improve comprehension (Rani, 2013; Bezemer & Kress, 2016; Oduro-Frimpong, 2020).

2.5 Communicating with Afrikan Symbols

Afrikan societies have historically developed rich visual and graphic systems to express ideas about belief, philosophy, and everyday life (Mafundikwa, 2004; Kushiator et al., 2020). These traditions are evident across Northern, Western, Central, and Southern regions of the continent, including Adinkra symbols from Ghana, Nsibidi symbols from Nigeria, and Bantu symbolic systems from Southern Africa (Willis, 1998; Mafundikwa, 2004). Recent scholarship emphasizes that these symbols remain vital in

shaping cultural identity and can be adapted for contemporary contexts such as health communication, where culturally relevant visual tools may foster stronger engagement and trust (Boateng, 2021; Serwadda et al., 2022).

Table 1: Shows some of the Afrikan symbols used in the study (Mafundikwa, 2004; Willis, 1998)

Sample Bantu symbols (SA)	Adinkra Symbols Ghana (WA)	Nsibidi Nigeria (WA)
		
Mother Source	Precaution	Woman
		
Birth	Planning	Pregnant woman

2.5.1 Bantu Symbols

Bantu symbols from South Africa communicate ideas rather than functioning as alphabets. These symbols were traditionally read silently to convey facts and preserve collective memory. They were commonly engraved on objects such as calabashes, pottery, mats, beads, and walls, ensuring that knowledge could be passed to future generations (Mafundikwa, 2004). Recent studies highlight their continued relevance, noting how Bantu symbolic systems remain part of indigenous knowledge practices and serve as resources for cultural continuity and education (Hagan, 2021).

2.5.2 Adinkra Symbols

Among the Asante of Ghana, Adinkra symbols which are derived from the term meaning “goodbye”, express philosophical concepts, socio-cultural values, and worldviews. These multi-layered visual signs are widely integrated into textiles, architecture, jewelry, and advertising, where they communicate enduring cultural messages and reinforce identity (Willis, 1998; Mafundikwa, 2004; Kushiator et al., 2020). Contemporary scholarship emphasizes their role in design, branding, and education, demonstrating how Adinkra symbols serve both traditional and modern communicative functions (Boateng, 2021; Oduro-Frimpong, 2020).

2.5.3 Nsibidi Symbols

Nsibidi symbols, originating with the Ejagham people of southern Nigeria and extending into parts of Cameroon, represent one of Afrika’s most ancient graphic communication systems. Historically used by secret societies such as Ekpe (or Leopard Society), Nsibidi conveyed complex social, political, and spiritual ideas through visual inscriptions (Mafundikwa, 2004). Modern researchers note that Nsibidi continues to evolve, with symbols being adapted, reinterpreted, and combined in contemporary art, literature, and popular culture while still retaining strong cultural roots (Mafundikwa, 2004; Okonkwo, 2018; Ugochukwu, 2022).

2.6 Contemporary use of Afrikan Symbols

Across Bantu, Adinkra, and Nsibidi traditions, symbols share common graphic qualities such as simplicity, abstraction, and adaptability that make them effective tools for both traditional and modern communication. Their visual flexibility allows them to be applied in diverse contexts, from education and design to social campaigns and healthcare messaging (Serwadda et al., 2022).

In this study, these symbols are explored as metaphors for maternal health communication, specifically examining their potential for use by community caregivers in Grabouw, South Africa. Their integration into health promotion highlights the possibility of connecting indigenous cultural heritage with contemporary public health strategies.

3. Materials and Methods

3.1 Case Study and Design-Led Approach

This research was conducted as a qualitative case study that applied the design thinking process. The process was participatory, co-design driven, and iterative in nature, emphasizing collaboration and the active involvement of participants (Mager, 2006; Mager, 2008; De la Harpe, 2014). Caregivers were not passive subjects but contributors who interpreted, reshaped, and refined ideas during the design workshops until collectively acceptable outcomes emerged (Debrah *et al*, 2015). Such an approach is particularly effective in culturally diverse and low-resource settings, where the lived experiences of participants are central to shaping interventions (Holmlid, 2009; Brown, 2009; Liedtka, 2018).

3.2 Demographics of Participants and Context

The study was situated in Grabouw, South Africa, and participants were primarily caregivers-in-training. This group reflected a culturally mixed demographic, including Black, White, and Coloured Afrikaans-speaking individuals, many of whom also spoke English. Their diverse linguistic and cultural backgrounds enriched discussions on maternal healthcare communication. Caregivers' roles were comparable to those of community health workers, who play a vital role in delivering grassroots health services across Afrika (Debrah *et al*, 2015; (Debrah *et al*, 2017).

3.3 Data collection procedures and design workshops

3.3.1 Creating an Enabling Environment for Workshops

Workshop environments were intentionally designed to encourage participation, creativity, and confidence among caregivers (Figure 7). Group seating arrangements supported peer learning, while a relaxed atmosphere, enhanced with background music, helped participants engage in the unfamiliar processes of symbol interpretation and design (Debrah *et al*, 2015; Debrah, 2021). Three workshops were conducted, each building upon the outcomes of the previous session to gradually refine ideas.



Figure 7: Caregivers engaging in design workshop activities (Image Source: Authors, 2024).

3.3.2 Workshop and Activities

Workshops were conducted at the caregivers' training institution and lasted approximately two hours each. A total of 60 caregivers took part, divided into six groups of five to six members. The sessions were structured to allow participants sufficient time to reflect, discuss, and co-design symbolic representations of maternal health concepts (Debrah, 2021).



Figure 8: Key phases of the design thinking process applied in this study (Authors' own construct, 2024), modeled on the Double Diamond Design process as referenced in Debrah (2021)

The design thinking process unfolded across four iterative phases (Figure 8):

- **Discovery (Phase one):** Sixteen Afrikan symbols drawn from Adinkra, Bantu, and Nsibidi traditions were introduced and a few are presented in Table 1. Participants first reflected individually on possible meanings and then shared their interpretations in groups. Discussions explored connections between the symbols and daily activities, encouraging free interpretation and personal naming of symbols.
- **Define (Phase two):** Groups developed maternal health promotion activities as part of their training. Each group presented plans to the wider cohort, receiving feedback from facilitators. Objectives for health promotion were defined, and appropriate symbols were selected to reinforce these activities.
- **Develop (Phase three):** Participants worked with large printouts of the earlier symbols, selecting favourites most relevant to women's health communication. Group discussions identified how these could be applied in practice. Consensus was achieved through negotiation, and symbols were organized under shared themes.
- **Deliver (Phase four):** Participants added colour to their chosen symbols to visually align with health concepts. They then brainstormed potential uses as icons for digital applications. Using paper templates of mobile tablets, coloured symbols were mounted to form prototype health communication interfaces (Figure 9). These low-fidelity prototypes represented the first steps toward adapting Afrikan symbols for digital maternal health communication tools.

The final session concluded with group presentations. Trainers attended the closing event, offering feedback and encouragement. They praised the creativity of the caregivers and expressed optimism about the potential for symbols in health promotion. The process highlighted the strength of co-design approaches in bridging cultural heritage and modern communication strategies (Debrah, et al., 2015; Debrah, 2021).



Figure 9: Caregivers co-designing cultural symbols for maternal health communication

(Image Source: Authors, 2024).

3.4 Ethics

Ethical approval for this study was obtained from the ethics committee of the hosting university. At the research site, additional clearance was secured in line with institutional protocols. Informed consent was obtained from all participants prior to their involvement, and participation was entirely voluntary. All ethics protocols were strictly observed, including confidentiality and respect for participants' autonomy. Caregivers were assured of their right to withdraw at any stage without penalty (Debrah *et al*, 2015). These measures ensured that the study was conducted in alignment with international standards for ethical qualitative research (World Medical Association, 2013; Emanuel *et al.*, 2016).

3.4.2 Reflecting on the methods and SDGs

This methodological approach directly contributes to the advancement of the Sustainable Development Goals (SDGs). The study supports SDG 3 (Good Health and Well-being) by improving maternal health communication and creating accessible pathways for women to engage with vital health information. It also advances SDG 5 (Gender Equality) through the empowerment of women and caregivers in low-resource communities, fostering agency and inclusion in health decision-making. Embedding participatory, culturally grounded design processes within maternal health promotion therefore not only enriches local practices but also aligns with global commitments to equity and sustainable development.

4. Discussion

Several important insights emerged from the design thinking sessions. The iterative and participatory nature of the process demonstrated that creating an enabling environment was essential for supporting ideation. A relaxed, playful atmosphere, enhanced through music and group-based activities, encouraged interaction and creativity among participants (Debrah *et al*, 2015; 2021). Caregivers contextualized the Afrikan symbols within their daily routines, applying them to maternal and women's health concerns in their communities. Some of the symbols identified as representative of maternal health concepts were later captured in the low-fidelity prototype tablet (Figure 9).

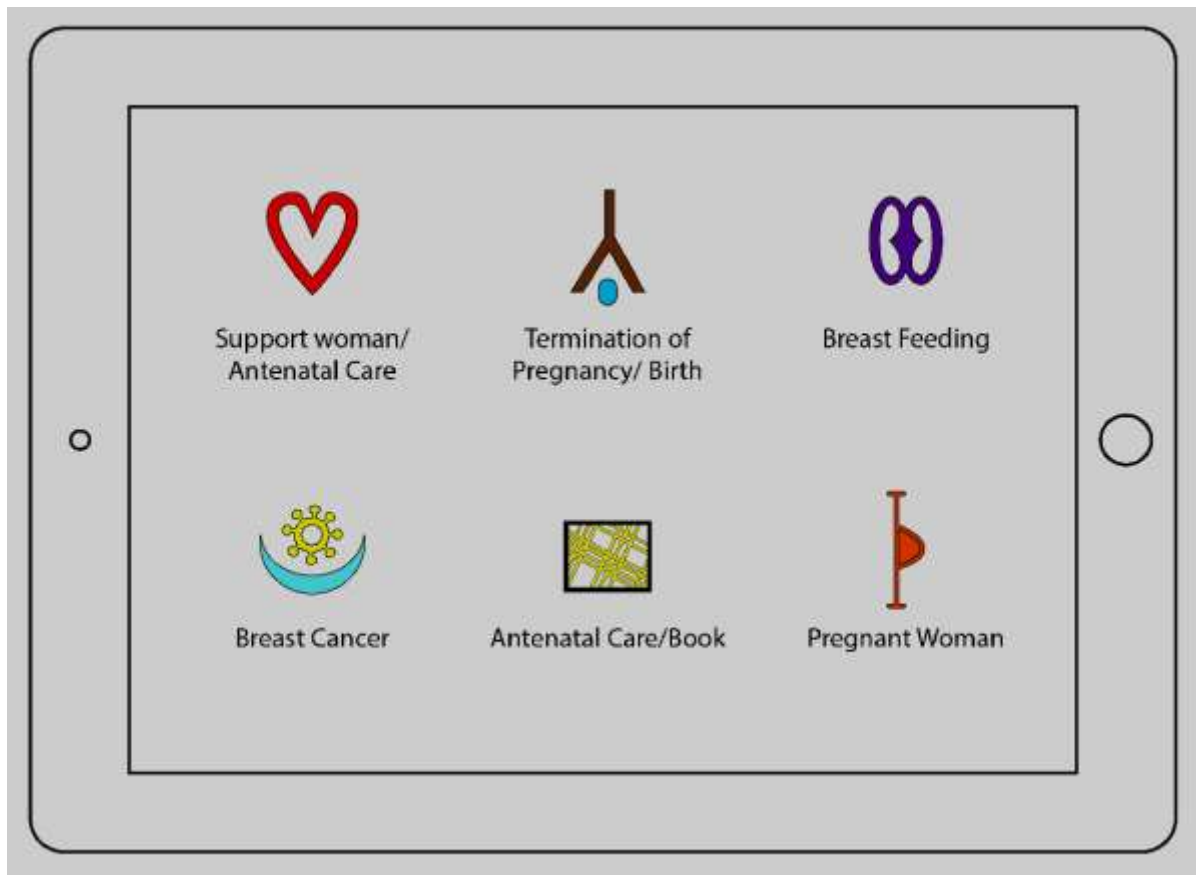


Figure 9: Prototype of a mobile tablet interface design displaying selected Afrikan symbols identified by caregivers to support maternal health communication (Adapted from Debrah, 2021).

During the co-design process, participants were not restricted to reproducing the original cultural meanings of symbols. Instead, they were encouraged to reinterpret and adapt the symbols to align with their professional practices and community contexts. Since meaning-making is fundamentally semiotic, visual representations need to remain simple and clear to enable effective communication (Murungi et al., 2003; Rani, 2013; Chandler, 2017). Results revealed that while many caregivers were initially unfamiliar with some of the symbols, certain interpretations closely aligned with their traditional cultural origins (Figure 10). This finding demonstrates that symbols can retain cultural resonance even when integrated into modern maternal health communication.

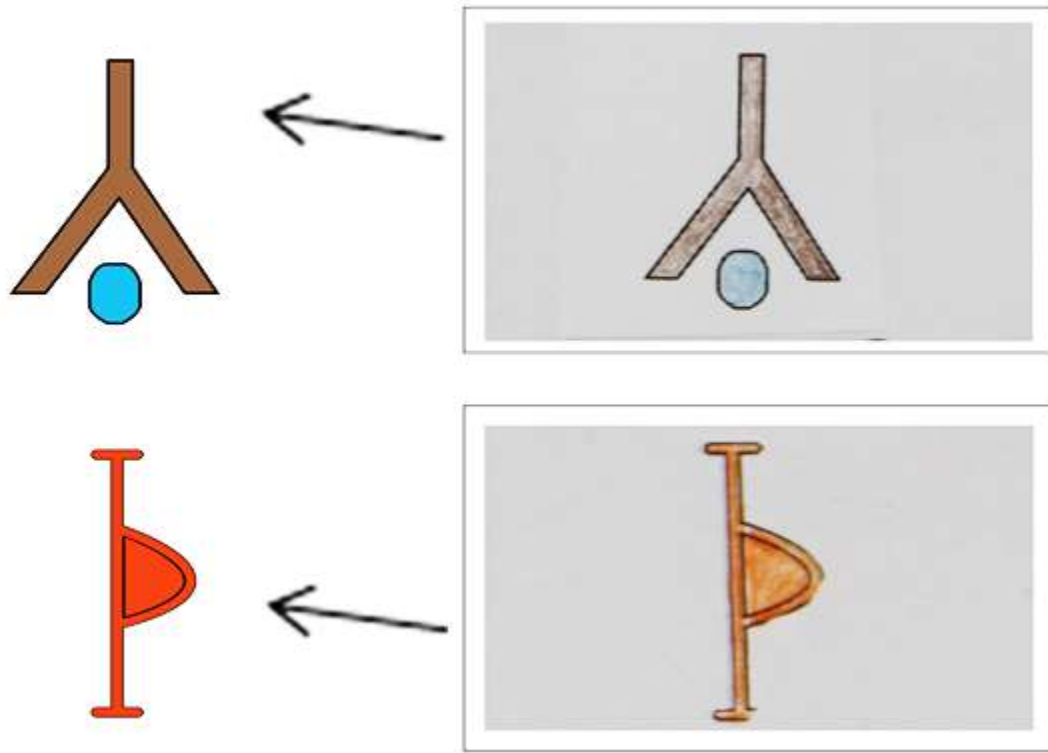


Figure 10: Afrikan symbols identified by caregivers, presented with their corresponding meanings from the original cultural context (Adapted from Debrah, 2021).

The findings also highlight the potential of symbols to serve as a toolkit (see Figure 11) for caregivers engaged in maternal health promotion. Such a toolkit could support community health workers in anchoring discussions with women, while also serving as visual cues that help caregivers recall lessons from their training and transfer knowledge into practice. This aligns with the principles of semiotics in design, where signs function as scaffolds for meaning-making, enabling participants to link abstract health concepts to tangible cultural metaphors (Bezemer & Kress, 2016; Liu, 2020).



Figure 11: Selected symbols rendered in 3D, designed as potential icons for use in a mobile health communication application (Adapted from Debrah, 2021).

Another key insight concerns the digital adaptability of these symbols. Rendering them in 3D form illustrates how cultural heritage can be translated into modern applications, opening possibilities for use as icons within mobile health platforms (Figure 11). Digital integration provides opportunities to strengthen communication, improve user experiences, and promote inclusivity in underserved communities. This reflects broader calls in participatory and co-design research to embed cultural context in digital health solutions to ensure relevance and sustainability (Anderson et al., 2018; Serwadda et al., 2022).

Equally significant was the positive reception of the design process itself. Both caregivers and trainers expressed appreciation for the collaborative and creative nature of the workshops. Their reflections highlight the importance of participatory and experiential learning, which fostered enjoyment, ownership, and deeper engagement (Figure 12):

4.1 Participant reflections

"We are very happy with what you have done with the caregivers, they enjoyed it very well and it blended nicely with our topics under discussion in healthcare." – *Instructor*

"I like your approach to this, the use of symbols for communication as part of their health promotion practice has actually enabled them to internalise our discussions within our lessons." – *Instructor*

"I saw the learners' brainstorming sessions displayed on the walls. I like this new way of learning and we will be glad if you can extend this to the other levels in the training of caregivers." – *Administrator*

"We are very grateful to have the opportunity to participate in this project; we really enjoyed ourselves and we like to do this with you again and again." – *Learner*



Figure 12: Caregivers actively participating design activities
(Image Source: Authors, 2024).

These reflections underscore the value of design thinking, co-design, and participatory design in culturally grounded health communication. Caregivers internalized the process, and trainers recognized its pedagogical value, illustrating how semiotic and participatory approaches can enhance both health promotion and caregiver education.

The implications of these findings extend beyond maternal health. Integrating culturally relevant symbols into caregiver training directly contributes to SDG 3 (Good Health and Well-being) by strengthening maternal health communication and to SDG 4 (Quality Education) through the use of innovative, participatory learning strategies that enhance knowledge retention and application.

4.2 Practical Implications

The outcomes of this study present several practical applications for policy, education, and healthcare practice:

- *Caregiver Training:* Integrating symbolic toolkits into caregiver training curricula can enhance comprehension and retention of maternal health concepts, making learning more experiential and culturally relevant.

- *Community Health Communication:* Symbols can serve as effective aids in health promotion activities, enabling community health workers to bridge literacy gaps and engage women in underserved areas through culturally resonant communication strategies.
- *Digital Health Innovation:* The adaptation of symbols into digital icons for mobile platforms presents opportunities to develop inclusive mHealth applications. Such tools could expand access to maternal health information and promote user-centered design tailored to local cultural contexts.
- *Policy and Global Development Goals:* Embedding culturally grounded communication strategies into health systems aligns with SDG 3 by reducing maternal mortality through improved communication and with SDG 4 by advancing inclusive and equitable quality education for caregivers and communities.

5. Conclusion

Maternal health education remains critical for reducing morbidity and mortality in Afrika, particularly in underserved communities where literacy barriers continue to limit access to information. The findings of this study demonstrate that culturally embedded symbols have strong potential to facilitate maternal health communication, offering caregivers intuitive and relatable tools for engaging with women in meaningful ways. These symbols also highlight opportunities for designers to integrate indigenous knowledge into contemporary communication practices, reinforcing the value of culturally grounded design approaches.

The study confirms the relevance of visual symbols within a long historical continuum of semiotic practices. Well before formal writing systems, communities used pictograms and ideograms to convey shared knowledge, and these traditions remain powerful in today's health contexts. Through the design thinking process, combined with participatory and co-design methods, caregivers were empowered to reinterpret and adapt Afrikan symbols for maternal health communication. This iterative engagement not only strengthened their confidence in using the symbols but also ensured that the outcomes reflected local realities and community needs.

The implications extend to both SDG 3 (Good Health and Well-being), through improved maternal health communication, and SDG 4 (Quality Education), through the incorporation of participatory and experiential learning strategies in caregiver training. The study illustrates how design thinking, participatory design, and semiotics in design can intersect to create inclusive and sustainable approaches for health education in low-resource settings.

Future research should expand on this participatory exploration, investigating how these symbols might be scaled into broader toolkits such as knowledge cards, flip charts, stickers, and mobile applications tailored for maternal health promotion. Further studies could also examine the impact of such tools on caregiver performance, maternal decision-making, and community health outcomes. Embedding culturally resonant design strategies into both education and health systems offers a pathway toward more equitable, inclusive, and sustainable solutions.

In summary, harnessing Afrikan symbols through design thinking and participatory methods shows that culturally rooted communication is not only a bridge between tradition and modernity but also a powerful pathway toward healthier communities and more inclusive education.

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