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The Paradox of Proximity: Artificial Intelligence, Gender, and the Cultural Fractures of Care in Later Life

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Abstract

Background: The rise of digital platforms and algorithmic systems has transformed late-life communication, presenting artificial intelligence (AI) tools as novel mechanisms for mitigating social isolation among older adults. Despite the growing deployment of assistive technologies, critical empirical inquiry into how AI-mediated communication intersects with gendered life courses, cultural expectations of care, and youth out-migration in African contexts remains sparse.

Objective: This study examined how AI-driven communication technologies intersect with gender and cultural dynamics to influence social connectedness and loneliness among older adults in Nigeria.

Methodology: A qualitative interpretive phenomenological approach was utilised, drawing on the Modernisation Theory of Ageing and reflexive thematic analysis. In-depth semi-structured interviews were conducted with a purposively selected sample of 25 older adults in Nigeria (10 men and 15 women, aged 65 to 81 years) with high educational attainment.

Result: While digital devices and smart systems provided continuous informational contact across transcontinental distances, they created an illusion of proximity that failed to meet cultural expectations of embodied, physical care. The findings revealed distinct gendered patterns: older women actively utilised digital platforms for transnational kin-keeping whilst mourning the loss of physical nurturing roles, whereas older men experienced technological isolation as a direct loss of public authority and communal prestige. Furthermore, voice-activated and conversational AI interfaces systematically failed to accommodate Nigerian-accented speech and indigenous languages, producing algorithmic erasure and user alienation despite the participants' advanced

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formal literacy. Participants strongly rejected synthetic companionship, viewing machine-mediated care for older adults as culturally dissonant, emotionally hollow, and an ethical infringement on domestic privacy.

Conclusion: AI-driven communication tools cannot replace the physical, intergenerational co-presence central to African elder care systems. To meaningfully alleviate late-life isolation without reproducing inequality or eroding cultural dignity, assistive technologies must be developed and deployed with vernacular linguistic inclusivity, gender-responsive literacy initiatives, and robust ethical data governance.

Keywords: Artificial intelligence, Gender, Social connection, Cultural dynamics, Older adults, Ageing

Introduction

Social relationships play a foundational role in maintaining physical, psychological, and emotional well-being across the life course. In later life, however, sustaining meaningful social connections becomes increasingly fraught as individuals encounter acute disruptions, including retirement, bereavement, economic insecurity, and physical frailty (Faronbi et al., 2019; Ikeorji et al., 2024). These challenges are particularly acute in low- and middle-income countries (LMICs) such as Nigeria, where government measures to support older adults remain limited and caregiving is largely provided through family networks, with comparatively less support from community structures (Ebimngbo et al., 2022). Interpersonal communication has long served as a primary means of preserving social ties in later life. Historically, face-to-face interaction, voice telephony, and written correspondence enabled older adults to sustain emotional intimacy, exchange social support, and remain connected to their social networks, thereby promoting participation and well-being in later life (Bacter et al., 2023; Yorkston et al., 2010).

Yet, the rapid digitalisation of social life has fundamentally transformed how interpersonal connections are initiated, sustained, and mediated, establishing artificial intelligence (AI) as an active actor in human interaction (Francis et al., 2019). Unlike conventional communication channels, AI technologies introduce new forms of interaction that can influence how users encounter, interpret, and engage with communicative content. Emerging technologies such as voice-activated digital assistants, conversational chatbots, social robots, and algorithm-curated platforms are increasingly positioned not merely as instrumental utilities, but as potential companions capable of mitigating loneliness and fostering social engagement among older adults (Getson & Nejat, 2021). Within contemporary gerontological discourse, these tools are often framed within optimistic paradigms of assistive companionship and digital ageing, ostensibly compensating for shrinking social networks and mobility constraints (Getson & Nejat, 2021).

In Nigeria, the introduction of AI-mediated communication coincides with profound structural and demographic upheavals. Traditional Nigerian societies have historically rested on communal living, filial piety, and intergenerational reciprocity, wherein older adults derive security and social

value from extended family networks (Akinrolie et al., 2020; Okoye, 2024). However, these traditional structures are fracturing under the pressures of rapid urbanisation, economic instability, and the widespread out-migration of younger adults, popularly termed the *japa* syndrome (Adeyamju et al., 2024; Ikeorji & Warri, 2024). This demographic flight has widened both geographical and emotional chasms between ageing parents and their adult offspring, leaving many older adults without steady instrumental or emotional care (Ikeorji et al., 2024; Okoye, 2024).

Although AI-driven conversational agents, telecare devices, and smart monitors are presented as innovative mechanisms to bridge transnational distance (Floridi et al., 2018; Francis et al., 2019), their deployment within Nigeria collides with deep structural inequalities. Deficits in electrical and telecommunication infrastructure, weak rural network penetration, financial precarity, low AI literacy, and justifiable public scepticism regarding autonomous systems produce an acute digital divide of ageing (Iyalla-Amadi, 2024). Rather than democratising care, these barriers threaten to reinforce systemic exclusion, marooning the very cohorts most vulnerable to isolation.

The encounter with AI is fundamentally gendered. Older adults are not a homogeneous demographic; men and women experience ageing, caregiving expectations, and technological adoption through starkly different life courses. In Nigeria, older women bear the cumulative weight of historical inequalities in formal education, diminished lifetime earnings, and continuous domestic caregiving demands, which heighten their financial and digital marginalisation in later life (Akinrolie et al., 2020; Rochelle et al., 2015). Furthermore, commercial AI interfaces frequently embed monolingual, Western-centric design assumptions that fail to reflect local communicative norms (Yakubu, 2025). The lack of accommodation for indigenous African languages, local dialects, and gendered speech styles alienates older women with limited formal English fluency, deepening their digital invisibility and exposing the algorithmic biases latent in modern technology design (Manasi et al., 2022; Noble, 2018; Yakubu, 2025).

Culturally and ethically, substituting human presence with artificial intelligence generates profound friction with indigenous moral frameworks. In Nigerian societies, elder care is rooted in an ethic of embodied presence, physical touch, and tangible respect (Faronbi et al., 2019; Okoye, 2024). Within this context, synthetic companionship is easily perceived as emotionally hollow, synthetic, or dehumanising, transforming a sacred familial duty into an automated technical transaction. Moreover, because conversational and monitoring systems rely on continuous extraction of emotional, behavioural, and biometric data, they collide with traditional views of domestic privacy and family sanctity (Bacter et al., 2023; Ho, 2020).

Despite these pressing concerns, empirical inquiry into how artificial intelligence, gendered life courses, and African cultural dynamics intersect in later life remains sparse. Existing research predominantly reflects Western, individualistic contexts or restricts its focus to younger demographics and commercial algorithmic bias (Manasi et al., 2022; Noble, 2018). Nigerian studies have primarily evaluated urban centres like Lagos and Abuja or addressed general digital

literacy in isolated locales without interrogating the cultural meanings of care, gender disparities, or the unique challenges of AI companionship (Iyalla-Amadi, 2024; Ogedegbe et al., 2025).

Literature Review

The Political Economy of Ageing and Algorithmic Marginalisation

The political economy of ageing provides a structural lens for understanding how older adults in Nigeria experience social connection in an AI-mediated world. It emphasises that ageing outcomes are shaped not only by personal circumstances but by the broader economic and policy environment that determines access to care, income security, and social participation (Estes, 2020). In Nigeria, where formal social protection is limited, older adults rely heavily on family networks for emotional and instrumental support (Ebimngbo et al., 2022). When AI-driven communication tools enter this fragile ecosystem, they do so within a context already marked by unequal access to resources, unstable infrastructure, and limited digital literacy. This means AI does not simply appear as a helpful innovation; it enters a landscape where older adults are already structurally disadvantaged, making its benefits uneven and its risks more pronounced.

Algorithmic marginalisation deepens these inequalities by embedding technological systems with assumptions that privilege younger, urban, and Western users (Francis et al., 2019; Noble, 2018). AI tools often struggle to recognise indigenous languages, slower conversational pacing, and culturally specific communication styles common among older Nigerians. As a result, older adults encounter not only technical barriers but also symbolic exclusion or a digital divide, where their ways of speaking and interacting are rendered invisible within algorithmic systems (Getson & Nejat, 2021). This form of exclusion is particularly harmful because it undermines the very purpose of communication technologies which is to create connection. Instead, AI tools may unintentionally silence or distort older adults' voices, reinforcing feelings of isolation and reducing the quality of their social interactions.

The Japa Syndrome, Transnational Kinship, and the Digital Mediation of Care

The traditional Nigerian moral economy of informal caregiving rooted in extended kinship co-residence, filial piety, and daily physical presence has experienced intense structural disruption (Akinrolie et al., 2020; Okoye, 2024), creating new patterns of separation that profoundly affect late-life social connectedness. A major catalyst is the mass out-migration of younger adults in search of economic stability abroad, widely known as the *japa* syndrome (Adeyamju et al., 2024; Ikeorji & Warri, 2024). This migration affects the traditional family structure, such that older parents are increasingly left behind in rural or peri-urban communities with limited access to daily companionship and practical support (Ikeorji et al., 2024). In response, families increasingly deploy digital and AI-mediated platforms ranging from predictive messaging applications and automated video scheduling to voice assistants to maintain communication rather than physical presence (Francis et al., 2019). In this context, AI-mediated tools emerge as substitutes for

proximity, yet their effectiveness is shaped by the emotional weight of separation and the cultural expectation that care must be embodied, not virtual

Digital and AI-mediated platforms have become central to maintaining transnational family ties. Predictive messaging apps, automated video calls, and voice assistants help families coordinate communication across time zones and distances (Francis et al., 2019). These tools create a sense of synthetic closeness that allows older adults to feel connected even when physical visits are infrequent. However, this closeness is often fragile as AI-driven communication can feel scripted, rushed, or emotionally thin, especially when adult children rely on automated reminders or templated messages to maintain contact (Manasi et al., 2022).

AI-mediated care often clashes with cultural expectations of relational intimacy. Nigerian informal care traditions emphasise shared routines, physical touch, and communal presence, elements that digital tools cannot replicate (Ebimgbo et al., 2022; Okoye, 2024). When AI becomes the primary bridge between generations, older adults may interpret this shift as a sign of declining respect or weakening family bonds. This shows a cultural mismatch that requires deeper reflection: while AI can facilitate communication, it may also unintentionally reinforce emotional distance by replacing meaningful interaction with automated or superficial exchanges. Understanding this tension is essential for evaluating the psychological and cultural implications of AI-mediated care in later life and in preserving the dignity of older adults.

Gendered Life Courses, Digital Literacy, and Algorithmic Bias

Gender also shapes how older adults encounter AI technologies, influencing both their access and their comfort with digital communication (Rochelle et al., 2015). In Nigeria, historical inequalities in formal educational access, property ownership, and formal sector employment mean that older cohorts of women enter later life with lower financial capital and technical literacy compared to older men (Yusuff & Ajiboye, 2014). These structural disadvantages directly limit their ability to purchase devices, afford data, or develop digital skills (Iyalla-Amadi, 2024; Yakubu, 2025). As a result, older women frequently experience greater difficulty navigating AI interfaces, leading to reduced confidence and lower adoption rates. This gendered digital divide means that AI-mediated communication may widen existing inequalities by offering more benefits to older men while leaving older women further isolated.

Furthermore, emerging AI systems are rarely value-neutral; they frequently reflect the embedded assumptions and training datasets of their developers, which systematically omit African socio-cultural contexts (Manasi et al., 2022). Natural language processing (NLP) models deployed in virtual assistants (such as Apple Siri or Google Assistant) display significant recognition failure when processing Nigerian accented English, indigenous vernacular languages (such as Igbo or Efik), or local code-switching. For older rural women who lack fluency in formal Western English, these communicative failures induce frustration, reinforce technophobia, and produce algorithmic erasure (Yakubu, 2025). Such experiences are not merely technical inconveniences; they shape how older adults perceive their own relevance within a digital world that seems designed for others.

This sense of exclusion can weaken social ties by making digital communication stressful rather than supportive. However, while older men may possess higher formal literacy, their traditional gender roles mostly centred on patriarchal community leadership and public gathering render screen-based affective companionship awkward and culturally dissonant. These intersecting challenges show that AI-mediated communication cannot be understood without considering gendered life histories, cultural expectations, and the biases embedded within technological systems. Any attempt to use AI to strengthen social connection in later life must therefore address these gendered realities to avoid reinforcing existing inequalities.

Theoretical Framework

Modernisation Theory of Ageing provides a clear and useful foundation for understanding how AI-mediated communication is reshaping late-life social connectedness in Nigeria. The theory was first postulated by Cowgill (1974), it argues that industrialisation, urbanisation, and technological advancement gradually weaken the social position and everyday reality of older adults. As societies modernise, traditional kinship systems loosen, youth labour becomes central to economic productivity, and older people experience declining authority, reduced co-residence, and shrinking interpersonal networks. African scholars such as Aboderin (2004) and Khalaila and Litwin (2012) have used this theory to show how rapid socio-economic change in African contexts produces fractured intergenerational reciprocity and heightened vulnerability in later life. In Nigeria, these dynamics are intensified by rural-urban migration, globalised labour markets, and the widespread japa movement, all of which widen the emotional and geographical distance between ageing parents and their adult children. When this happens, AI tools such as chatbots, digital assistants, and social robots seem to be the modern solutions promising to bridge distance yet displaces older adults from the centre of communal life.

The theory also shows the gendered inequalities embedded within these modernising processes. According to Lukman et al. (2025) modernisation disproportionately disadvantages older women, who often enter later life with fewer educational opportunities, lower lifetime earnings, and lifelong caregiving responsibilities. In Nigeria, these disadvantages intersect with digital exclusion: older women are less likely to own smartphones, have stable income for data access, or feel confident navigating AI interfaces shaped by Western, monolingual, and masculine-coded design assumptions (Iyalla-Amadi, 2024). Modernisation Theory helps explain why AI-mediated care may unintentionally reproduce these inequalities by privileging technologically fluent users and sidelining those whose life courses were shaped by structural disadvantage. The theory also highlights cultural tensions that arise when modern technologies attempt to replace embodied, relational care with algorithmic simulations. In societies where elder care is rooted in physical presence, moral duty, and communal identity, AI companionship can become an illusion of proximity, a digital closeness that masks, but does not repair, the deeper erosion of intergenerational solidarity.

Methodology

Research Design

This study employed a qualitative interpretive phenomenological approach to explore how AI-driven communication technologies intersect with gender and cultural dynamics to influence social connectedness among older adults in Nigeria. Interpretive phenomenology was chosen because it allows researchers to investigate participants' lived experiences in depth, capturing how they make sense of technology, relational belonging, and social isolation within their historical, relational, and cultural contexts (Creswell & Creswell, 2017; van Manen, 2018).

Study Setting and Participant Selection

The study was conducted in two contrasting socio-cultural urban and peri-urban landscapes in southern Nigeria: Enugu (Enugu State, southeastern Nigeria) and Calabar (Cross River State, south-southern Nigeria). These two locations provided rich comparative insights into how regional cultural norms, family networks, and local dialects shape technology adoption. Also, participants were recruited through a combination of purposive and snowball sampling techniques. Recruitment was facilitated through church societies, community elder associations, and peer networks within the study locations. To be eligible for participation, individuals were required to be 65 years of age or older, reside within the Enugu or Calabar study axis, have direct experience using digital communication technologies or AI-mediated platforms, such as smartphones, voice-assisted applications, automated social media feeds, or virtual communication tools, and be willing to provide informed voluntary consent. A total of 35 older adults were initially approached for participation. Of these, 25 completed the study, including 15 participants from Enugu and 10 from Calabar. The remaining 10 individuals did not participate due to scheduling conflicts, frail health conditions, or a lack of interest in engaging in qualitative interviews.

Data Collection

The study conducted in-depth, semi-structured interviews. A semi-structured interview guide was designed around the study objectives, exploring themes of daily communication routines, perceived emotional depth of digital interactions, gender differences in device use, language barriers with automated tools, and cultural views on artificial companionship. Interviews were conducted face-to-face in participants' private residences or, when preferred, via secure telephone calls, each lasting 50-60 minutes. Probing questions were deployed to capture emergent insights. All interviews were conducted in English (with occasional vernacular phrases clarified in real time), audio-recorded on password-protected mobile devices and laptops, and supplemented by reflective field notes.

Data Analysis

We analysed the transcripts manually using Braun and Clarke's (2019) six-phase reflexive thematic analysis framework. We began by familiarising ourselves with the data through the verbatim

transcription of all audio recordings, followed by repeated readings of the transcripts and accompanying field notes. This process enabled us to develop a deep understanding of participants' narratives and the broader contexts within which their experiences were situated.

We then generated initial codes inductively on a line-by-line basis, allowing themes to emerge from participants' accounts rather than imposing predetermined categories. At the same time, our interpretation of the data was sensitised by Modernisation Theory of Ageing and communication perspectives on aging, social connectedness, and interpersonal relationships. This analytical approach enabled us to identify recurring patterns associated with algorithmic frustration, gendered caregiving roles, the emotional consequences of the *japa* phenomenon, changing family structures, social isolation, and experiences of AI-mediated communication.

Subsequently, we examined relationships among the codes and grouped them into preliminary themes reflecting the intersections of technological change, cultural values, gender relations, and later-life social connectedness. Candidate themes were then reviewed and refined through continuous comparison with both the coded extracts and the entire dataset to ensure coherence, consistency, and a faithful representation of participants' lived experiences. Once the themes were fully developed, we formulated clear conceptual definitions and descriptive labels for each overarching theme. Finally, we produced the analytical report by synthesising the findings into a coherent interpretive narrative, supported by verbatim quotations from participants and disaggregated by gender and study location to illuminate contextual similarities and differences across Enugu and Calabar.

Results

Socio-Demographic Profile of Participants

The participating cohort comprised 10 men and 15 women, with ages ranging from 65 to 81 years (mean age: 66 years). All 25 participants identified as Christians. Regarding marital status, 8 were cohabiting with their spouses, 5 were widowers, 4 were widows, and the remainder lived separately. In terms of formal educational attainment, 3 held a Bachelor of Science (B.Sc.), 8 held a Master of Science (M.Sc.), and 10 held a Doctor of Philosophy (Ph.D.). This demographic profile represents a highly educated cohort of retirees residing in southern Nigerian communities, whose high literacy allows for a clear evaluation of whether educational privilege overcomes the cultural and technical hurdles of AI engagement.

Thematic analysis of the interview transcripts generated four overarching themes that capture how artificial intelligence and mediated communication intersect with gender roles, cultural values, and late-life social isolation among older adults in Enugu and Calabar.

The Paradox of Proximity: The Japa Syndrome, Screen-Mediated Care, and Emotional Alienation

Across both study locations, participants identified the mass out-migration of children and younger kin (*japa*) as the primary catalyst for their social isolation. While digital devices, automated video-calling routines, and smart messaging platforms provided informational continuity across borders, participants overwhelmingly experienced this mediated contact as an insufficient, synthetic substitute for physical presence.

Emotional Void of Digital Check-ins

Participants described scheduled digital calls and algorithmically suggested messages as transactional rituals that highlighted their domestic emptiness rather than relieving it.

My daughter set up a smart tablet on my dining table before relocating to the United Kingdom. It rings at scheduled intervals for video calls, but looking at a flat glass screen cannot replace a child walking into the parlour to greet you in the morning. It feels like a broadcast, not true companionship. When the call ends, the quiet in the house is even heavier. (Participant 3, Female, 68 years, Enugu).

A female participant confirmed that digital communication reduces the positive impact of physical presence. She said:

When my son calls me on the phone, I am always happy and I look forward to his call because I can see his face and hear his voice. At least at that moment, I can feel him even though he is not present. But when the call finishes, I face the reality, that I am still here by myself. The phone can help me hear his voice, but it cannot make his presence real. I prefer his presence not just seeing him on the phone screen.” (Participant 7, Female, 65 years, Calabar)

Loss of Embodied Reciprocity

Older adults emphasised that African cultural understandings of elder care are rooted in touch, shared meals, and shared physical space. Automated interactions stripped care of its cultural meaning.

The younger generation thinks that buying an expensive device and sending monthly allowances solves everything. In our culture, taking care of older people is not a remote assignment. You cannot hold a hand through a phone screen. The machine only reminds me of how far away my family has scattered. (Participant 14, Male, 73 years, Calabar).

Another participant expressed concern that the increasing dependence on phones and digital communication gradually replaced the closeness they once shared with their children:

Before, my daughter would come home and sit with me. We would talk about everything, and I could feel like a mother. Now she sends money and calls me on the phone, but the

calls are always short because she is busy. Sometimes I look at this phone and wonder if it has taken my daughter away from me. Technology was supposed to bring families together, but for me, I feel it has divided us. I miss having my daughter beside me; a phone cannot give me back the love we shared. (Participant 16, Female, 70 years, Enugu)

Gendered Trajectories of Isolation and Technology Deployment

The qualitative findings revealed sharp gender divergence in both the vulnerability to social isolation and the everyday deployment of communication technologies.

Relational Maintenance among Older Women

Older female participants actively adopted messaging platforms and basic voice interfaces to maintain kin-keeping responsibilities, track grandchildren's milestones, and participate in church fellowship networks. However, their emotional distress stemmed from the loss of hands-on grandmotherly nurturing.

I use WhatsApp voice notes daily to speak with my grandchildren in Canada. I pray for them and send audio messages. It helps me feel useful as a grandmother, but it breaks my heart that I cannot cook for them or nurse them when they fall ill. My care has been reduced to voice recordings. (Participant 8, Female, 67 years, Enugu).

In contrast, another participant viewed the phone as a helpful way of staying connected with her daughter despite the distance. She said:

I miss my grandchildren very much. When my daughter calls me on video, I sing with them, we laugh, and I ask them about their day, just like I would do if they were here with me. They are not here, but the phone helps me to still be their grandmother and share in their daily lives. I thank God that I have something that helps me feel close to them, although I would be happier if they could come home and sit with me. (Participant 17, Female, 68 years, Calabar).

Prestige Loss and Reluctance among Older Men

Older male participants, particularly retired civil servants and academics, experienced isolation as a sudden collapse of public authority, occupational identity, and communal status. Many viewed virtual interaction as undignified or superficial compared to physical town meetings and peer socialisation.

For over thirty years, people came to my office or home to seek counsel and deliberate on community matters. In retirement, sitting alone with a smartphone waiting for someone to send a message feels belittling. A man cannot lead or command respect through a small telephone screen. It is an isolating experience. (Participant 19, Male, 71 years, Calabar).

Another participant emphasized that physical presence was important when there is a need for advice and maintaining meaningful intergenerational relationships. He said:

When I want to advise my son or talk to my grandsons about important things, speaking through the phone is not the same as sitting together. When they are in front of me, they listen better because they can see my face, my hands, and the way I speak, and they understand that what I am saying is important. In our culture, advice is not something you just send on the phone; you sit with your family, talk properly, and they can ask questions and learn from you. I can still talk to them through the phone, but the real understanding and respect come when we sit together. (Participant 22, Male, 75 years, Enugu).

Linguistic Hegemony, Algorithmic Erasure, and Usability Friction

Despite the high educational attainment of this cohort (with all participants holding tertiary degrees), engagement with conversational AI tools and smart digital assistants encountered persistent structural friction.

The Accent and Vernacular Divide

Voice-driven AI systems (such as Siri and Google Assistant) consistently failed to interpret local Nigerian phonology, accented English, and indigenous idioms (Igbo and Efik). This generated intense user frustration and communicative withdrawal.

My son bought me a voice-activated speaker so I could ask it for news or bible verses. Half the time, the machine responds that it does not understand my request because of my accent. If an educated woman like myself cannot get an ordinary device to recognise her voice, how do they expect rural elders with no formal education to use these things? It makes one feel inadequate. (Participant 5, Female, 70 years, Enugu).

In the same vein, another female participant described the practical difficulties of navigating digital applications, particularly when these technologies failed to accommodate her language and way of communicating. She stated:

Even with my formal education, learning these new phone applications has not been easy for me. Sometimes, I have to call my younger children to show me again how to record a voice note or make a video. Even when I know what I want to say, I may want to speak in my local language or Pidgin, but the application does not understand some of the words and writes something completely different. I get tired of correcting it because the phone is not made to understand the way we speak here. Sometimes I just leave it because I do not have the patience to keep struggling with an application that cannot understand my language. (Participant 10, Female, 69 years, Calabar).

Cognitive Load and Complex Device Ecosystems

Participants expressed anxiety over frequent software updates, algorithmic interface changes, password management, and pop-up notifications, viewing automated systems as intrusive chores rather than intuitive supports.

The interfaces change without warning. You master how to open a menu today, and tomorrow an update alters the layout entirely. It creates continuous mental stress. I prefer standard voice telephone calls where I simply press green to answer and red to terminate. (Participant 25, Male, 69 years, Calabar).

Difficulties with updates and file management creates anxiety and results in the loss of important personal information stored on devices. A male participant shared that:

“Once, the phone wanted me to update one application and back up my files, but I did not really understand how to do it. I tried, but some of the things I had saved were no longer there. Later, when the phone stopped working completely, I could not get my files back because I had not done the backup properly. These updates are too much for me; every time the phone asks me to do something new, I become worried that I may press the wrong thing and lose what I have. I just want the phone to work without always asking me to update this and that.” (Participant 20, Male, 67 years, Enugu).

Ethical Dissonance: The Commodification of Care and Privacy Concerns

The prospect of AI-driven social robots and synthetic companionship provoked profound moral and cultural objections among respondents.

Synthetic Care as Dehumanisation

Participants overwhelmingly rejected the notion of artificial agents replacing human kin, categorising machine companionship as a breach of filial piety and an affront to elder dignity.

An artificial programme pretending to care about an old person is an insult to human dignity. A robot does not have a soul, empathy, or moral duty. Substituting a human child with an algorithm is an abandonment cloaked in modern sophistication. (Participant 11, Female, 75 years, Enugu).

Another participant expressed concerns that replacing human care with robots could gradually weaken human relationships and create a society in which technology takes over the roles of humans. He said:

I have never liked the idea of using robots to take care of human beings. Like recently I watched on TV how robots were bringing food to hotel rooms, who knows tomorrow they

will be sitting with our old people, and before you know it, people will no longer need one another. I have even seen on the news that many people may lose their jobs to AI and robots in the coming years. If robots can work for us, talk to us, and even care for us, then what will be left for human beings to do? Very soon, we may become strangers in our own families, with robots doing the work that our children and grandchildren should be doing. To me, that is not development; it is a warning that we are slowly losing our humanity. (Participant 21, Male, 65 years, Calabar).

Surveillance and Privacy

Participants expressed serious concerns about 24/7 video and audio tracking. They felt it violated the privacy of the home and raised alarming questions about who controls their personal health data.

In our culture, family life and one's private home are sacred. Placing sensors and smart cameras everywhere to monitor whether an elder has stood up or taken medication feels like living under foreign police surveillance. It strips you of your privacy in your own home. (Participant 1, Male, 78 years, Enugu).

Discomfort with surveillance technologies was expressed by another participant who acknowledged their safety benefits but said that constant monitoring could make older adults feel cautious and uncertain about their privacy within their homes.

I understand why they put the cameras there. It is for safety, so that if something happens, somebody can see and know what is going on. My neighbour has cameras in his house, and I have seen how they monitor things. But sometimes I still do not like it. You begin to wonder where exactly the camera can see and which part of the house is being watched. Even when you want to have your private moments, you may be wondering if you are completely free in your own house, so it makes you become careful about what you do. Safety is important o, but a person should also know that there is still somewhere in the house where they have their privacy. (Participant 12, Male, 66 years, Calabar).

One female participant viewed home surveillance more positively because it could protect older adults from harm. But she shared that monitoring should not intrude on their private moments. She said:

I like the surveillance cameras though we don't have it yet. They can protect an older person, especially when the person depends on a caregiver. I remember a family friend who was almost assaulted and robbed. The information from the surveillance camera helped the family discover what was being planned by the caregiver, and they were able to intervene before anything happened. So, I cannot say that surveillance is bad. Sometimes it can save a person's life or protect them from people who want to take advantage of them. But I will still say that there should be some limits. The camera should be there to protect

the older person, not to watch everything they do. There are some moments that belong to the person alone, and those private moments should be respected. (Participant 2, Female, 67 years, Calabar).

Discussion

The empirical findings show how the intersection of artificial intelligence, demographic shifts, and cultural transformations produces distinct challenges for social connectedness in later life. While technological discourse frequently champions AI and digital devices as panaceas for social isolation, the lived realities of older adults in Enugu and Calabar demonstrate that digital mediation often generates an illusion of proximity that fails to satisfy cultural expectations of care.

The persistent dissatisfaction with screen-mediated contact, despite continuous connectivity with dispersed children, underscores the limitations of purely technical solutions to human isolation. In African gerontological contexts, elder care is traditionally structured around the moral economy of physical co-presence, shared domestic routines, and intergenerational reciprocity (Akinrolie et al., 2020; Okoye, 2024). The increasing migration of youths driven by the *japa* phenomenon shatters this arrangement, reducing rich communal ties to scheduled screen interactions. As reflected in the Modernisation Theory of Ageing, modernisation forces, industrial migration, and technological changes erode the communal family fabric and diminish the social integration of older persons (Khalaila & Litwin, 2012). Rather than restoring genuine intimacy, algorithmically managed calls and digital exchanges often serve as painful reminders of physical abandonment, leaving domestic spaces socially hollow.

Furthermore, data from this study confirm that late-life technological encounters are profoundly gendered. Older women deploy mobile platforms as relational instruments to execute kin-keeping duties across transnational borders, yet they suffer from the inability to provide physical maternal care. In contrast, older men experience technological isolation as an acute status decline; the transition from authoritative, in-person communal assembly to passive digital engagement strips away their patriarchal social relevance. This aligns with critical feminist gerontology, which posits that men and women inhabit divergent communicative pathways and experience late-life role disruptions differently (Yusuff & Ajiboye, 2014). These findings suggest that the implications of digital engagement in later life extend beyond access or digital literacy to encompass the gendered identities, relationships, and social roles through which older adults understand their place within family and community life.

A critical contribution of this study lies in unmasking algorithmic erasure and linguistic hegemony. Even within an exceptionally educated sample where participants held advanced postgraduate degrees, conversational AI systems and voice assistants generated significant operational friction due to their inability to recognise Nigerian-accented speech, code-switching, or indigenous languages (Igbo and Efik). This finding challenges the assumption that digital exclusion among older adults is solely a function of low general literacy (Iyalla-Amadi, 2024). Instead, it reveals that commercial AI systems embed Western-centric, monolingual design defaults that alienate African users regardless of educational attainment (Manasi et al., 2022; Noble, 2018; Yakubu,

2025). When smart systems fail to decode the natural speech patterns of older adults, they reinforce technophobia and deepen feelings of communicative inadequacy.

The vehement rejection of artificial companions and intrusive surveillance monitors highlights a fundamental cultural and ethical incompatibility. Framing care for older adults as an automated service strips it of the human dignity and moral obligation central to Nigerian social systems (Floridi et al., 2018; Okoye, 2024). Rather than welcoming algorithmic caregivers, participants viewed simulated empathy as dehumanising and regarded continuous sensory monitoring as an invasion of the domestic sanctuary. These findings demand an urgent departure from uncritical adoptions of Western assistive technologies, advocating instead for culturally rooted, gender-responsive digital designs that uphold dignity, preserve privacy, and support human relationships rather than attempting to replace them. It is important to state that participants' concerns should not be interpreted as a blanket rejection of technological innovation. Rather, their responses reveal a desire for technology to occupy a supportive role within care, without displacing the human relationships that give care its meaning. For these older adults, being cared for involves more than being monitored for safety, reminded to take medication, or provided with a digital conversation. It involves being visited, listened to, respected, consulted, and included in family and community life.

This distinction is particularly important in the Nigerian culture, where care for older adults is often understood as a relational responsibility rather than simply a service that can be purchased or automated. The findings therefore raise a deeper question about what is lost when efficiency becomes the primary measure of good care. A system may be technically capable of detecting a fall or responding to a conversation, yet still fail to provide the emotional reassurance, familiarity, respect, and sense of belonging that participants associated with meaningful care. Similarly, surveillance may improve physical safety while simultaneously creating feelings of discomfort, caution, and loss of control when older adults are uncertain about where and when they are being watched. The ethical challenge, therefore, is not simply whether AI can perform caregiving functions, but whether those functions can be introduced without undermining autonomy, privacy, dignity, and human connection. From this perspective, culturally responsive AI for older adults should be designed as an extension of human care rather than a substitute for it. It should help families remain connected, support caregivers, improve safety, and strengthen access to services while leaving space for older adults to maintain private moments and meaningful interpersonal relationships.

The findings from this study suggest that the value of AI in later-life social connection lies not in its ability to replace human relationships, but in its capacity to strengthen them. Participants' experiences show that older adults need technologies that fit into their existing social worlds rather than technologies that require them to abandon familiar ways of communicating, relating, and receiving care. This includes AI systems that recognise Nigerian accents, code-switching, and indigenous languages; interfaces that are simple and accessible; and communication tools that allow older adults to remain active participants in family and community relationships. The findings also point to the need for gender-sensitive approaches that recognise that older men and

women may experience digital connection differently because of their social roles, expectations, and experiences of ageing. For some older women, technology may help sustain caregiving and kinship relationships across distance, while for some older men, digital communication may not adequately replace the social recognition and authority associated with face-to-face community interaction. A culturally appropriate approach must therefore move beyond treating older adults as a single technological user group. It must recognise differences in gender, language, education, social roles, and living circumstances. At the same time, participants' concerns about surveillance and artificial companionship demonstrate that technological support must be accompanied by clear ethical boundaries. AI should enhance communication, support caregivers, improve safety, and reduce isolation working alongside families, communities, and social care systems to promote belonging, dignity, autonomy, and meaningful participation in later life.

Conclusion

This study critically examined how artificial intelligence and emerging digital communication technologies intersect with gender roles, cultural values, and late-life social isolation among older adults in southeastern and south-southern Nigeria. The empirical findings reveal that while digital tools afford functional connectivity across geographical boundaries, they fail to replicate the embodied presence, physical care, and mutual reciprocity foundational to traditional Nigerian elder care. Rather than mitigating loneliness, screen-mediated interactions often construct an illusion of proximity that accentuates emotional distance and deepens feelings of domestic abandonment following youth out-migration.

Furthermore, technological adoption and the experience of late-life isolation are starkly differentiated by gender. Older women actively deploy communication tools to preserve transnational kinship ties yet endure deep maternal grief over their inability to provide physical care. On the other hand, older men experience technological transitions as an abrupt collapse of public authority, civic stature, and traditional communal leadership. To make things worse, computer systems ignore certain people, and one dominant language pushes out all the others, thus modern conversational AI systems systematically fail to accommodate local accents, vernacular languages, and regional idioms, alienating even highly educated African users. The wholesale substitution of human presence with automated companions or invasive sensory surveillance conflicts with cultural understandings of filial duty, privacy, and elder dignity. Artificial intelligence cannot serve as a technical remedy for the structural breakdown of communal care; its utility in later life depends entirely on culturally grounded, gender-equitable, and ethically governed integration. Future research should examine how culturally responsive and linguistically inclusive AI systems can be designed to support older adults in diverse African contexts while preserving the relational, gendered, and communal dimensions of care that remain central to later-life well-being.

Recommendations

To bridge the cultural and digital divides exposed by AI care technologies, we must move beyond the illusion of proximity and design systems that genuinely sustain human connection. To address the intersection of gender bias, algorithmic exclusion, and linguistic dominance in care for older adults in Nigeria requires immediate, systemic intervention. The following recommendations provide a strategic framework to build equitable, culturally competent AI technologies that protect the dignity of aging populations.

- Technology developers and computer scientists should intentionally train natural language processing (NLP) models on regional African phonology, Nigerian accented English, and indigenous languages such as Igbo and Efik. Designing conversational agents and voice interfaces that comprehend indigenous idioms and code-switching will mitigate linguistic alienation and reduce the cognitive burden on ageing users.
- Gerontological social workers, non-governmental organisations, and public health authorities must refrain from deploying AI systems as direct replacements for human interaction. Digital tools must be positioned strictly as supplementary aids designed to facilitate human-to-human connection, while policy priority must focus on strengthening community day centres, peer fellowship schemes, and intergenerational physical gatherings.
- Digital literacy and AI education programmes should be tailored to the distinct communicative patterns of older men and women. Programmes targeting older women should focus on digital self-efficacy, fraud avoidance, and transnational family coordination, whilst initiatives for older men should facilitate peer networking platforms that help preserve civic engagement, intellectual exchange, and communal status post-retirement.
- Regulatory bodies, such as the Nigeria Data Protection Commission, should formulate enforceable ethical guidelines governing assistive and monitoring technologies deployed in private residences. Older adults must have transparent, unambiguous control over personal health and domestic surveillance data to safeguard their right to privacy and protect against technological intrusion.
- Federal and state welfare ministries should establish social support frameworks that cushion the disruption caused by the *japa* syndrome. Investing in community-level health workers and neighbourhood visit networks will provide embodied, physical check-ins that technology alone cannot deliver, preserving the dignity and psychological stability of older adults in their communities.

Declarations

Ethical Approval: This study was conducted in accordance with the Declaration of Helsinki. Formal institutional ethical approval was not required for this study as the survey was completely anonymous, voluntary, and carried no risk to participants.

Artificial Intelligence (AI) Use Statement: During the preparation of this work, the authors used Gemini to improve language, style, and clarity. Following the use of this tool, the authors thoroughly reviewed, edited, and verified the content, and take full responsibility for the final intellectual integrity of the publication.

Data Availability Statement: The datasets generated and analysed during the current study are available from the corresponding author upon reasonable request.

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