

Digital Media, the English Language, and Development Communication in HIV/AIDS Control among Female Sex Workers in Calabar Municipal

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ABSTRACT

HIV/AIDS prevention among female sex workers (FSWs) remains a critical public health challenge in Nigeria. This paper examines the intersection of digital media, language use, and development communication strategies in HIV/AIDS prevention and control efforts targeting FSWs in Calabar Municipal, Cross River State. Drawing on the Diffusion of Innovations (DOI) theory as its analytical framework, the study investigates how digital platforms mediate the dissemination of health information, sustain peer support networks, and facilitate access to HIV/AIDS services. Using qualitative internet ethnography, data were collected as selected excerpts of posts from two closed social media groups — a WhatsApp group and a Telegram group, each comprising fifty (50) enrolled FSW members — monitored over a defined period for evaluation of behaviour change communication (BCC) outcomes. The study finds that Nigerian Pidgin English, deployed through WhatsApp and Telegram, is particularly effective in transmitting health messages and eliciting responses that expose knowledge gaps, enabling targeted peer educator follow-up. The paper concludes that culturally sensitive, multilingual digital approaches are essential in designing effective BCC interventions for marginalized populations, and recommends that development project designs prioritize multilingual digital communication strategies and expand platform diversity to enhance reach and representativeness.

Keywords: Digital media, development communication, behaviour change communication, Diffusion of Innovations theory, female sex workers, Nigerian Pidgin English.

INTRODUCTION

The millennial era ushered in a wave of digital innovations that fundamentally altered traditional patterns of information, communication, and technology (ICT). The proliferation of mobile phones, internet connectivity, and social media platforms has transformed information dissemination and interpersonal communication globally. Even in resource-limited settings, mobile phone ownership and internet access have reached significant levels. In the field of development communication, digital media offers unique advantages for health interventions targeting marginalized and vulnerable populations, including anonymity, convenience, wide reach, cost-effectiveness, and interactive capabilities.

One of the critical areas of concern in development communication is the prevention and control of HIV/AIDS, particularly among key vulnerable populations such as Female Sex Workers (FSWs), Injection Drug Users (IDUs), and Men who have Sex with Men (MSM). FSWs constitute a critical population in global HIV/AIDS epidemiology, experiencing HIV prevalence rates 10 to 30 times higher than the general female population in most countries. The World Health Organization estimates that FSWs and their clients account for approximately 10–20% of new HIV infections in several regions. This vulnerability is compounded by poor HIV/AIDS knowledge, inconsistent condom use, limited negotiating power with clients, exposure to violence, substance abuse, social and legal marginalization, and inadequate access to prevention, testing, and treatment services. In Nigeria, the HIV/AIDS prevalence rate stands at approximately 1.4%, with around two million people living with HIV (NACA, 2025), of which 1.7% are in Cross River State — a notable decline from a previous rate of 6.6%.

Traditional HIV/AIDS control strategies targeting FSWs have included community-based peer education, condom distribution, voluntary counselling and testing, and harm reduction initiatives. These approaches, however, frequently encounter implementation challenges related to stigma, FSW mobility, and language barriers. Language serves as both a facilitator and a barrier in health communication. English dominates much of the digital health content and international HIV/AIDS discourse, yet English proficiency among FSWs varies widely based on educational background, geographical location, and exposure. This linguistic reality has driven the strategic use of Nigerian Pidgin English and, in some cases, indigenous languages, in Information, Education, and Communication (IEC) materials produced by development workers in Nigeria.

This paper examines the intersection of digital media, language use, and development communication strategies in HIV/AIDS prevention among FSWs in Calabar Municipal, drawing on the Diffusion of Innovations (DOI) theory as its analytical lens.

Theoretical Framework

The Diffusion of Innovations (DOI) theory, popularised by Everett Rogers in 1962, explains how new ideas, technologies, or behaviours spread through a social system over time. It posits that the adoption of new ideas follows a staged process driven by communication channels, the characteristics of the innovation, and the structure of the social network. The theory identifies four core elements:

- The innovation: an idea, practice, or product perceived as new by an individual or group.
- Communication channels: the means — whether mass media or interpersonal — through which information about the innovation reaches potential adopters.
- Time: the speed at which an innovation is adopted across a social system.
- The social system: the structure of relationships within which adoption occurs.

Rogers further categorised adopters into five groups along a normal distribution curve: Innovators (the first to adopt, willing to take risks), Early Adopters (respected opinion leaders who embrace innovation just before the early majority), Early Majority (deliberate adopters who follow once an innovation is established), Late Majority (sceptical adopters who adopt after the average member of the social system), and Laggards (the last to adopt, often resistant to change). This framework is directly applicable to the present study as it explains the process and rate by which HIV/AIDS-related health information is shared and adopted by female sex workers in Calabar Municipal — from the innovators and early adopters who readily embrace new health behaviours to the laggards who require more intensive peer educator follow-up.

REVIEW OF RELEVANT LITERATURE

This review examines the role of digital media, English as a language of communication, and development communication approaches in HIV/AIDS prevention interventions.

Asharaf (2025) reveals that digital platforms not only facilitate rapid lexical change but also shape how new words are adopted and normalised within contemporary English. While this dynamic environment presents opportunities for linguistic enrichment and inclusion of diverse voices, it also introduces challenges such as the potential erosion of linguistic diversity. Similarly, Marcos (2024) notes that the digital technology era has brought about a substantial shift in language development, particularly for younger generations who have grown up immersed in digital environments. This implies that language use is greatly influenced by digital media exposure, which offers a wealth of options for linguistic choices and practice.

In development communication, particularly in HIV/AIDS prevention and control programmes among FSWs, the choice of language is critical to successful information dissemination. This is evident in the design of IEC materials and in the selection of appropriate digital channels. Sikorska et al. (2025) further note that emerging communication technologies and social networks exert a strong influence on lexical and grammatical norms,

with young people serving as primary agents of language development. Given the social profile and educational background of FSWs — many of whom are school dropouts, particularly among brothel-based sex workers — their linguistic options are limited. For FSWs in a cosmopolitan city like Calabar, these options typically reduce to English, Efik, Nigerian Pidgin English, and selected indigenous languages, with Nigerian Pidgin English enjoying the widest usage.

The proliferation of unverified health information on social media poses a significant challenge to health interventions. Adetola and Babafemi (2024) demonstrate this in their study of the COVID-19 pandemic, which showed that the speed of digital media enabled the rapid spread of false information about disease management and vaccine administration. Notwithstanding, Nweze et al. (2025) encourage the leveraging of emerging digital technologies and strategic collaborations through participatory models tailored to local realities to advance equitable progress in health service delivery.

Godwin et al. (2025) highlight the critical need for targeted interventions addressing the specific barriers faced by HIV/AIDS key populations. They argue that enhancing service accessibility and addressing stigma are essential for reducing HIV transmission and achieving epidemic control in Nigeria by 2030. The advent of digital media technologies presents unprecedented opportunities to overcome some of these barriers — enabling discreet information access, building targeted communities, facilitating peer networks, supporting service linkage, and empowering FSWs as active agents in behaviour change communication.

Development Communication and HIV/AIDS Prevention

Development communication is defined as the strategic use of communication processes and media to support sustainable development and social change. According to Ongkiko and Flor (1998), development communication grew in response to societal problems, with the underlying assumption that root causes of social problems may be traced and remedied through information and communication. Development communication has increasingly incorporated digital technologies in HIV/AIDS prevention and control by deploying participatory methods, community mobilisation, behaviour change communication (BCC), and structured interventions that address the social determinants of health. Nweze et al. (2025) observe that context-specific techniques — including community health workers, multilingual edutainment, and technology-driven models — enhance inclusion and scale-up potential despite challenges of limited infrastructure and literacy.

The Role of the English Language in Development Communication

A language attains global status when it assumes a special role that is recognised across countries — first as a mother tongue, and subsequently through adoption as an official or functional language in government, the legal system, the media, and education (Crystal, 2003). English today holds some form of special status in over seventy countries, including Nigeria, Ghana, India, Singapore, and Vanuatu. In HIV/AIDS control among FSWs in Nigeria, English anchors the design of national IEC materials, peer-to-peer education resources, pre- and post-test counselling materials, and community outreach content. However, within the FSW community in Calabar Municipal — where English, Nigerian Pidgin English, and Efik are the predominant languages — Nigerian Pidgin English functions as the dominant language of informal communication and is, therefore, the preferred medium for BCC messaging.

Digital Media and Development Communication

Digital media has profoundly reshaped how language evolves and how health information spreads. Platforms such as social media, online forums, and instant messaging applications provide dynamic spaces where users create, share, and refine information in real time. The interactive nature of digital media allows for rapid feedback and adaptation, while its viral capacity enables new health messaging to gain traction quickly through peer networks. For FSWs in Calabar Municipal, WhatsApp and Telegram offer critical advantages: they provide a degree of privacy and anonymity that face-to-face interactions do not, and they accommodate community formation without disclosing individual HIV status. The ready access to internet-enabled mobile devices makes these platforms effective channels for information dissemination and community engagement in HIV/AIDS control.

Behaviour Change Communication in HIV/AIDS Control

Behaviour Change Communication (BCC) in HIV/AIDS control is an interactive process used to develop tailored messages and strategies that encourage individuals to adopt and sustain healthy behaviours to prevent the spread of the virus. Rather than merely providing information, BCC aims to empower individuals with the knowledge, skills, and social support needed to reduce HIV risk and improve health outcomes. Peer-to-peer education is a central mechanism of BCC, wherein trained community members serve as trusted influencers to facilitate behaviour change among their cohorts.

METHODOLOGY

Research Design

This study employs a qualitative research design, specifically qualitative internet ethnography (also known as virtual or digital ethnography). Internet ethnography enables the study of social interactions, practices, and communities as they occur in online spaces, offering access to naturally occurring communication data (Hine, 2000). It is particularly suited to studies of vulnerable or stigmatised populations, where digital spaces often provide the primary or preferred site of community interaction. The approach allows the researcher to observe and participate in online group communication, yielding authentic insights into the language practices, knowledge gaps, and community dynamics of the research participants.

Study Setting and Participants

The study was conducted within two closed social media groups — a WhatsApp group and a Telegram group — formed as part of a behaviour change communication programme targeting FSW cohorts in Calabar Municipal, Cross River State, Nigeria. Both groups were dedicated to research purposes, specifically to monitor and evaluate the impact of BCC messaging among HIV/AIDS-vulnerable populations. The WhatsApp group comprised fifty (50) enrolled FSW members; the Telegram group similarly comprised fifty (50) active members. The researcher served as a participant observer, holding a functional role within the BCC programme. The term 'female sex workers' is used throughout this paper in line with development communication conventions, as a non-stigmatising designation that promotes openness and acceptance among key populations.

Data Collection

Data were collected as purposively selected excerpts of posts and responses from the two group chats over a defined monitoring period. The posts were drawn from a standardised Behavioural Change Communication (BCC) manual toolkit, designed to evaluate members' knowledge of HIV prevention and to stimulate disclosure of misconceptions and risky behaviours. Excerpts were selected on the basis of their thematic richness and their capacity to illustrate the range of knowledge levels, misconceptions, and engagement patterns among participants. A total of eight (8) key posts and their associated responses were selected for analysis.

Data Analysis

Data were analysed using thematic analysis informed by the DOI theoretical framework. In the first stage, the researcher read through all collected posts and responses to develop familiarity with the data. In the second stage, initial codes were generated based on recurrent patterns in content — including knowledge gaps, misconceptions, willingness to change, and resistance. In the third stage, codes were grouped into broader themes aligned with the DOI adopter categories (e.g., willingness-but-fearful, resistant/ignorant, compliant/informed). The role of Nigerian Pidgin English in mediating meaning and reducing stigma was treated as an overarching linguistic theme throughout the analysis.

Ethical Considerations

Ethical considerations were central to the conduct of this study, given that participants belong to a vulnerable and stigmatised population. The following protocols were observed:

- **Informed Consent:** All participants provided consent for their anonymised group communications to be used for research and monitoring and evaluation purposes at the point of enrolment into the BCC programme. The nature of the research, including its objectives and the use of group chat data, was clearly communicated.
- **Anonymity and Confidentiality:** No real names, usernames, phone numbers, or other identifying information appear in this paper. Excerpts are presented in their original Pidgin English form without any identifying metadata.
- **Data Protection:** Access to the groups was restricted to enrolled participants and programme staff. Chat data were stored securely and accessed only by the research team.
- **Minimisation of Harm:** The double role of the researcher as a participant observer and programme staff member was carefully managed to avoid any conflicts of interest or undue influence on participants.

Data Presentation and Analysis

The following excerpts are drawn from the WhatsApp and Telegram group chats of the FSW cohorts in Calabar Municipal. Each post was crafted in Nigerian Pidgin English — the dominant language of the community — and designed to elicit responses that would reveal participants' knowledge gaps, misconceptions, and behavioural tendencies with respect to HIV/AIDS prevention. Three overarching themes emerged from the analysis: (1) knowledge gaps and misconceptions about HIV transmission; (2) risky behavioural patterns and economic pressures; and (3) the mediating role of Nigerian Pidgin English in reducing stigma and facilitating open disclosure.

Theme 1: Knowledge Gaps and Misconceptions about HIV Transmission

Excerpt 1:

'You dey shame to do HIV test' (Are you ashamed of going for an HIV/AIDS test?)

This post is designed to open discussion on the need for routine HIV testing. Its impersonal construction avoids direct accusation, creating a space for members to engage without feeling personally indicted. Responses to this post revealed a spectrum of knowledge and attitudinal positions:

i. "I wan go do the test o but fear no gree me" (I want to do the test but I am afraid)

This response indicates willingness to test, constrained by fear of the result. The peer educator's follow-up action is to provide pre-test counselling, normalising testing and addressing fears around receiving a positive result.

ii. "Dat test na fake, I no de do" (The test is fake; I will not do it)

This response signals misinformation about the validity of HIV testing — a significant knowledge gap requiring targeted HIV prevention awareness education from the peer educator.

iii. "Where I go do the test, I no get money o" (Where can I do the test? I have no money)

This response demonstrates willingness but limited knowledge of available programme services. The peer educator is required to provide information on the location of testing sites and confirm that testing is free.

Excerpt 2:

'You think say if you taste man prick, you go sabi if e carry disease' (Do you think you can detect an infection by tasting a man's penis?)

This post directly debunks a specific and dangerous myth prevalent among FSWs — that oral exposure to seminal fluid can detect HIV infection. The anchor message reinforced by peer educators is that HIV can only be confirmed through laboratory testing, not through sensory assessment. This excerpt aligns with the 'Late Majority' and 'Laggard' DOI categories, reflecting persistent myths that require sustained, targeted communication to address.

Excerpt 4:

'You think say bobo wey fine for face no get HIV for body' (Do you think a healthy-looking person cannot have HIV?)

This post addresses the widespread misconception that HIV/AIDS carriers are always visibly ill or underweight. The key prevention message is that HIV does not manifest visibly until it progresses to AIDS, particularly when individuals are not on antiretroviral therapy (ART). Early detection through routine testing is promoted as the only reliable method for determining one's HIV status.

Excerpt 5:

'You folo person wey get HIV chop' (Have you shared a meal with a person living with HIV/AIDS?)

This post is designed to reduce stigma against people living with HIV by disabusing members of the misconception that casual contact — including sharing food — can transmit the virus. The message clarifies that HIV is transmitted through contact with infected bodily fluids (semen, blood, breast milk) and not through casual contact.

Theme 2: Risky Behavioural Patterns and Economic Pressures**Excerpt 3:**

'You dey use condom with every bobo' (Do you use a condom with all your clients?)

This post elicits disclosure of condom use practices. Key responses include:

i. "Na customer wey bring condom, I go folo use; if im no get, na im money be dat" (If a client brings a condom, I will use it; if he does not, he pays more)

This response reveals the commodification of unprotected sex — a critical risk factor for HIV transmission. The peer educator is tasked with reinforcing the message of consistent condom use, irrespective of client preferences or financial incentives. Free condoms and lubricants are provided as part of the programme to reduce economic barriers to condom use.

ii. "I no de enjoy condom with my bobo but I dey use with client" (I do not use condoms with my boyfriend but I use them with clients)

This response exposes an inconsistent condom use pattern, reflecting misplaced trust in intimate partners who may have multiple sexual partners. The peer educator is required to address the equal risk of HIV transmission in intimate partnerships.

Excerpt 7:

'You dey rob lubrica for condom instead of Vaseline' (Do you use water-based lubricant on condoms instead of Vaseline?)

This post reinforces the correct use of lubricants in HIV prevention. Oil-based lubricants such as Vaseline degrade latex condoms and increase the risk of breakage. HIV/AIDS prevention packs provided to participants include free condoms and water-based lubricants, and the correct use of both is a key BCC message.

Excerpt 8

'You fuck man wey no use condom because of more money' (Have you had unprotected sex with a client for a higher fee?)

This post opens a direct discourse on the practice of charging premium rates for unprotected sex — including anal sex. Peer educator responses to this thread prioritise reframing the perceived economic benefit of unprotected sex against the far greater cost of HIV infection and the health consequences of AIDS.

Theme 3: Digital Platforms and Routine Health Service Uptake

Excerpt 6

'You go do HIV test for heart-to-heart center' (Have you visited the heart-to-heart centre for an HIV test?)

'Heart-to-Heart Centres' are designated spaces within health facilities for HIV testing, counselling, and management. This post functions as a routine reminder for members to attend these centres every three to six months to ascertain their HIV status. Unlike other posts that expose knowledge gaps, this one frequently generates positive, affirming responses from members who confirm compliance — illustrating the DOI 'Early Adopter' and 'Early Majority' categories in action.

DISCUSSION OF FINDINGS

The data analysis reveals three interconnected patterns that illuminate the intersection of digital media, Nigerian Pidgin English, and HIV/AIDS behaviour change communication among FSWs in Calabar Municipal.

First, the choice of Nigerian Pidgin English as the medium of communication is not incidental but strategic. Most participants — particularly brothel-based FSWs — have limited formal education and communicate most fluently in Pidgin. The structuring of BCC messages in direct, non-accusatory, impersonal Pidgin sentences eliminates ambiguity and reduces the risk of self-stigmatisation or defensiveness. This finding aligns with Sikorska et al.'s (2025) observation that language variations are strongly shaped by users' social qualities and age, and underscores the importance of matching communication language to the sociolinguistic reality of the target audience.

Second, the use of WhatsApp and Telegram as delivery platforms provides structural advantages that conventional face-to-face interventions cannot replicate. The platforms enable wide reach within a defined, enrolled community; they afford participants the option of anonymity; and they do not require disclosure of HIV status in a visible, stigmatising manner. The viral nature of content within these closed groups also accelerates information sharing, consistent with Rogers' (1962) emphasis on communication channels as a key determinant of innovation adoption speed.

Third, the participant responses to the BCC posts map directly onto the DOI adopter categories, demonstrating the framework's analytical utility in this context. Participants who expressed willingness to test but cited fear or logistical barriers correspond to the 'Early Majority'; those expressing outright scepticism or reliance on myths correspond to the 'Late Majority' and 'Laggards'. This mapping enables peer educators to calibrate their follow-up interventions according to the specific attitudinal position of each participant, improving the efficiency and targeting of the programme.

Limitations

Several limitations should be noted in interpreting the findings of this study. First, the data are drawn from two groups in a single municipality, limiting the generalisability of findings to FSW communities in other cities or regions. Communication patterns and language preferences may differ significantly across geographical and social contexts. Second, the study relies solely on WhatsApp and Telegram data, excluding FSWs who do not own smartphones or who do not have consistent access to internet data — groups who may be among the most

marginalised within the FSW community. Third, the dual role of the researcher as both participant observer and programme staff member introduces a degree of positionality that may have influenced data collection and interpretation, despite efforts to minimise this effect. Future research should adopt multi-site, multi-platform designs incorporating mixed methods to improve breadth and generalisability.

CONCLUSION AND RECOMMENDATIONS

This paper has demonstrated that the strategic deployment of digital media — specifically WhatsApp and Telegram — in combination with Nigerian Pidgin English constitutes an effective and contextually appropriate approach to HIV/AIDS behaviour change communication among female sex workers in Calabar Municipal. The Diffusion of Innovations framework provides a robust analytical lens for understanding the varied rates and patterns of health behaviour adoption within this community, enabling more targeted and responsive peer educator interventions.

For FSWs in a cosmopolitan urban environment like Calabar, WhatsApp and Telegram offer a combination of privacy, anonymity, and community cohesion that platforms such as Facebook, Instagram, or X (formerly Twitter) cannot guarantee, given those platforms' vulnerability to infiltration by non-community members. The consistent use of Nigerian Pidgin English in messaging eliminates linguistic barriers, reduces stigma, and promotes honest engagement with sensitive health topics.

On the basis of these findings, this paper makes the following recommendations:

- Development project designs should prioritise culturally sensitive, multilingual digital communication strategies that match the sociolinguistic profile of target populations.
- Future HIV/AIDS BCC programmes should expand beyond a single platform, incorporating multiple digital channels — including Telegram, encrypted SMS systems, and community radio combined with digital follow-up — to improve representativeness and reach.
- Mixed-method approaches combining qualitative digital ethnography with quantitative indicators of health behaviour change (such as HIV testing frequency, condom uptake rates, and ART adherence) should be integrated into programme monitoring and evaluation frameworks.
- Ethical protocols — including informed consent, anonymity, and digital data protection — must be clearly designed, documented, and reported in all research involving vulnerable populations who participate in digital BCC programmes.

REFERENCES

1. Adetola, S. A., & Babafemi, J. (2024). Development communication in the era of digital media: Confronting the myth of pandemic in Nigeria. *Development Communication in Perspective*. <https://www.researchgate.net/publication/379805704>
2. Amankwaa, R. O. (2016). The impact of social media on student academic life in higher education. *Global Journal of Human-Social Science: Linguistics & Education*, 16(4), 1–9.
3. Ararume, J. (2015). The role of technology in enhancing science education in Nigerian schools. *Nigerian Journal of Education, Technology, and Innovation*, 7(1), 32–41.
4. Asharaf, M. (2025). Digital platforms and lexical change in contemporary English. *Journal of Language and Digital Communication*, 3(1), 45–62.
5. Bisong, J. A., Bisong, M. B., & Agbogo, E. (2024). The use of digital media for communication in the Nigerian educational system. *Nigerian Journal of Literacy and English Education*, 2(1), 132–140. <https://nijolee.net.ng/index.php/home/article/view/17>
6. Buckingham, D. (2007). Media education goes digital: An introduction. *Learning, Media and Technology*, 32(2), 111–119. <https://doi.org/10.1080/17439880701343006>
7. Crystal, D. (2003). *English as a global language* (2nd ed.). Cambridge University Press.

8. Dudeney, G., & Hockly, N. (2016). Literacies, technology and language teaching. In F. Farr & L. Murray (Eds.), *Routledge handbook of language learning and technology* (pp. 141–152). Routledge.
9. Godwin, O. E., Olaniyi, F. S., Abang, R., Paul, U., Ochonye, B. B., Amechi, P., Ismaeel, M. Y., & Agie, M. A. (2025). Improving HIV prevention for key populations in Nigeria: Insights on access, barriers, stigma, and service utilisation. *International Journal of Maternal and Child Health and AIDS*. https://doi.org/10.25259/IJMA_49
10. Hine, C. (2000). *Virtual ethnography*. SAGE Publications.
11. Marcos, L. (2024). Digital technology and language development in younger generations. *Applied Linguistics Review*, 12(2), 78–95.
12. Maragkopoulou, K. (2021). Digital media and English language development of dual language learners in kindergarten [Unpublished master's thesis]. University of Rhode Island. <https://digitalcommons.uri.edu/theses>
13. Nweze, G. N., Awoniyi, O. M., Falebita, T. F., Familoni, J. K., & Opele, J. K. (2025). Development communication as a tool for addressing health disparities and challenges in Nigerian communities: Obstacles and opportunities for future direction. *African Journal of Human Kinetics, Recreation and Health Studies*, 1(2).
14. Ongkiko, V. C., & Flor, A. G. (1998). *Introduction to development communication*. UP Open University.
15. Rogers, E. M. (1962). *Diffusion of innovations*. Free Press.
16. Sikorska, M., et al. (2025). Emerging communication technologies and the development of lexical and grammatical norms in English. *Language and Society Online*, 7(1), 14–33.