Exploring health literacy in developing economies: perspectives and practices of health communication professionals in rural Nigeria.

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Abstract

Background: Health literacy is widely recognised as a social determinant of health and key factor in health communication and education, with low health literacy correlated with poor health outcomes and socioeconomic inequalities. Health literacy is recognised as a core knowledge domain and competency required of health professionals, but there are limited empirical studies providing insights into professional understanding and practices, particularly in non-clinical public health communication and education roles. Whilst a global issue, health literacy is reported to be lower in developing economies and questions have been raised regarding professional health literacy perspectives and practices.

Aims: This paper provides insights into the health literacy perspectives and practices of health communication professionals involved in public health communication and education in a rural region of Nigeria, providing new empirical insights into professional practices and challenges in a developing economy.

Methods: Exploratory research design. Our data collection method was semi-structured interviews with 38 state and third sector professionals in public health communication management, dissemination, and education roles. Data analysis conducted via iterative cycles of pattern coding and thematic analysis.

Results: Our professional participants all recognised health literacy as an important consideration in public health communication and demonstrated general awareness of key issues when communicating to rural populations in Nigeria. However, depth of perspectives and practices appear limited. All discussed health literacy in general layman's terms with no referral to any health literacy policy, frameworks, models or specific competencies. Professional practices appear largely focused on issues of population illiteracy, linguistic diversity, and message complexity and reach, with no evidence of attention to acknowledged issues of mistrust and misinformation. Many participants also appeared to overestimate population health information seeking capabilities and none indicated any need for health literacy education for either themselves or their rural populations.

Discussion: Findings suggest our professional participants' understanding of health literacy and

associated practices are focused on and/or limited to basic communicative and functional aspects. Recommendations are made for action-oriented research to review health literacy educational provision for practising professionals in the region, and to develop contextually appropriate and scalable methods of health literacy education for impoverished illiterate populations.

Plain language summary

Health literacy refers to a person's ability to locate, understand, and make use of authoritative health information. Low health literacy is widely recognised as contributing to poor health outcomes and can be particularly low in disadvantaged populations. Whilst recognised as a key factor to consider in public health promotion and education, there are limited studies providing insights into professional understanding and practices. This study provides insights into the perspectives and practices of health professionals involved in public health communication in a rural region of Nigeria. Basic understanding and practices are reported with recommendations for future health literacy education and support.

Keywords: health literacy, health communication, developing economies.

Introduction

Health literacy (HL) is a widely recognised social determinant of health and key factor in effective health communication (HC) and education[1-4,] with low HL associated with poor health outcomes[5-6]. Low HL is correlated with socioeconomic inequalities[2,7], and whilst a global issue[7-8], is reported to be much lower in developing economies and rural regions[9-11].

HL is recognised as a core knowledge domain and competency required of HC professionals[12-13] but there are limited studies providing insights into professional understanding and practices, particularly in non-clinical health promotion roles. Such broader perspectives of professional HL have been described as "scant"[14(p7)] with calls for an expansion of research enquiry[14-16].

We report on a study exploring the HL perspectives and practices of professionals involved in public HC within a rural region of Nigeria. Whilst professional perspectives are limited worldwide, we focus on Nigeria as a case study due to various reports raising concerns regarding professional practices in developing economies including Nigeria[11,17-20]. Findings provide new empirical insights into professional perspectives and practices and raise important questions for HL education in the region.

Background

The findings reported here are part of a larger study exploring HC in rural Nigeria. We reserve reporting the full findings of this study for future publication and report on HL aspects here.

Research setting

With a population of approximately 230 million people, Nigeria is the most populated nation in Africa and sixth-most populous nation in the world[2]. The country has more than 250 ethnic groupings and approximately 380 spoken languages, and a diverse mix of cultural and religious beliefs. Approximately half the population live in rural regions, and approximately one third in multidimensional poverty[22-23]. Approximately one third of the population are illiterate[22] further increasing in rural regions[24].

Life expectancy in Nigeria is 63 years and can be contrasted with a global average of 73 years[25]. WHO[26(p9)] reports that "Nigeria's health outcome indicators are still unacceptably high, despite modest improvements. Moreover, a significant disparity in health status exists across the states and geopolitical zones, with a stark rural-urban divide". WHO[26] has called for a significant scaling up of health promotion in rural Nigeria.

Prior studies

There are limited prior empirical studies providing insights into HL in Nigeria and none to date involving non-clinical HC professionals. A small number of studies provide some insights into population HL; however, several were undertaken in urban settings with largely tertiary educated and/or middle-income participants not reflective of the rural population. They nonetheless report basic levels of population HL ranging from low[27-32] to "moderate"[18(p41),33(16)] to "adequate"[34(p1)]. Studies of rural populations all report poor HL with structural inequalities reported as the major contributory factors[10,17,35-36].

Similar disparities of attention are evident in empirical studies of information literacy in Nigeria (that might offer more general insights). Again, none have involved HC professionals. Studies of professionals are largely limited to academics and librarians, and population studies largely limited to students. A small number have involved rural populations with low literacy once more reported [37-39].

Relevant studies from other African nations and developing economies more broadly are also limited. Again, none have involved non-clinical HC professionals. A small number provide more general insights into the HL of primary healthcare professionals with "very low" professional HL reported in Ghana[40(p16)], "moderate" HL reported in South Africa and Zambia[41(p1)], and "unsatisfactory" HL reported in South Africa[42(p1)].

In summary, whilst HL is reported as a significant issue in rural regions of Nigeria and developing economies more broadly, insights into professional perspectives and practices are limited. This raised two key research questions:

1. To what extent is population HL a consideration in HC to rural regions of Nigeria?
2. What are the HL experiences and practices of professionals involved in such communication?

Methodology

Our research approach was exploratory, considered appropriate given limited prior work. In epistemological and ontological terms our approach can be considered interpretivist and constructivist.

The study area was a local government region within a southern state of Nigeria with a local population of approximately 205k (redacted for anonymity). A purposive approach to sampling defined participant inclusion criteria as being a state or third sector (non-government and non-profit) professional involved in public HC in the region (non-clinical communication and promotion roles). To obtain multi-level insights, two groups were recruited: national and state level professionals involved in the development and management of HC (group A); and community-based professionals, workers, and leaders involved in the dissemination of health information (group B). Participants (identities redacted for anonymity) were recruited via invites (email) to state and third sector organisations. This included information specifying researcher occupation/role and study purpose/aims etc. No prior relationships existed. During recruitment three interviewees withdrew: one due to work commitments, two due to lack of incentive/remuneration.

Our data collection method was semi-structured interviews conducted by first author (female doctoral candidate with graduate research training). No other researchers or non-participants were present. Interview questions were provided in advance. Group A participants were asked if population HL was a consideration during the development and delivery of HC campaigns. Follow on questions explored considerations and practices. Group B participants were asked if they thought that disseminated health information was in general understood by the population with whom they interacted. Group B participants were also asked if they thought that the population with whom they interacted could obtain further health information themselves. Follow-on questions explored influencing factors and practices. Whilst all participants were aware that our focus was to explore HL as a factor of HC (communicated via initial briefs), our interview questions were intentionally open and general in nature to avoid use of potentially unfamiliar terminology, leading questions, and questions that might be construed as questioning practices and competencies. Interviews (30-45 min. duration) were conducted via telephone/online in English (n=36) or Igbo (n=2) as appropriate, recorded with consent (field notes also taken), and transcribed in full. Literal and conceptual accuracy of translation was facilitated by first-author fluency in original (Igbo) and target (English) languages and conducted via process of initial translation, review, and refinement. Interviewee transcripts were not returned to participants for

comment/correction as the researcher summarised each question answered during the interviews. Repeat interviews were not conducted.

Data analysis (utilising NVivo) was conducted via iterative cycles of pattern coding and thematic analysis as per Braun and Clarke's[43] recommended steps of: data transcription and familiarisation; initial code generation; collating codes into themes; reviewing themes; refining themes; and producing themes. First-author coded with periodic code checking (multiple sample coding) conducted by the second-author independent to the first, with no notable disagreement to report. Team discussion facilitated minor refinements to code structures, and identification of primary codes for data initially assigned multiple codes. Repetition was identifiable but we make no claims to have reached data saturation as saturation is a problematic concept in thematic analysis[44]. Emergent themes were identified and refined iteratively, and as per Braun and Clarke's recommendations[43], analysis included two levels of review (within and across themes) to check for coherence, consistence, and distinctiveness. Analysis included identification of exemplary quotes (from coded data extracts) for inclusion in this paper to evidence themes.

Ethical approval was obtained via author Institution Ethics Committee (General University Reference Panel ref: #7550) with the study run in strict accordance with institutional guidelines. All participation was voluntary with informed consent obtained from all participants.

Findings

38 state and third sector professionals involved in public HC participated in this study. Age range was 20-55 years with the majority (65%) aged 40+. The majority (92%) were tertiary educated. The majority (97%) spoke Igbo and one (3%) spoke Hausa. The majority (95%) also spoke English. Participant HC roles ranged from campaign development and management roles (group A, n=12); to various dissemination and education roles within communities (group B, n=26). In total, our 38 participants possessed 348 years of collective HC experience (avg. 9 years).

Findings (main and sub-themes) are reported below.

General HL perspectives

All group A (GA) and group B (GB) participants recognized HL as an important factor in public HC and discussed in general terms. One commented:

> [HL] is very important because if the audience understands you, whatever health message you give to them will be effectively utilized. Therefore, you have to deliver the health message you have for them in a manner or in a way they would understand. If you don't… it's as good as not doing anything (ID7, GA, age 25-29, manager**).**

And another:

> I think they [health literate people] can get this information because… they are educated and literate enough to understand their health needs; where to source for satisfaction and how to go about it without needing assistance (ID15, GB, age 50+, community worker).

In follow-on discussions participants discussed various considerations, categorised as population: illiteracy (reading); linguistic diversity; mistrust; and misinformation. Further questions to those participants interacting with the public (GB) also provided insights into perspectives of population HL.

Illiteracy (reading)

Population illiteracy was discussed by most GA participants and several GB participants. One commented that "many people cannot read" (ID1, GA, 35-39, director) and another that "few… are educated" (ID5, GA, 35-39, officer). Another that:

> Some do not understand because they are not able to read, and they are not able to hear the information because of lack of access to power [for television/radio]. The power supply… is very bad (ID17, GB, age 40-44, community worker).

Another commented that “Some educated ones can get information by themselves without help, while the uneducated ones need assistance (ID15, GB, age 50+, community worker).

Linguistic diversity

Population linguistic diversity was discussed by several GA participants and some GB participants. One described it as a “very big issue” (ID5, GA, age 35-39, officer). Another commented:

> …in a community we have people speaking Igbo, the same community we have Hausa people, in the same community you have Yoruba people but collectively they speak English, but not all… understand English (ID3, GA, age 40-44, manager).

Another commented that “We need people who are grounded in these local languages and dialects like pidgin English, Igbo, and other languages to disseminate health messages” (ID36, GB, age 40-44, healthcare professional).

Mistrust

Mistrust of government was discussed by some GA participants, and several GB participants. One commented that “rural dwellers never actually believe the government” (ID4, GA, age 50+, officer). Another commented:

> Some people don’t understand public health messages because they don’t believe in the government and… do not pay attention to such campaigns and messages. They feel it’s a scam from the government (ID15, GB, age 50+, community worker).

Misinformation

Misinformation was discussed by some GA participants and some GB participants. One commented that “People have many superstitions” (ID1, GA, age 35-39, director), and another that “So much information is gathered which is not true and they fail to reason with you. They believe that rumour they heard is the truth” (ID8, GA, age 50+, officer). Another commented:

> Some take it for real [public health messages], some take it as huge joke. Some said, “don't mind government”, they are looking for funding, they said government go lie, government go lie (ID14, GB, age 45-49, healthcare professional)

Population HL

Group B participants were also asked if they thought that the population with whom they interacted could successfully obtain authoritative health information by themselves. 12 (46%) answered yes, and 7 (27%) answered no. The remainder (7 or 27%) answered that some could, and some could not.

Participants who thought that the population could obtain health information by themselves discussed literacy and access as key factors. One commented “so long as they are literate and have access to such technologies, they can get whatever information they need” (ID22, GB, age 40-44, healthcare professional). Another commented:

> For those that want the information… they can because the health centres are there, and some… are very close to the people. In the health centres they have trained people… to give out public health information (ID17, GB, age 40-44, community worker).

Participants who believed that the population could not, or not always, obtain reliable health information by themselves discussed low levels of education and understanding of needs. One commented:

> No… because of their level of education, most people are not literate enough to even understand what their health needs are and how to solve them, and if they don’t realize their health needs, they would not know what to do (ID35, GB, age 45-49, healthcare professional).

Further general insights into perspectives were obtained from further analysis of discussions with attention to how HL was discussed and described by participants (terminology, references, depth etc.), including attention to what was not discussed. All participants discussed HL in general lay terms. None referred to any HL policy, frameworks, or models. None discussed specific HL competencies apart from one who commented:

> [HL] has to do with their ability, their capacity to obtain this information; not just obtaining information, also the capacity to process information and use (ID9, GA, age 50+, manager).

And another who commented:

> [health literate people] are educated and literate enough to understand their health needs; where to source for satisfaction and how to go about it without needing assistance (ID15, GB, age 50+, community worker).

Communication-oriented HL practices

Our participants discussed various communication-oriented practices, categorized as: message simplification; use of intermediaries; and translation.

Message simplification

Several GA and GB participants discussed the importance of message simplification. One commented:

> Most of the persons we met… we spoke to them in Igbo language… we broke it down… we made it as elementary as possible for them to easily understand… we made use of audio-visuals (ID7, GA, age 25-29, manager).

Message understandability was further explored with Group B participants who were asked if they thought that the rural populations with whom they interacted understood disseminated health information. 16 (61%) answered yes, and 3 (12%) answered no. The remainder (7, 27%) thought that some could, and some could not. Participants who thought that information was understood attributed this to simple messages often communicated orally and/or pictorially in local dialects. One commented 'yes, because it was communicated to them in their dialect' (ID22, GB, age 40-44, healthcare professional), and another that:

> Yes, they understand, in the sense that it is not only oral communication but through pictorial messages. So, when they see pictures maybe stage 1, 2, 3… they can interpret these pictures by themselves (ID28, GB, age 40-44, community worker).

However, several group B participants felt that public health information was too complex and needed to be much simpler. One commented that "some of these messages are very difficult to interpret and that is one of the major issues" (ID35, GB, age 45-49, healthcare professional), and another that "The messages are also not clear and simple enough for them to understand" (ID30, GB, age 50+, healthcare professional).

Use of Intermediaries

Some group A participants and several group B participants discussed the use of intermediaries. This included the use of literate laypersons within communities. One commented "The literate ones in their community who also understand pidgin, we give them flyers to read and… explain to their own people in the language they will understand" (ID1, GA, age 35-39, director). This could also include use of children. One commented:

> We factored in their [low] literacy level, some… have their children in schools, so we considered apart from using the village town criers or the village communication personnel… that their children can… pass these messages easier to their parents than

> someone… going house to house (ID2, GA, age 35-39, officer).

This could also include intermediary support for not only understanding provided information but also to support the sourcing of information. One commented:

> They need someone to explain to them how to go about sourcing such information. Most times, they come to us for help, most times they ask their friends and family members to assist them (ID16, GB, 40-44, community worker).

However, in relation, some participants discussed limited audience reach. One commented, "Nobody went there to tell them or teach them what they are expected to do" (ID16, GB, age 40-44, community worker). Another commented:

> Some did not even get these messages, especially the grass root people. I say this because we interact with these people, and they confide in us. They hardly get messages from the local government, and this is a big issue. (ID30, GB, age 50+, healthcare professional).

Translation

Several GA and GB participants discussed communication in multiple languages including the use of interpreters. One commented:

> What I mean by creating and disseminating these messages in the way people will understand, is that the words were simple… You know the messages written in simple languages… Igbo, pidgin English, even in English (ID6, GA, age 35-39, manager).

And another:

> Let me take [area redacted] for instance, our common language is Igbo. We have Hausas, Ibos, Yorubas here. So, we had language barriers… We used interpreters who helped and disseminated to people of various tribes (ID8, GA, age 50+, officer).

However, some group B participants discussed limited translation. One commented:

> The messages do not resonate with some of them in terms of language because [government department redacted] do not provide these messages in different languages that are familiar to many (ID30, GB, age 50+, healthcare professional).

As per the analysis of discussions relating to perspectives, analysis of discussions relating to practices also included attention to depth and extent of HL discussion. Again, HL was discussed in general terms with no reference to any specific HL frameworks, models, policy or competencies. No participants indicated any HL education needs for either themselves or rural populations. This included no apparent practices to address issues of mistrust and misinformation.

Discussion

All our participants recognised HL as an important factor in public HC and discussed several considerations, population: illiteracy; linguistic diversity; mistrust; and misinformation. Issues of illiteracy and limited audience reach have been previously reported in Nigeria[10,17,35-36] as have issues of linguistic diversity and message complexity[17], and misinformation[45].

Findings also provide insights into professional practices with much appearing focused on issues of illiteracy and linguistic diversity. Our participants discussed the importance of message simplification and provision in multiple languages and formats often involving visual and/or interpersonal communication via intermediaries. Findings are consistent with prior studies and further highlight the importance of tailored outreach in rural regions[9,17,27]. However, there were contrasting views amongst our participants as to how fully such considerations are addressed with some feeling that messages are not always simple enough or provided in sufficient range of languages. In support of the latter, limited translation for Nigerian populations has been previously reported[17].

Findings also provided insights into professional perspectives of population HL. Most of our participants who interact with the public felt that health information is in general understood by rural populations and that most are able to obtain further information themselves. Findings are arguably optimistic given the low levels of population HL previously reported (see Background). For example, previous studies in similar regions of Nigeria have reported population HL as "dismally low"[10(p9)] and as a "public health emergency"[36(p1115)]. A possible explanation for our participant responses is provided in several previous reviews of professional evaluations of population HL that report a tendency amongst health professionals to overestimate the HL of the people with whom they interact and is largely attributed to limited depth of professional HL knowledge[9,46-47].

Further notable findings relate to the extent and depth of participant discussion including what was not discussed. As previously stated (see Methodology), our interview questions were open to avoid unfamiliar terminology and leading or interrogatory questions. Our participants thus had the freedom to discuss HL in their own words and from their own perspectives. All discussed HL in general lay terms largely focused on factors of illiteracy and linguistic diversity with no evidence of analytical or evaluative thinking indicative of deeper knowledge of a subject[48-49]. This included limited attention to issues of misinformation and mistrust. Whilst health misinformation is globally reported as "an insidious and persuasive... epidemic"[50(p327)] and "major challenge"[51(p151)], including in Nigeria[44]; issues of misinformation were only mentioned by some of our participants, and none discussed any practices to address. Mistrust was more widely mentioned but again to a limited degree with no practices discussed. No participants referred to any guiding HL policy or frameworks or discussed specific HL competencies beyond two brief general comments. None indicated any HL education needs either for themselves or the public. We lack other empirical studies from Nigeria to further explore, but it has been previously argued in unsubstantiated terms that the HL knowledge and skills of health professionals in Nigeria is "inadequate"[11(p112)]. Our findings provide important empirical insights.

Our main findings suggest that HL is understood in basic general terms and that practices are focused on and/or limited to basic functional considerations, with no evidence of more advanced interactive and critical considerations important for population independence and empowerment[52] including to address issues of misinformation[53]. In HLS19[54] conceptual terms, specific HL considerations appear largely focused on/and or limited to communicative aspects, and specific information processing considerations appear largely focused on/and or limited to information access and understanding aspects[55].

As previously noted (see Background), similar studies from other developing economies are limited, but there is some evidence to suggest that limited professional perspectives and practices might be more widespread in the region. For example, a study in Ghana exploring health professional understanding of HL reports that whilst most participants appeared familiar with HL, their depth of knowledge and ability to practice was low[40]; and a study in South Africa reports HL as a "relatively new concept" in healthcare[56(p2071)].

Limitations and Further Research Recommendations

Our findings should not be considered representative of HC professionals in Nigeria or other developing economies as we provide insights into the perspectives and practices of a particular group within a particular socioeconomic environment. Our exploratory and sensitive line of enquiry also limited our assessment of depth of participant knowledge and skills. We thus encourage further studies with further groups that might include more direct enquiry and evaluation.

We nonetheless believe that our findings have implications for HL education and practices in the region and make two recommendations:

1. Our findings suggest a need for a review of HL educational provision for public HC professionals in the region, providing empirical evidence to support previous unsubstantiated calls for attention[11,17,57]. We recommend further work to determine specific practitioner needs and appropriate methods of in-context education and support (i.e., practical pedagogical and infrastructural considerations). We would encourage such reviews to encompass awareness of existing open access development frameworks, toolkits, and materials, such as those provided by WHO[20,58] and other health organisations (e.g., UK NHS, US CDC), and the factors influencing use

(or not). We would also encourage such reviews to consider the existence of directive and supportive overarching HL policy.

2. Our findings further highlight the challenges of HC to disadvantaged rural populations including how to address issues of low HL. There is a need to identify new approaches to HL education for such populations as traditional approaches appear neither practical nor effective[57]. Whilst establishing effective educational interventions for such populations has been previously described as "a high priority[59(p6)], progress appears limited. We recommend further research to develop contextually appropriate and scalable methods of HL education for impoverished illiterate populations including appropriate and effective communication channels.

Conclusion

Our professional participants all recognised HL as an important consideration in public HC and demonstrated general awareness of associated factors and issues. However, depth of perspective and practices appear limited. All discussed HL in general layman's terms with no referral to any HL policy, frameworks, or specific competencies. Practices appear largely focused on issues of population illiteracy, linguistic diversity, and message complexity and reach, with no evidence of attention to acknowledged issues of mistrust and misinformation. Many also appeared to overestimate population health information seeking capabilities and none indicated any need for HL education for either themselves or their rural populations. Findings suggest that the HL perspectives and practices of our professional participants are focused on and/or limited to basic communicative and functional aspects. Recommendations are made for the development of context-appropriate methods of HL education and support.

Disclosure statement

The authors report no conflicting interests to declare.

Data availability statement

Due to the nature of this research the participants of this study did not give consent for their data (i.e., full transcripts) to be publicly shared.

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