Mass Communication and Society

ISSN: (Print) (Online) Journal homepage: www.tandfonline.com/journals/hmcs20

Misinformation and Digital Inequalities: Comparing How Different Demographic Groups Get Exposed to and Engage with False Information

Gregory Gondwe, Dani Madrid-Morales, Melissa Tully & Herman Wasserman

To cite this article: Gregory Gondwe, Dani Madrid-Morales, Melissa Tully & Herman Wasserman (14 Mar 2025): Misinformation and Digital Inequalities: Comparing How Different Demographic Groups Get Exposed to and Engage with False Information, Mass Communication and Society, DOI: 10.1080/15205436.2025.2474139

To link to this article: https://doi.org/10.1080/15205436.2025.2474139

MASS COMMUNICATION AND SOCIETY
https://doi.org/10.1080/15205436.2025.2474139

Routledge
Taylor & Francis Group

Misinformation and Digital Inequalities: Comparing How Different Demographic Groups Get Exposed to and Engage with False Information

Gregory Gondwe[a], Dani Madrid-Morales[b], Melissa Tully[c], and Herman Wasserman[d]

[a]Communication, California State University, San Bernardino, CA, USA; [b]School of Journalism, Media and Communication, University of Sheffield, Sheffield, UK; [c]School of Journalism and Mass Communication, University of Iowa, Iowa City, IA, USA; [d]Department of Journalism, Stellenbosch University, Stellenbosch, South Africa

ABSTRACT

This study examines the extent to which digital inequalities, often associated in the literature with certain social demographics (e.g. age or place of residence), shape media users' exposure to and engagement with misinformation. Using data from 24 focus group discussions conducted in six African countries (Ghana, Kenya, Nigeria, South Africa, Zambia, and Zimbabwe), we describe media users' diverse experiences with false information and discuss whether these experiences can be better understood if we take into account inequalities in access to digital technology and digital literacy skills. We find that, while some older media consumers living in rural areas say they feel less exposed to misinformation online, they still come across online falsehoods through other means. We also show that this group is often perceived by others as the most vulnerable to misinformation because of assumed lower digital literacy skills. Our data, however, call for a problematization of this view, given that critical consumption of the media is prevalent among older adults. We conclude by highlighting the need for nuanced and targeted interventions to combat the spread of misinformation that consider the diverse range of experiences of media consumers in the countries under study.

Digital inequalities can be broadly understood as a form of "social exclusion in the e-society" (Zheng & Walsham, 2008, p. 224). Traditionally, analyses of such expressions of inequality have centered on accessibility to digital technologies (e.g., mobile phones and computers), digital literacy and skills (e.g., how to use digital media, how to connect with others through media), and adoption of digital technology (Buthelezi et al., 2021; Pei & Chib, 2021; Wildermuth, 2021). A predominant strand in the literature presents these inequalities, sometimes referred to as digital divides, as differences in technology access between the "haves" and "have-nots" (Tsatsou, 2011; Zheng & Walsham, 2021). In other cases, the focus is on the *excluded*, a term that refers to groups that have limited engagement with digital technology and the consequences of their exclusion from the e-society (Zheng & Walsham, 2008). More recently, scholars have called to move past binary classifications, particularly in the Global South, where some forms of technological determinism have long dominated the study of the adoption and use of digital technology. Among these voices are Hargittai and Hsieh (2013), who argue that digital inequalities need to be understood as multi-layered and call for researchers to focus on levels, types of use, and reasons for such disparities, rather than simply on access.

CONTACT Dani Madrid-Morales d.madrid-morales@sheffield.ac.uk School of Journalism, Media and Communication, University of Sheffield, 2 Whitham Rd, Sheffield S10 2AH, UK

Supplemental data for this article can be accessed online at https://doi.org/10.1080/15205436.2025.2474139

Previous research has shown that digital inequalities affect multiple aspects of mediated (Mangold et al., 2021), interpersonal (Komen, 2020), intergroup (Darling-Wolf, 2021), and other forms of communication (Asmar et al., 2022). Less is known, however, about whether and how digital inequalities inform the ways in which media consumers get exposed to and engage with misinformation, which in this paper is used as an umbrella term to refer to false and/or misleading information, regardless of whether this was created/shared intentionally or unintentionally (see Vraga & Bode, 2020, for a discussion on definitions). In African countries, the availability of affordable mobile phones and access to zero-rating internet services (Gagliardone, 2019; Nothias, 2020) has led to improved technological access in both rural and urban areas (Abdulai et al., 2021). Traditionally, rural dwelling has been considered a marker of digital inequality (Wyche & Olson, 2018). While the gap in digital access between rural and urban communities may be narrowing, other forms of inequalities may persist, including cultural values or language fluency (Wyche & Baumer, 2017) as well as age (Abubakar, 2022).

Drawing on the idea of digital inequalities as multilayered (Hargittai & Hsieh, 2013) and building upon our prior research on misinformation in Africa (Madrid-Morales et al., 2021), this manuscript examines the extent to which age and place of dwelling (urban vs. rural), both of which have been linked to different experiences with misinformation in a range of contexts (Duffy et al., 2020; Guess et al., 2019), are useful categories for understanding the ways digital inequalities and exposure to and engagement with misinformation intersect. We explore this in six countries—Kenya, Ghana, Nigeria, South Africa, Zambia and Zimbabwe—where we conducted 24 focus group discussions with both urban and rural residents, as well as older and younger media consumers.

Digital inequalities, literacies and misinformation

Digital inequality refers to "how people of different backgrounds incorporate the Internet into their lives; how their digital and social contexts, their skills and their uses differ," and "how the life outcomes associated with these differences vary" (Hargittai, 2021, p. 1). Although the use of the term digital divide is widespread in both academic and popular literature—and often used interchangeably with the concept of digital inequality—it does not capture the full range of divides or differences among users that digital inequalities suggests (Asmar et al., 2022; Hargittai, 2003). Following this, we draw on digital inequality as a framework, instead of using the notion of digital divides, as it allows for an examination of disparities that are formed around or because a myriad socio-economic, cultural, political and geographic phenomena, including quality of access, opportunities, knowledge, and skills for navigating digital environments that are often connected to age, gender, education, place of dwelling, and other social, demographic, and digital indicators (Asmar et al., 2022; DiMaggio & Hargittai, 2001; Hargittai, 2021; Heponiemi et al., 2021).

As a starting point, access to the internet and digital technologies remains an important inequality to consider, especially in terms of quality of access and the ability to have access "when and where one wants" (Hargittai, 2021, p. 2). As Tsatsou (2011) has argued, emphasizing the haves and have-nots provides a limited view of the complexities of access (e.g., where, how, with whom, when, or through what technology access occurs) and focuses too narrowly on "quantitative accounts of divides, overlooking qualities of technology diffusion and the contexts where diffusion takes place" (p. 319). As global internet connectivity has risen, particularly mobile internet, questions about access quality and reliability are increasingly pertinent as inequalities persist within and across groups. In addition, differences in knowledge and skills or levels of digital literacy are also important to consider when thinking about digital inequality to capture how people interact with digital tools and information in their lives (Abdulai et al., 2021). Research suggests that demographic and social factors affect each dimension of digital inequality (Abdulai et al., 2021; Hargittai, 2021; Heponiemi et al., 2021). Although digital inequality is multidimensional, in this paper we focus on two key aspects: (1) quality of access and, (2) digital literacy, which vary considerably across Africa and possibly affect engagement with misinformation (Madrid-Morales et al., 2021).

There is strong evidence to suggest that young people are more likely to adapt to technology than older individuals (Hanson, 2010; Mubarak & Nycyk, 2017). Research suggests that even when parents are avid technology users, children will have more skills than their parents (Kennedy et al., 2008). The case is especially true in Africa where most technology use is common among youth, who are frequent users of social media (Ahmed et al., 2023). However, one thing that has not been widely substantiated is whether young people with more skills and access to media—and therefore, more access to fake content—are more likely to be exposed to or engage with misinformation.

Media and information literacy (MIL) describes an understanding of how the media functions, what power relations are attendant upon those functions, and the ability of media users to access and engage the media to express themselves, create or critique content ethically, and to evaluate and verify content found in the media and online (Wilson et al., 2011, p. 8). Another way of describing the competencies included in MIL is "the ability to access, analyze, evaluate, and create messages in a variety of forms" (Livingstone, 2004, p. 5). Digital literacy, a component of MIL, refers to:

> a broad set of competencies surrounding the use of digital media, computers, and Information and Communication Technologies (ICTs). It is often understood to compose of (or has subsumed) several other forms of literacy such as computer literacy, internet literacy, media literacy and information literacy (Leaning, 2019, p. 4).

A common feature of definitions of digital literacy is the focus on enquiry-based skills and meaningful engagement across a variety of media and information channels and technologies (Wilson et al., 2011, p. 18).

The ability to acquire and practice these competencies is however contingent upon a range of social and demographic factors related to digital inclusion and exclusion (Asmar et al., 2022; Haddon, 2000; Leaning, 2019). Research shows that socio-demographic factors like age, for example, affect digital literacy (Haddon, 2000; Hargittai & Hinnant, 2008). Younger adults are often shown to have higher digital literacy than older adults, although within group differences exist and are often connected to other compounding socio-demographic and digital factors (Asmar et al., 2022; Scheerder et al., 2017). Studies of MIL programs aimed at both youth and adult users of digital media have shown that such programs hold the potential to improve the ability of audiences "to think more critically about the information they encounter" (FullFact, 2020, p. 3).

Digital literacy, as well as other components of MIL, are also impacted by location-based differences such as living in rural versus urban areas or locations with differing levels of broadband or mobile internet quality (Asmar et al., 2022). Individuals living in rural communities, regardless of their age, are often under-served in both their access to digital technologies and the spaces to learn how to use them (e.g., public libraries, community centers), which can contribute to lower digital literacy (Nogueira et al., 2022). However, these gaps are not absolute and can be addressed through educational interventions. For example, Nogueira et al. (2022) found that a digital literacy intervention administered in a Brazilian school improved students' digital knowledge and skills compared to a control group who did not receive the intervention.

The concept of information seeking and processing offers a useful theoretical underpinning for the possible relationship between digital literacy and exposure to and engagement with misinformation. It has been suggested that audiences' exposure to misinformation and acceptance thereof can be predicted through the ways in which they seek and process information (Hwang & Jeong, 2021). Media users can be exposed to misinformation while they seek information about how to avoid risks (e.g. around health issues), and the likelihood of them accepting that misinformation is influenced by the ways in which they process and make sense of the information (Hwang & Jeong, 2021, p. 585). These processes are expected to differ between those with higher and lower levels of digital literacy. Sharing of misinformation, a form of engagement with misinformation, is also highly dependent on the context within which this information is processed and the social and cultural influences shaping how audiences make meaning of messages (Madrid-Morales et al., 2021). Considering their intersectional nature, studies of digital inequalities tend to also emphasize the importance of users moving

between more or less digitally inclusive environments. On the one hand, it could be argued that higher digital literacy should be related to lower engagement with misinformation if digitally literate individuals use their knowledge and skills to avoid misinformation or to not engage with it when they encounter it. On the other hand, a counterargument could be made that higher digital literacy might lead to increased digital media access and use, both of which could increase exposure to misinformation and engagement with it (Ahmed et al., 2023).

Markers of digital inequalities and misinformation

The growth of access to the internet in Africa has led to both favorable assessments of its impact on the economy and politics (Silver & Johnson, 2018) and increased perceptions that social media can make people less tolerant and more susceptible to misinformation (Conroy-Krutz & Koné, 2020). The latter point is built on the idea that some groups in society might be more likely to be exposed to misinformation due to limited access to credible sources or because of low digital literacy. Research has shown that perceived exposure to misinformation—a self-reported measure of how prevalent misinformation is in one's media diet—is high in African societies. In a study of media users in Kenya, Nigeria, and South Africa, Wasserman and Madrid-Morales (2019) found that 90% of Kenyans, 93% of Nigerians, and 76% of South Africans believed they were sometimes or often exposed to made-up political news. Not only do media users in these countries believe they are exposed to misinformation often, but they also engage with it at high rates. When asked whether they would engage with this type of content by sharing it, more respondents in these three African countries said they would do so than was the case in the United States. Researchers have also suggested that in these and other African countries (Madrid-Morales et al., 2021), there's a perception, particularly among younger media users, that older generations are the most gullible and likely to believe false content is true when exposed to it. This is not a uniquely African phenomenon, but one that has been described in the literature about misinformation in India (Malhotra & Pearce, 2022), Singapore (Duffy et al., 2020) and the United States (Guess et al., 2019), to name a few countries. In fact, Lins and Castelli-Rosa (2023) report that, in Brazil, the expression "tia do zap" or "WhatsApp aunt," is used to refer to an archetypical misinformer.

The way Kenyan, South African and Nigerian media users engage with misinformation has been shown to depend on several demographic factors, including their age and educational level (Ahmed et al., 2023; Tully, 2021). Age has indeed been identified as a strong predictor of vulnerability to misinformation in multiple contexts. Seo et al. (2021) highlight that older low-income individuals often face significant barriers in assessing credible information online, relying on limited digital skills and lacking the critical awareness required to discern credibility. These limitations result in increased susceptibility to misinformation as they struggle with content verification and are more likely to trust familiar but less credible information sources (Seo et al., 2021). While age gaps in digital engagement have narrowed in some contexts, Mangold et al. (2021) show that in Germany, older users still display more passive patterns of news consumption, engaging less critically than younger users. Furthermore, social media's algorithmic emphasis on popularity over quality, combined with lower digital proficiency among older users, may amplify their exposure to inaccurate information (Mangold et al., 2021).

Similar patterns of inequities in access and information processing have also been identified in studies that compare the experiences of audiences in urban and rural settings. In China, for example, Yan (2021) describes how rural users often face information overload without the skills or resources to filter information effectively, leading to a reliance on narrow and potentially unreliable sources. This disparity is mirrored in South Africa, where Buthelezi et al. (2021) emphasize that digital access in rural areas is often limited to mobile phones with restricted functionalities, which leads to engagement with limited content and tends to increase reliance on community-centric narratives. Similarly, in Kenya, Wildermuth (2021) found that rural communities rely heavily on locally shared information, which, while reinforcing social cohesion, constrains exposure to diverse viewpoints. However, in both studies, important concerns are raised around simplistic and homogenizing views of rurality that fail

to acknowledge that African rural communities are not "digitally homogenous" (Buthelezi et al., 2021, p. 455).

In sum, previous research has shown that in some instances and contexts, differences in age (old vs. young) and place of dwelling (rural vs. urban) map onto differences in media use and engagement (Mangold et al., 2021; Seo et al., 2021). Some evidence suggests that these connections overlap with the ways in which those groups are exposed to and engage with misinformation (Gadjanova et al., 2022; Lins & Castelli-Rosa, 2023; Malhotra & Pearce, 2022). This evidence, however, comes from a limited number of studies that focus on small case studies or very specific contexts. This paucity of evidence is more acute in African countries, where some have suggested that homogenizing labels lead to distorted pictures of media users (Buthelezi et al., 2021). Building on these studies, and with the goal of better understanding the link (if any) between commonly assumed markers of digital inequalities and misinformation, both online and offline, we ask:

RQ1: To what extent do digital inequalities affect how Africans (i.e., Ghanaians, Kenyans, Nigerians, South Africans, Zambians and Zimbabweans) living in urban and rural settings, and younger and older Africans get exposed to and engage with misinformation?

Method

Data for this study come from 24 focus groups convened in six African countries: Ghana, Kenya, Nigeria, South Africa, Zambia, and Zimbabwe. These countries were selected because they represent different regions on the continent (eastern, western and southern), and include a wide range of political and media systems. Politically, two of the countries (Ghana and South Africa) are labeled as "Flawed democracies" in the Economist Intelligence Unit's 2023 Democracy Index, three are listed as "Hybrid regimes" (Kenya, Nigeria, and Zambia), and one, Zimbabwe, is listed as "Authoritarian."[1] In terms of media freedom, our sample is equally diverse. While South Africa and Ghana, for instance, rank in the top two quartiles of Reporters Without Borders' 2024 World Press Freedom Index at 38 and 50 respectively, the other countries fall at different levels in the bottom 50%: Kenya is at 102, Nigeria is at 112, Zambia is at 95 and Zimbabwe sits at 116.[2] The group discussions for this project were conducted in person between late 2019 and early 2020, after receiving ethical clearance by the Institutional Review Board of the University of Cape Town in South Africa in August 2019. In each country, we conducted four focus groups: one with urban residents under 50 years old, one with urban residents over 50, one with rural residents under 50 and one with rural residents over 50. The number of participants and locations for each focus group are presented in Table 1.

We selected participants ($N = 182$) through a combination of purposive and snowball sampling. In each country, a researcher with knowledge of local languages and cultural contexts led the sampling of participants and facilitated the discussions. In urban settings, we used word-of-mouth to recruit participants, whilst trying to find a balance between different age groups, genders, and social strata. In rural settings, we worked with local elders and community leaders to identify possible respondents. We followed the criteria put forward by the United Nations in differentiating rural from urban settings (United Nations, 2017). Rural settings tend to be those with lower population density levels, higher "percentage(s) of the population engaged in agriculture" and lower levels of access to "electricity and piped water in living quarters" (p. 188). Participants in our focus groups were not paid but were offered refreshments at the beginning and end of the discussion. All focus group participants provided written consent to participate in the study.

[1]For a full description of the different categories, see https://www.economistgroup.com/press-centre/economist-intelligence/eius-2023-democracy-index-conflict-and-polarisation-drive-a-new-low-for.

[2]The full list of countries can be found at https://rsf.org/en/2024-world-press-freedom-index-journalism-under-political-pressure?year=2024&data_type=general.

Table 1. Location and number of participants in each focus group.

	Ghana	Kenya	Nigeria	South Africa	Zambia	Zimbabwe
Rural Over 50	10 Ada	8 Kitengela	8 Yola	9 Makhanda	9 Solwezi (Zangameno)	5 Lupane
Rural Under 50	10 Ada	8 Kitengela	8 Yola	8 Makhanda	8 Solwezi (Zangameno)	6 Lupane
Urban Over 50	8 Accra	8 Nairobi	10 Imo	7 Gqeberha	5 Solwezi (Mitukutuku)	4 Bulawayo
Urban Under 50	6 Accra	8 Nairobi	8 Lagos	8 Cape Town	6 Solwezi (Mitukutuku)	6 Bulawayo

We used a single interview guide for all focus groups, but we adapted some of the prompts to spur discussion to make them more relevant to the local social and political contexts. Discussions started with general questions about participants' media consumption habits, such as "What are your go-to sources for news?" and "What do you use [WhatsApp or Facebook] for?" This was followed by two sections that explored participants' engagement with (mis) information in general, and (mis)information of political nature. Each of these sections started with a visual prompt. These prompts, as well as the interview guide, can be found in Appendices II and III of the online supplemental materials. The first prompt consisted of two inaccurate social media posts: one about plastic rice allegedly originating from China and one claiming that mobile phones are linked to brain cancer. The second prompt was a screenshot of a false political news story published online. For each country, we used a different story, see Appendix III in the online supplemental materials for details. After presenting participants with these prompts, we asked questions such as "Has anybody you know, maybe a friend or a relative, ever shared with you content like this? What did you do when you received it?" and "Do your friends or relatives share news stories for political reasons? What is your reaction when they do?" The final two sections of the interview guide focused on different responses to misinformation and included questions like "How much of a problem do you think misinformation and fake news are in [country name]?" and "Who do you think is best positioned to stop misinformation and fake news?"

All focus group discussions were audio recorded and transcribed. A thematic analysis of the transcriptions was conducted using NVivo, a computer program commonly used in qualitative analysis of textual data (Bazeley & Jackson, 2013). Based on the interview guide and an initial iterative reading of all transcripts, a codebook with eight main themes (e.g., "Motivations to share or not share information" or "Sharing misinformation or fake news") divided into multiple subthemes was prepared by the researchers. Using this initial codebook, two members of the research team used NVivo to independently code four randomly chosen group discussions as a sample of the data. Coding decisions, particularly areas of disagreement, were compared and discussed between the two coders and a third member of the team. Based on these discussions, a revised version of the codebook was prepared. The final version includes 67 sub-themes, grouped into eight main themes (e.g., "Confronting the people who post" and "Not confronting" were sub-themes in the theme "Actions after exposure to misinformation"). We provide a list of themes and sub-themes included in the codebook in Appendix I in the online supplemental materials.

In the next two sections, we draw on these themes to argue: (1) Different experiences in perceived exposure to misinformation are only partially explained because of differences in quality of access to digitally mediated information; and, (2) Despite there being clear gaps in digital literacy skills between users, these gaps are sometimes bridged by resorting to broader media and information literacy skills, which in turn impact how media users engage with misinformation.

Digital inequalities and exposure to misinformation

The media diets of focus group participants in this study are rather heterogenous and, consequently, this leads to different experiences in participants' perceived exposure to misinformation. While this

heterogeneity can be attributed, to a certain degree, to inequalities in access (e.g., those without access to mobile devices or computers would not see false information on Facebook), it does not map precisely onto the rural-urban and old-young continuums that previous studies have assumed as clear markers of these inequalities. Take the example of these four media users from different countries and demographic groups whose media consumption habits range from using purely offline media to relying heavily on online content:

> [Where do you get your news from?] Radio or television, because of fake news, made up stories here and there [. . .] So, I'm okay with [just] radio and television. (Ghana, under 50, urban)

> [When] I get home, I listen to CNN, BBC, Al-Jazeera, but at 8 o'clock, I make sure I listen to ZBC news. I discovered that many people no longer listen to ZBC news. But I believe I still have to know the local story . . . Of course, there might be bias and propaganda and so on, but you just want to get to know what is happening in your country. (Zimbabwe, over 50, urban)

> I would say that I also use Facebook and WhatsApp a lot on my phone. While I am selling my fritters, I am entertained by the different things that people post on Facebook. (Zambia, under 50, rural)

> I can start by surfing my WhatsApp. It's still news, isn't it? Whether it's formal or informal news, but it's news. So, there's certain things that you get from your trusted groups which are properly configured and administered. And then there are those others which have hyped news or untrustworthy things or general things. . .Then, when I get access to the internet, I get the formal news. I don't know whether it's called formal, but sources which are more reliable with news that you want to hear about the country and what's happening around you, soccer etc. (Zimbabwe, over 50, rural)

These four profiles, and others we identified in the analysis, highlight that not all urban residents rely on social media for news, and that not all older rural residents get information purely from offline sources. In other words, this diversity of mediated experiences transcends the markers of digital inequalities that we found most prevalent in the literature and problematizes, as previously noted by Buthelezi et al. (2021), the notion of a homogenous digitally unsavvy rural population in Africa.

At the same time, it would be inaccurate to imply that this range of media diets is not shaped by some digital inequality. This is true both in terms of access to digital technologies and quality of access. Examples of the former abound in our dataset. For example, an older South African living in Makhanda said, "I get the news from the radio because I don't have a TV;" a Zambian farmer over 50 who reminded the focus group facilitator that "this is a village, and we do not have the luxury of the internet, let alone electricity that should power the internet," and another Zambian participant over 50 explained that they get "news from the radio that is always playing in my house," adding "I don't know anything about the Facebook or internet things. I think they are for rich people in towns." In terms of quality of access (i.e., if, where, or how access is possible), residents from villages in rural Zimbabwe mentioned that they regularly access WhatsApp because it is cheaper, or in some cases free, but that other sources of information, such as Google or fact-checking websites are out of reach as those would require additional data usage and higher costs. In other cases, the limitations are infrastructural. For instance, access to certain TV channels or radio stations is limited by the reach of available technology, not by choice of the media user.

Despite these differences in access, when we prompted participants to recall examples of misinformation they had seen recently, most conversations focused on online spaces. Some participants referred to political news stories. For example, an older Kenyan living in Nairobi shared, "I once got news that said the opposition leader was planning to overthrow the government. It was on WhatsApp, and everyone was talking about it" and a Nigerian under 50 living in an urban area recalled "There was a time they were sending it on WhatsApp, saying that Buhari was marrying a second wife. They even sent the wedding card!" Others recalled examples of health-related misinformation such as "[I saw one recently] of some people dumping COVID-19 dead bodies in the sea; and it was fake news because that video was about people who were trying to. . . they were migrants" (Ghana, over 50, urban), and another participant shared "Do you remember when people shared fake stories about mosquito nets and how they made men impotent? People stopped using them, and the end result was that we had

several people that died from malaria" (Zambia, under 50, rural). Others gave examples from celebrity news, such as "There is a guy who came here to Kitengela who was called Jesus—the one who acted the movie—then there was news everywhere that he died. … A week later I realized he was in Nakuru preaching" (Kenya, under 50, rural), and "Just like this thing about Will Smith and his son that came out I think two days ago saying that they were in an accident. Today they appeared in the news saying that that was fake" (South Africa, over 50, urban). Much more prevalent, however, were mentions of scams, particularly among older participants but not exclusively:

> I got a message from someone called [redacted]; she was talking about a motorbike. She said if I register and pay KS. [Kenya Shillings] 20,000 the motorbike will be mine, but after following up, I found out she was a con-woman and one of my friends was conned. (Kenya, over 50, rural)

> There was a rumor that SASSA [South African Social Security Agency] was giving out extra payments, and some people went to queue for it, but it wasn't true. It just spread like wildfire on WhatsApp. (South Africa, under 50, rural)

> People are scammed into believing that they have won scholarships. Someone can say, "Pay K10,000, then you will receive a scholarship." Many people have fallen victim to this because they think they are getting a good opportunity. (Zambia, under 50, urban)

In some of these discussions about scams as misinformation, participants referred to differences between younger and older users, alluding to perceptions that older generations are more prone to be victims of this type of misinformation. We heard this from a rural resident over 50 in Zimbabwe who said:

> I remember this one where they were saying next year EcoCash [a mobile money transfer platform] won't be in use. I got it and forwarded it and, as usual, my children challenged me about where I got it. Some of these things might not be true but I feel that other people should be aware of what is happening.

A Nigerian participant in the urban focus group of under 50s noted, "A student of one university created this thing that if you click on this link your battery will be [affected]. I once corrected my dad and since then he has stopped sending such messages."

As the examples above suggest, online exposure to misinformation appeared to be prevalent across most groups and geographical settings. Those participants with a predominantly offline media diet also described being exposed to misinformation through other channels. For instance, when we showed participants two social media posts featuring misinformation (one about plastic rice and one about phones causing cancer), many said they had seen those posts before. The majority had seen them online, but some had heard about the topic on mainstream media: "for me, it was not on the TV or the internet, but I heard it on the radio" (Ghana, over 50, rural). Others explained that, even though they don't have WhatsApp or Facebook accounts, they hear about (mis)information that circulates on those platforms in everyday situations, such as in church or, like this participant from Zimbabwe, while grocery shopping: "If I go to the shops right now, and someone greets me, what follows is a comment about how things are [online]. It's on everyone's lips; it's the reality we face every day" (Zimbabwe, under 50, rural). This transmission of misinformation from online to offline spaces, particularly through "pavement media—the everyday communication of current affairs through discussions in marketplaces, places of worship, bars, and the like and through a range of non-conversational and visual practices such as songs, sermons, and graffiti" has been previously documented by Gadjanova et al. (2022, p. 161) in Northern Ghana and exemplifies the blurred lines between online and offline.

The information environment that could be sketched from our focus group discussions is one where the line between what is true and what is not is not always easy to establish, in part because of the perceived prevalence of falsehoods circulating online and offline. In multiple instances, we found participants not sure whether the examples they were discussing were true or not. For example, "In my WhatsApp groups, people often debate if things are true or not, especially with shocking news" (Zimbabwe, over 50, rural). This uncertainty leads to a complex picture of how media users navigate

issues of media trust. For this participant from Zambia, the perception that mainstream media can also be a source of misinformation, and therefore cannot always be trusted, comes from their own experience:

> Even on radio, there are some stories that have no truth. Like not long time ago, Solwezi Radio reported someone who was found naked early in the morning as a witch, yet that person we know her, and that she has mental issues. (Zambia, under 50, urban)

In most other cases, however, the distrust is connected to long-lingering issues of state and elite capture of the news media, which is common across Africa:

> I don't seem to trust most African media controlled by government. So now, I have stopped listening to radio and TVs because somehow, I believe that most of them are announcing and broadcasting what the government officials want them to broadcast. So, for me, they are a "no-no" [as a] news source. (Nigeria, over 50, urban)

Potentially due to this lingering distrust, and despite the fact that a lot of participants' exposure to misinformation appears to happen online, we found multiple instances of, predominantly younger, participants trusting online sources such as YouTube—"I use YouTube because it is more reliable and most of the news items are mostly true" (Nigeria, under 50, rural)—or Twitter, now X: "I do trust the news I get on Twitter. The thing about Twitter is, even if you get something false, there is always someone who can always counter it almost immediately from a reliable source" (Nigeria, under 50, urban).

Digital inequalities and engagement with misinformation

In the previous section, we discussed how the link between inequalities in access and exposure to misinformation might not be as clear as previously suggested in the literature. Now, we turn to examining engagement. We identified multiple forms of engagement with misinformation, including sharing, correcting, commenting, rejecting or ignoring, confronting, banning users from groups, and verifying or fact-checking information as shown in the sample quotes in Table 2. However, our analysis found little evidence of a clear connection between certain demographic characteristics and certain types of engagement with misinformation. For example, in their own accounts of how they engage with misinformation, we found examples of young and old, urban

Table 2. Forms of engagement with misinformation.

	Example
Sharing	"My friends and I on WhatsApp share things that are completely false but entertaining. I think everyone knows that they are not true. We make fun of each other and joke about it" (Zambia, over 50, urban)
Correcting	"I corrected my friend's mum, but she retorted that prevention is better than cure. So, I just kept quiet" (Nigeria, under 50, urban)
Commenting	"Sometimes, people add their own parts to make stories sound worse. If someone says they killed some people in Jalingo, another person might say the whole town is on fire" (Nigeria, over 50, rural)
Rejecting/Ignoring	"My mum sends me some of it. It is fake news. I try to tell her, but sometimes I just ignore it if it's something silly" (Nigeria, under 50, urban)
Confronting	"When I see someone sharing false information, I tell them to check their source or retract what they've posted" (Ghana, over 50, urban)
Banning	"We have a family group chat. One of the members is Commissioner with the Zimbabwe Electoral Commission. So, she was trying to dispute, getting angry and people were saying elections are being rigged. She was responding angrily and someone said: 'Please, for now, sis, can you withdraw from the group until after the elections?' They removed her from the group because [. . .] it was going to affect family relations." (Zimbabwe, over 50, urban)
Verifying/Fact-checking Information	"I saw this in a group, and in that group the focus was on 'Is this true?' Somebody with handsome knowledge of computers indicated that this couldn't be true. 'Look at this, look at.' The focus of the discussion was whether this was true, or it was manipulated. [In] the end, we agreed that this is fake." (Zimbabwe, over 50, urban)

and rural participants who recall having shared misinformation online. In some cases, their actions could be attributed to low levels of digital literacy, such as sharing a scam post without carefully considering its truthfulness. Participants' range of motivations for sharing as well as other forms of engagement is a lot more nuanced—from making political statements to preserving social ties. This diversity of reasons is consistent with other work in this area (Wasserman & Madrid-Morales, 2024).

This contrasts with a claim that we heard repeatedly in the focus group discussions: low levels of digital literacy skills—and, more generally, lower levels of educational attainment—are the main reason why some media users decide to engage with misinformation:

> Some of my neighbours, they cannot read well, so they believe what they hear without thinking twice. It's easy for them to take what they see on WhatsApp as "truth" because they do not know how to question it. (Kenya, over 50, rural)

> I also think [it] is according to the level of people's education. If you take our LSU [Lupane State University] chat groups, the academic group is so academic, so nice, but then there's this Lupane Connect [WhatsApp group] . . . people think of anything they just throw it in there. They don't care how other people are going to react. (Zimbabwe, over 50, rural)

Oftentimes, the blame is projected specifically toward older users and, to a lesser extent, those living in rural areas. This blame attribution comes from both younger and urban residents as well as older rural residents, who reflect on their own skills and those of their peers: "There are so many here [in Kenya] who think that if it's on Facebook, it's true because they don't know how to check if it's fake news or not" (Kenya, under 50, urban); "In our community, people trust what they hear on the radio. Many are not educated, so they don't question it much. They just believe it" (Ghana, under 50s, rural); "My uncle keeps sending these doomsday messages. He's older and never had much education, so he doesn't check anything. It's frustrating" (Ghana, under 50s, rural); "In rural areas, we do not have resources to verify information" (Zambia, under 50, rural). In fact, self-reflection, which is an important media and information literacy skill, was quite common in the discussions:

> I don't consider myself as one [media literate person] . . . because, during the COVID-19, I think I sent a message to my children, and they prompted me, "Did I verify is this true?" So that was when I became aware of myself that, yes, I should have verified before sending it to them. So, for now I wouldn't say I am doing the right thing. (Ghana, over 50, urban)

Yet, when discussing who would benefit the most from media and information literacy training, we also found the counterargument that it is, in fact, young people who would need this training the most. The same argument was made in nearly identical terms in Nigeria: "The youth today, they just take what they see on social media and believe it right away. They don't check anything, they just believe and share" (over 50, rural); South Africa: "Young people are the ones always on their phones, sharing anything they see without thinking. They want the likes and the attention" (under 50, urban); Zimbabwe: "It's mostly the young ones who spread these things. They see something shocking, and before you know it, it's everywhere because they don't stop to think if it's true" (over 50, urban); and Zambia: "These young people, they are the problem. Back then, we didn't have this issue because we relied on the radio and newspaper, but now they see things online and believe it all" (over 50, urban).

Regardless of whose digital literacy skills are perceived to be the lowest, there is evidence in our data that gaps in skills exist: "I don't think I am [media literate]. . . .It's just been so hard to figure things out as a result, I've sort of removed myself from consuming news or even like reading" (South Africa, under 50, urban); or "I didn't know there is a news cycle, it would be important to know, so that news came from this source to this one and that is why it is out" (Kenya, under 50, urban). Some evidence suggests that less digitally literate users sometimes bridge these gaps by drawing on other MIL skills, such as critically decoding media content:

> Sometimes the journalists don't take their time to check the information. They just rush and they bring the information out. Only to come back later and realize that it's not true. This generates a lot of mistrust in the media. It's like they don't respect those of us in the rural areas. Because they just come and give any information and then next time, they come back to realize it's not true. At the end of the day, they take the public for granted. They don't take the public seriously because if they did, they wouldn't do what they are doing. (Ghana, over 50, rural)

> With what is happening in our media now, I always cross-check [. . .] People want to you to view things the way they want, and it's too much. You read the same thing in the *Chronicle* and then you go to *NewsDay* or *Daily News* and you find is a completely different [. . .]. So, sometimes, you need to check and see whether it's consistent. When you see it's in the *Chronicle*, knowing their affiliations, and in the *Daily News* and *NewsDay* and you find it focusing on the same thing, then you say: "It's probably true." (Zimbabwe, over 50, rural)

The ability to interpret the media critically, like the two quotes above show, was more widespread among older participants, including those in rural areas, than among younger ones. In other words, while it is possible to say that some older or rural residents might be less knowledgeable of how to interact with digital media tools (one component of MIL), some are able to compensate this with existing knowledge of how to interact with information more generally (a different component of MIL).

Discussion and conclusion

The aim of this study was to broaden our understanding of exposure to and engagement with misinformation by exploring the extent to which these practices intersect with digital inequalities and demographic factors—specifically age and place of dwelling— that have long been assumed as markers of said inequalities. In doing so, we sought to respond to the call by Hargittai and Hsieh (2013) to consider digital inequalities as multi-layered, shaped by a complex interplay of socio-demographic factors. This complexity is especially evident in many African countries, where mobile technology has expanded access across urban and rural areas (Nothias, 2020), yet other inequalities persist (Ahmed et al., 2023; Gadjanova et al., 2022). Our contribution to ongoing scholarly discussions around digital inequalities and misinformation is twofold. First, we add nuance to our understanding of how media users in six African countries get exposed to misinformation by arguing that exposure to online misinformation is widespread—even among groups that are often assumed to be offline most of the time—and by describing avenues through which online content enters offline spaces and, eventually, reaches wider publics. These findings echo work by Buthelezi et al. (2021) who have challenged the idea of a digitally homogenous rural Africa. In our dataset, misinformation exposure and engagement in rural settings was far from homogenous. Our work also builds on evidence presented in Gadjanova et al. (2022) regarding the nexus between online and offline mediated spaces, particularly pavement media, when it comes to the spread of misinformation. Second, our analysis supports the idea that digital skills used to spot misinformation are not present equally across the different demographic groups included in this study (Haddon, 2000; Hargittai & Hinnant, 2008). For example, broadly speaking, older rural users tend to be less digitally savvy than some younger users, but not exclusively. However, we offered examples of older and rural media users describing other MIL skills that appear to be often overlooked when discussing ways in which African media consumers engage and disengage with misinformation. Building on these two contributions, in this final section, we make specific suggestions on how contextually-grounded interventions to counter misinformation could be better designed.

While previous studies have suggested a generational and locational divide in how media users are exposed to misinformation (Ahmed et al., 2023; Seo et al., 2021), our data reveal a more nuanced landscape. Access to digital technologies is indeed a factor in misinformation exposure, but not the sole factor. For instance, rural and older users in our study often relied on offline media sources like radio and television, while younger, urban participants predominantly engaged with social media. Yet, this divide is not absolute, as both urban and rural, young and old individuals described diverse media

diets that defy the expected patterns of digital engagement. Our findings also stress the role of socio-environmental factors in shaping misinformation engagement (Asmar et al., 2022). While this study has shown some evidence that age and place of dwelling influence misinformation engagement, participants' diverse responses indicate that these demographic categories should not be simply viewed as predictors of behavior, if we were to draw on the vocabulary of positivistic scholarship. For instance, we observed instances where older participants, despite having limited digital skills, employed critical thinking to question the authenticity of certain news stories, a skill often honed through broader life experiences and media interactions. This type of media literacy self-reflection fits well within some of the recommended competencies of digital literacy, including "to think more critically about the information they encounter" (FullFact, 2020, p. 3). In contrast, some younger participants exhibited a less critical approach, sharing misinformation for entertainment or social reasons, underscoring the varied motivations behind misinformation sharing (Wasserman & Madrid-Morales, 2024).

In practical terms, this study shows that when close attention is paid to how misinformation manifests within specific contexts, broad and generalized assumptions about digital inequalities and engagement can become contradictory. In some cases, as our findings show sharing of misinformation may ironically be well-intended, as users might think that it may be of benefit to others, even if they know such information to be false. In other contexts, such a practice may be seen as an indication that users lack MIL. When understood within context, however, such practices might result from a commitment of media users to their communities, an expression of their disillusionment with elite-captured mainstream media or seen as in alignment with the beneficent use of social media propagated by MIL programs themselves. Such contradictions between MIL norms and users' media practices might therefore not necessarily be seen as an indication of illiteracy, but rather of a contextually specific interpretation of media and social norms. The heterogeneity of digital inequalities and engagement with misinformation in the six African contexts examined calls for differentiated MIL interventions.

As others have pointed out (Matanji et al., 2024), responses to misinformation that focus on media and information literacy cannot be designed to address whole populations or even sub-groups in generalized ways, but must be tailored to specific demographic groups, considering their usage practices. Organizations like AfricaCheck (2024) and PesaCheck (2024) have started tailoring media and information literacy programs to local needs in South, West, and East Africa. These efforts consider factors like regional languages on social media, the widespread use of WhatsApp and other platforms, and partnerships with local universities and NGOs for program development and implementation. These organizations have also been involved in promoting the notion of *misinformation literacy*, which describes the ability to identify and distinguish between different types of inaccurate or false content, using a range of tools and tactics to check the veracity of online content, or verifying the accuracy of images and videos using technological tools (Cunliffe-Jones et al., 2021). Misinformation literacy training, rather than more general digital literacy training, might better fit the need of some groups of media consumers.

As with any study, ours has important limitations and offers some possible avenues for further research. In terms of limitations, first, although our comparative study of misinformation practices is the first of its kind in sub-Saharan Africa, we are unable to extend the findings across the entire African continent. Second, and rather crucially, our study might not be accounting for the media practices of fully offline populations, for whom exposure and engagement with misinformation might take a completely different form from what we describe. Furthermore, as a qualitative study, we do not address the possible effects of exposure to and engagement with misinformation nor the effects of digital literacy interventions on misinformation engagement. This, however, could be further explored in future quantitative studies that might find it useful to build on some of the evidence presented here around the diversity of misinformation engagement practices. There are two other areas for future research that our findings hint at. The first one is around the connection between online and offline misinformation circulation networks, particularly through pavement media (Gadjanova et al., 2022). Some of the evidence we presented here suggests, for example, false content form online media is

sometimes picked up by traditional media and spread by word-of-mouth. The role of radio in spreading misinformation, for example, remains an understudied, yet critical, area of inquiry. The second area for future research relates to the economies of misinformation, particularly work around scams and other forms of everyday misinformation (Tully, 2021), which featured predominantly as concerns for participants in our focus group discussions. Extending the work on misinformation to engage with its vast complexities is an on-going task and challenge for media and communication researchers.

Acknowledgments

We would like to thank Kioko Ireri, Khanyisa Melwa, Khulekani Ndlovu, Etse Sikanku, Emeka Umejei and Chikezie E. Uzuegbunam for their assistance in coordinating and facilitating some of the focus group discussions.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

The work was supported by the University of Houston.

Notes on contributors

Gregory Gondwe is an assistant professor of journalism at California State University, San Bernardino, and a Faculty Associate at the Berkman Klein Center for Internet & Society. His research explores the intersection of journalism, new media technologies, and foreign influence in Sub-Saharan Africa, with a focus on artificial intelligence and misinformation.

Dani Madrid-Morales is a lecturer in journalism and global communication at the School of Journalism, Media and Communication at the University of Sheffield and a Research Fellow at the Centre for Information Integrity in Africa at Stellenbosch University, South Africa. His research focuses on the global circulation of State-sponsored news and information, and on audiences' exposure to and engagement with mis/disinformation, particularly in the Global South.

Melissa Tully is a professor in the School of Journalism and Mass Communication at the University of Iowa. Her research focuses on news literacy, social media, and audiences' exposure to and engagement with mis/disinformation in the United States and sub-Saharan Africa.

Herman Wasserman is professor of Journalism and Director of the Centre for Information Integrity in Africa at Stellenbosch University in South Africa. He has published widely on media and democracy in Africa, disinformation and media and geopolitics. He is a Fellow of the International Communication Association and holds an A-rating by the South African National Research Foundation. He is Editor-in-Chief of the *Annals of the International Communication Association* and *African Journalism Studies*.

Open Scholarship

This article has earned the Center for Open Science badge for Open Materials. The materials are openly accessible at https://doi.org/10.1080/17439760.2023.2239781

References

Abdulai, A.-F., Tiffere, A.-H., Adam, F., & Kabanunye, M. M. (2021). COVID-19 information-related digital literacy among online health consumers in a low-income country. *International Journal of Medical Informatics*, *145*, 1–6. https://doi.org/10.1016/j.ijmedinf.2020.104322

Abubakar, T. A. (2022). Mobile telephony and the changing patterns of audiences' engagement with global media in Africa. *Global Media and Communication*, *20*(1), 71–89. https://doi.org/10.1177/17427665241235481
Africacheck. (2024, October 30). *Our media literacy work*. https://africacheck.org/what-we-do/media-literacy
Ahmed, S., Madrid-Morales, D., & Tully, M. (2023). Social media, misinformation, and age inequality in online political engagement. *Journal of Information Technology & Politics*, *20*(3), 269–285. https://doi.org/10.1080/19331681.2022.2096743
Asmar, A., Mariën, I., & Van Audenhove, L. (2022). No one-size-fits-all! Eight profiles of digital inequalities for customized inclusion strategies. *New Media and Society*, *24*(2), 279–310. https://doi.org/10.1177/14614448211063182
Bazeley, P., & Jackson, K. (2013). *Qualitative data analysis with NVivo*. SAGE Publications.
Buthelezi, M., Chatikobo, T., & Dalvit, L. (2021). United in diversity? Digital differences and inequalities within a South African rural community. *Information Communication & Society*, *24*(3), 455–469. https://doi.org/10.1080/1369118X.2020.1864000
Conroy-Krutz, J., & Koné, J. (2020). *Africans are embracing digital media, but they're wary of its downsides*. *Afrobarometer working paper*. Retrieved February 2, 2022, from. https://afrobarometer.org/blogs/africans-are-embracing-digital-media-theyre-wary-its-downsides
Cunliffe-Jones, P., Gaye, S., Gichunge, W., Onumah, C., Pretorius, C., & Schiffrin, A. (2021). The state of media literacy in Sub-Saharan Africa 2020 and a theory of misinformation literacy. In *Misinformation policy in Sub-Saharan Africa: From laws and regulations to media literacy* (pp. 5–96). University of Westminster Press. https://www.fulcrum.org/concern/monographs/bv73c331q?locale=en
Darling-Wolf, F. (2021). In the city, they go "pit pit pit": Digital media's affordances and imagined (dis)connections in a rural Japanese community. *New Media and Society*, *23*(7), 1863–1881. https://doi.org/10.1177/1461444820921175
DiMaggio, P., & Hargittai, E. (2001). *From the "digital divide" to "digital inequality": Studying internet use as penetration increases (no. 47; working papers)*. Princeton University, Woodrow Wilson School of Public and International Affairs, Center for Arts and Cultural Policy Studies.
Duffy, A., Tandoc, E., & Ling, R. (2020). Too good to be true, too good not to share: The social utility of fake news. *Information Communication & Society*, *23*(13), 1965–1979. https://doi.org/10.1080/1369118X.2019.1623904
E, H. (2021). Introduction to the handbook of digital inequality. In E. Hargittai (Ed.), *Handbook of digital inequality* (pp. 1–7). Edward Elgar Publishing.
FullFact. (2020). *Media and information literacy: Lessons from interventions around the world*. https://fullfact.org/media/uploads/media-information-literacy-lessons.pdf
Gadjanova, E., Lynch, G., & Saibu, G. (2022). Misinformation across digital divides: Theory and evidence from Northern Ghana. *African Affairs*, *121*(483), 161–195. https://doi.org/10.1093/afraf/adac009
Gagliardone, I. (2019). *China, Africa, and the future of the internet*. Bloomsbury Publishing.
Guess, A., Nagler, J., & Tucker, J. (2019). Less than you think: Prevalence and predictors of fake news dissemination on facebook. *Science Advances*, *5*(1), eaau4586. https://doi.org/10.1126/sciadv.aau4586
Haddon, L. (2000). Social exclusion and information and communication technologies: Lessons from the studies of single parents and the young elderly. *New Media and Society*, *2*(4), 387–406. https://doi.org/10.1177/1461444800002004001
Hanson, V. L. (2010). Influencing technology adoption by older adults. *Interacting with Computers*, *22*(6), 502–509. https://doi.org/10.1016/j.intcom.2010.09.001
Hargittai, E. (2003). Informed web surfing: The social context of user sophistication. In P. Howard & S. Jones (Eds.), *Society online I* (pp. 257–274). Sage Publications.
Hargittai, E., & Hinnant, A. (2008). Digital inequality: Differences in young adults' use of the internet. *Communication Research*, *35*(5), 602–621. https://doi.org/10.1177/0093650208321782
Hargittai, E., & Hsieh, Y. P. (2013). Digital inequality. In W. H. Dutton (Ed.), *Digital inequality* (pp. 129–150). Oxford University Press.
Heponiemi, T., Gluschkoff, K., Leemann, L., Manderbacka, K., Aalto, A.-M., & Hyppönen, H. (2021). *Digital inequality in Finland: Access, skills and attitudes as social impact mediators*. New Media & Society. https://doi.org/10.1177/14614448211023007
Hwang, Y., & Jeong, S. (2021). Misinformation exposure and acceptance: The role of information seeking and processing. *Health Communication*, *38*(3), 585–593. https://doi.org/10.1080/10410236.2021.1964187
Kennedy, T. L. M., Smith, A., Wells, A. M., & Wellman, B. (2008). *Networked families*. Pew Research Centre. https://www.pewresearch.org/2008/10/19/networked-families/
Komen, L. J. (2020, 16). My mobile phone, my life: Deconstructing development (maendeleo) and gender narratives among the Marakwet in Kenya. *Ada: A Journal of Gender, New Media & Technology*,16. https://doi.org/10.5399/uo/ada.2020.16.4
Leaning, M.2019). An approach to digital literacy through the integration of media and information literacy. *Media and Communication*, *7*(2), 4–13. https://doi.org/10.17645/mac.v7i2.1931
Lins, D., & Castelli-Rosa, J. (2023). Tia do zap: Representações de desinformação e confiança no WhatsApp no Brasil. In N. Haring, R. Maierhoffer, & B. Ratzenböck (Eds.), *Gender and age aging in popular culture* (pp. 153–177). Transcript.

Livingstone, S. (2004). Media literacy and the challenge of new information and communication technologies. *Communication Review*, *7*(1), 3–14. https://doi.org/10.1080/10714420490280152

Madrid-Morales, D., Wasserman, H., Gondwe, G., Ndlovu, K., Sikanku, E., Tully, M., Umejei, E., & Uzuegbunam, C. E. (2021). Motivations for sharing misinformation: A comparative study in six Sub-Saharan African countries. *International Journal of Communication*, *15*, 1200–1219.

Malhotra, P., & Pearce, K. (2022). Facing falsehoods: Strategies for polite misinformation correction. *International Journal of Communication*, *16*, 2303–2324.

Mangold, F., Stier, S., Breuer, J., & Scharkow, M. (2021). The overstated generational gap in online news use? A consolidated infrastructural perspective. *New Media and Society*, *24*(10), 2207–2226. https://doi.org/10.1177/1461444821989972

Matanji, F., Tully, M., Mudavadi, K. C., Diop, L., & Madrid-Morales, D. (2024). Media literacy and fact-checking as proactive and reactive responses to misinformation in Kenya and Senegal. *African Journalism Studies*, 1–18. https://doi.org/10.1080/23743670.2024.2401782

Mubarak, F., & Nycyk, M. (2017). Teaching older people internet skills to minimize grey digital divides: Developed and developing countries in focus. *Journal of Information, Communication and Ethics in Society*, *15*(2), 165–178. https://doi.org/10.1108/JICES-06-2016-0022

Nogueira, V. B., Teixeira, D. G., Lima, I. A. C. N., de Moreira, M. V. C., de Oliveira, B. S. C., Pedrosa, I. M. B., de Queiroz, J. W., & Jeronimo, S. M. B. (2022). Towards an inclusive digital literacy: An experimental intervention study in a rural area of Brazil. *Education and Information Technologies*, *27*(3), 2807–2834. https://doi.org/10.1007/s10639-021-10711-z

Nothias, T. (2020). Access granted: Facebook's free basics in Africa. *Media Culture & Society*, *42*(3), 329–348. https://doi.org/10.1177/0163443719890530

Pei, X., & Chib, A. (2021). Beyond the gender (dis)empowerment dichotomy: The mobile phone as social catalyst for gender transformation in the Global South. *New Media and Society*, *23*(3), 578–595. https://doi.org/10.1177/1461444820905295

Pesacheck. (2024, October 30). *Multi-language tiplines and media literacy: Pesacheck in Africa*. https://meedan.com/post/multi-language-tiplines-and-media-literacy-pesachecks-fact-check-strategy-in

Scheerder, A., van Deursen, A. J. A. M., & van Dijk, J. A. G. M. (2017). Determinants of internet skills, uses and outcomes. A systematic review of the second- and third-level digital divide. *Telematics and Informatics*, *34*(8), 1607–1624. https://doi.org/10.1016/j.tele.2017.07.007

Seo, H., Blomberg, M., Altschwager, D., & Vu, H. T. (2021). Vulnerable populations and misinformation: A mixed-methods approach to underserved older adults' online information assessment. *New Media and Society*, *23*(7), 2012–2033. https://doi.org/10.1177/1461444820925041

Silver, L., & Johnson, C. (2018). *Internet connectivity seen as having positive impact on life, but digital divides persist*. Pew Research Center. https://www.pewresearch.org/global/2018/10/09/internet-connectivity-seen-as-having-positive-impact-on-life-in-sub-saharan-africa/

Tsatsou, P. (2011). Digital divides revisited: What is new about divides and their research? *Media Culture & Society*, *33*(2), 317–331. https://doi.org/10.1177/0163443710393865

Tully, M. (2021). Everyday news use and misinformation in Kenya. *Digital Journalism*, *10*(1), 109–127. https://doi.org/10.1080/21670811.2021.1912625

United Nations. (2017). *Principles and recommendations for population and housing censuses*. United Nations Publication.

Vraga, E. K., & Bode, L. (2020). Defining misinformation and understanding its bounded nature: Using expertise and evidence for describing misinformation. *Political Communication*, *37*(1), 136–144. https://doi.org/10.1080/10584609.2020.1716500

Wasserman, H., & Madrid-Morales, D. (2019). An exploratory study of "fake news" and media trust in Kenya, Nigeria and South Africa. *African Journalism Studies*, *40*(1), 107–123. https://doi.org/10.1080/23743670.2019.1627230

Wasserman, H., & Madrid-Morales, D. (2024). What motivated the sharing of disinformation about China and COVID-19? In G. Yang, B. Meng, & E. J. Yuan (Eds.), *Pandemic crossings: Digital technology, everyday experience, and governance in the COVID-19 crisis* (pp. 189–212). Michigan State University Press.

Wildermuth, N. (2021). 'Restricted' digital/media repertoires in Rural Kenya: A constructive critique. *Information Communication & Society*, *24*(3), 438–454. https://doi.org/10.1080/1369118X.2020.1853791

Wilson, C., Grizzle, A., Tuazon, R., Akyempong, K., & Cheung, C.-K. (2011). *Media and information literacy curriculum for teachers*. UNESCO. https://unesdoc.unesco.org/ark:/48223/pf0000192971/PDF/192971eng.pdf.multi

Wyche, S., & Baumer, E. P. (2017). Imagined Facebook: An exploratory study of non-users' perceptions of social media in Rural Zambia. *New Media and Society*, *19*(7), 1092–1108. https://doi.org/10.1177/1461444815625948

Wyche, S., & Olson, J. (2018). Kenyan Women's rural realities, Mobile internet access, and "Africa rising". *Information Technologies & International Development*, *14*, 33–47.

Yan, P. (2021). 'Fed with the wrong stuff': Information overload (?) and the everyday use of the internet in rural and urban China. *International Communication Gazette*, *83*(5), 404–427. https://doi.org/10.1177/17480485211029019

Zheng, Y., & Walsham, G. (2008). Inequality of what? Social exclusion in the e-society as capability deprivation. *Information Technology & People*, *21*(3), 222–243. https://doi.org/10.1108/09593840810896000

Zheng, Y., & Walsham, G. (2021). Inequality of what? An intersectional approach to digital inequality under covid-19. *Information and Organization*, *31*(1), 100341. https://doi.org/10.1016/j.infoandorg.2021.100341