COMMENTARY

Communication in context: How culture, structure, and agency shape health and risk communication about COVID-19 in Ghana

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Abstract
Despite impressive strides toward proper health education about the pandemic, in resource-limited contexts, health information dissemination occurs within a structural context that restricts the enactment of agency and further marginalizes the most vulnerable. Through observations of and reflections about Ghana's work in health communication about the COVID-19 pandemic, this essay examines the key processes and outcomes of COVID-19 information dissemination in Ghana, highlighting the structural factors that contribute to health inequities during the pandemic. We argue that although Ghana has been commended continentally and globally for the country's efforts in containing the virus and vaccinating its populace, there is evidence of health information access disparities across the country, especially in rural communities. In doing so, we increase knowledge about health information needs and gaps, and conclude by making recommendations for public health practitioners in Ghana and similar contexts.

KEYWORDS
COVID-19 pandemic, fake news, health disparities, information deserts, misinformation and disinformation

Highlights
Health information access disparities, particularly in rural areas of Ghana worsened the impact of COVID-19. Gaps in access and structural inequities have the largest impact on the most vulnerable populations. To increase effectiveness of health information dissemination, it is important to critically engage with culture and larger socio-cultural structures that may impact community members' enactment of agency.
INTRODUCTION

Like many countries around the world, the COVID-19 pandemic has had a profound impact on Ghana. According to reports by the World Health Organization, in the period dating from January 3, 2020, to June 6, 2021, Ghana has had over 90,000 confirmed cases of the virus (World Health Organization, 2021). According to the same source, over 700 people have died of the virus in Ghana. The pandemic in Ghana impacted not only the health of the population but also, specifically, the health of healthcare providers in a context with an already overburdened healthcare system (Afulani et al., 2020). In Ghana, there is just one hospital bed for every 10,000 people and there are about 1.1 physicians and 27.1 nurses for every 10,000 individuals (Afulani et al., 2021). The overburdening of the healthcare system is also evidenced by the strikes threatened by physicians and nurses against the conditions they had to work in during the pandemic (Ghanaweb, 2020). Thus, while many health systems around the globe were struggling to keep up with demands created by the pandemic, Ghana's health system was facing similar issues under conditions that predated the pandemic (Afulani et al., 2020). The government of Ghana responded to the global health crisis in a variety of ways, including bans on public gatherings, bans on travel from particularly stricken countries, a mandatory quarantine, partial lockdowns, and the use of face masks (Kenu et al., 2020). In tandem with these public health policy measures were health education interventions and health information dissemination efforts to foster preventive behaviors among the population. While Ghana has made positive strides to protect the population, including being one of the first countries to administer the AstraZeneca vaccine and administering over one million doses of the COVID-19 vaccine as of May 2021 (World Health Organization [WHO]), we argue that there is evidence of health information access disparities, particularly in marginalized and rural communities. Expounding upon these disparities and the resulting challenges and gaps in health information dissemination during the COVID-19 pandemic, we highlight the importance of foregrounding the intersection of culture, structure, and agency in the contextualization of health information dissemination in similar contexts worldwide.

CULTURE, STRUCTURE, AGENCY, & HEALTH INFORMATION DISSEMINATION

Health information dissemination cannot be isolated from the cultural, structural, and agentic factors that shape the context in which it occurs. The disproportionate impact that health disasters and crises like COVID-19 have on communities that are already marginalized (Rivera & Fothergill, 2021) highlights the importance of engaging with health information dissemination in light of culture and contextual structures that enable or constrain health behavior.

The culture-centered approach (CCA) is an analytical framework in health communication that provides a useful lens through which to understand the impact of context and value systems on health. CCA foregrounds the intersection of culture, structure, and agency, highlighting the way these three dynamically interact to shape health meanings for individuals and communities (Dutta, 2007). In this framework, 'culture' refers to systems of meaning, 'structures' refer to social constructions that enable/constrain resource access, and 'agency' refers to the individual capability for dynamic action (Sastry et al., 2019). While cultural sensitivity approaches in health communication emphasize health education that is congruent or attentive to cultural practices, CCA, by foregrounding voices from the margins and localized health meanings, engages with culture as an entry point for transformation and disruption of unequal power dynamics (Dutta, 2008; Dutta et al., 2017). In this essay, we
apply this approach as an orienting metatheoretical framework to move toward opening a new line of discourse on COVID-19 health communication in Ghana.

Understanding COVID-19 communication in Ghana through a CCA lens means drawing into the center individuals' and communities' meaning making around health and health issues such as COVID-19, with attention to how structural factors and policies enable Ghanaians to enact their agency in response to the risk of COVID-19.

Despite Ghana being commended widely by the international community for its approach to addressing and containing COVID-19, contextual factors shape COVID-19 infection rates. Structures within Ghana form a foundation for the way COVID-19 health information has been disseminated and negotiated during the pandemic. In this essay, we describe some of the main contextual factors that shaped health information dissemination in Ghana, grounding our discussion in the intersection of culture, structure, and agency.

**CONTEXTUALIZING HEALTH INFORMATION DISSEMINATION IN GHANA**

Historically, Ghana has employed various avenues to facilitate information dissemination on various health issues such as HIV/AIDS, malaria, cholera, and guinea worm. Before and after the diffusion of new and social media, the public health sector in Ghana employed extensive use of traditional media to make health information accessible to the populace. This medium of communication was culturally suited to the local context, and studies have provided evidence of the effectiveness of “edutainment” programs in African contexts (Scheepers et al., 2004).

The Ghana Broadcasting Corporation (GBC), Ghana's public broadcaster, has played a pivotal role in health education in the country with programs such as HeHaHo, a weekly radio drama, which aired on GBC's subsidiary stations across the country on Sundays in the 2000s (Compass, n.d.). HeHaHo was a campaign to “roll back malaria for a healthier, happier, home,” as the name suggests. Like many health campaigns in Ghana, HeHaHo was funded by foreign organizations like GoodLife/USAID (Compass, n.d.). This again draws attention to the way power dynamics and global geopolitics shape funding for development programs in the Global South. This campaign was actualized as a weekly drama broadcast in English, Dagbanli, Akan, and Ga, mostly on Sundays to teach the populace about malaria prevention strategies. As a child, the second author and their family tuned in to this program to be entertained and educated. Beyond HeHaHo, there were various songs, mostly led by children to provide education on malaria prevention.

Radio and television have also proven to be important mediums for the communication of health information in Ghana (Agyemang-Duah et al., 2020). For example, as many African countries worked to prevent the spread of HIV/AIDS, Ghana once again utilized traditional media platforms to air catchy songs about HIV prevention on radio and TV. Beyond these platforms, paper flyers were created and circulated to facilitate education on HIV prevention, stigma, and management.

Today, health education campaigns have drastically reduced in the country due to a lack of government commitment to providing funding for health education programs (NCCE Ghana [@nccegh], 2020). In addition, communication about health information has grown complicated as the public health education sector is burdened with not only providing education but fighting misinformation and disinformation propelled by access to platforms such as WhatsApp and Facebook. For individuals with limited access to these platforms, health information dissemination is even further hampered. While research on health information seeking behaviors among individuals in rural communities in Ghana is sparse, a recent study in one such community found that the majority of respondents experienced
difficulties gaining access to health information due to language barriers, poor information infrastructure, and lack of access to mobile phones (Sokey & Adisah-Atta, 2017).

When Ghana went into lockdown in March 2020, President Nana Akufo Addo began to provide weekly updates about the country's strategies to contain the virus and how the country was performing in their bid to contain the spread of the virus (Mohammed, 2020). Media organizations across the spectrum mostly based in Accra provided extensive coverage for these through live broadcasts, news stories, and circulating digital flyers about major points made on their social media platforms among others. Despite the growth in social media, radio and TV continue to be the major avenues for health information dissemination in Ghana. While these platforms were also used to provide information on COVID-19, they could not exhaustively address the information needs of the Ghanaian population due to the digital divide caused by limited access to internet data and digital technology.

In the following section, we highlight the key structural challenges that hindered the enactment of agency through protective health behaviors during the COVID-19 pandemic in Ghana.

**STRUCTURAL CHALLENGES AND COVID-19 IN GHANA: FAKE NEWS, INFORMATION DESERTS, & INEQUITABLE ACCESS**

Fake news and information deserts

Although digital media access continues to rise around the world, the digital divide continues to undermine access for people in rural communities, people who do not have access to digital technology and internet data, people who are not literate in the language of many digital platforms, and people who are not technologically literate (Mohammed, 2019a). This divide is mirrored across various sectors of the digital economy including the health sector (Abdulai et al., 2021; Ankamah et al., 2021). A lack of access to these technologies, platforms, and literacy skills creates information deserts in an increasingly digitized world, ultimately stripping community members of the opportunity to assert their agency in finding credible information. While some users may have various levels of access to these platforms, misinformation, and disinformation continue to thwart efforts to use digital platforms for health information dissemination. WhatsApp, which has become one of the most popular mediums of communication across Africa, and specifically Ghana, has in recent times been inundated with fake news about various topics from education to health and politics (Abdulai et al., 2021). While some young college students accessed COVID-19 health information via the Internet (Ankamah et al., 2021), a wide digital divide means that majority of the population do not have access to these platforms (Abdulai et al., 2021). Although there are increasing conversations around digitization and digitalization in Ghana, the fact remains that the most widely accessible media in the country is radio. Sixty-nine percent of women and 80% of men in Ghana have access to the radio (Ghana Statistical Service, 2011). Radio is accessible in Ghana and across Africa because it is cheap; can run on electricity, battery power, or solar energy; can be carried to remote areas like farms and has signals that are more widely accessible than other platforms such as TV and print (Mohammed, 2019b). Ultimately, traditional media (radio, TV, print) became the avenue to access more credible information about COVID-19 in Ghana (Agyemang-Duah et al., 2020). Despite radio's wide accessibility, there was very little effort on the part of the Ghanaian state to provide resources to develop public health campaigns to educate the populace about the virus (NCCE Ghana [@nccegh], 2020). In fact, the National Commission
on Civic Education, which is mandated to carry out such campaigns, was only provided with GHS 100 (the equivalent of $20 at the time) to develop and launch health education campaigns in each district office across the country (NCCE Ghana [@nccegh], 2020). Ultimately, independent actors such as NORSAC, a Tamale-based NGO, and citizens led efforts to provide education on COVID-19 in indigenous Ghanaian languages (Mohammed, 2020; Norsaac @Norsaac, 2020). Therefore, the prevalence of fake news, lack of access to credible media platforms, limited digital media accessibility (Abdulai et al., 2021; Ankamah et al., 2021) and media literacy have exacerbated information deserts that predate COVID-19 (Mohammed, 2020). It does not help that some journalists and opinion leaders who hold tremendous sway in their communities amplified disinformation. For example, a renowned journalist shared fake news on her Facebook account that insinuated that the COVID-19 vaccine could cause infertility in women (Aminu, 2021). Therefore, health information dissemination efforts are not only mitigated by lack of media infrastructure and information deserts but also by actors, such as journalists, who ideally should be the arbiters of credible information. These issues pose profound structural challenges that restrict the extent to which individuals can enact agency through protective health behaviors during the COVID-19 pandemic.

**Inequitable vaccine access**

The COVID-19 pandemic has highlighted the need for robust health systems that can quickly and efficiently respond to crises (Paintsil, 2020). These systems must ensure their strategies are equitable. While Ghana's public officials and health practitioners advocated that people take the COVID-19 vaccine, at the same time, there were inequities related to vaccine distribution that hindered a significant segment of the population from heeding that advice. While Ghana received its first consignment of vaccines in February, systemic factors related to resource distribution in the country meant that the vaccines were very slow to arrive in Northern Ghana (even for health workers), and when they did, they were already on the verge of expiration (Ghanaweb, 2021). While urbanization and other factors have led to poverty reduction in Southern Ghana, the same has not been true for Northern Ghana as the region has been systematically excluded in development efforts in colonial and postcolonial Ghana. While the number of poor people in Southern Ghana reduced by 2.5 million between 1992 and 2006, it actually increased by 900,000 in Northern Ghana (UNICEF, 2014). Thus, the deprivation of individuals in Northern Ghana of the vaccine only served to expose and exacerbate existing inequities. Health information about the vaccine, particularly communications encouraging people to receive them, was thus rendered ineffectual to a group of people in the country who were already marginalized and were further restricted in their ability to enact their agency by making a choice about the vaccine. This severely compromised the extent to which health information dissemination can actually result in protective health behaviors. This example highlights the importance of public health practitioners understanding and engaging with the structures that shape health behavior.

**Inequitable policies and corruption**

Another factor that posed a challenge to health information dissemination in Ghana was policies that were potentially or in actuality harmful to citizens. During the COVID-19 pandemic, and at a time when health messaging was promoting staying at
home, some homes in Old Fadama were demolished, severely reducing the possibility of these individuals being able to maintain the social distancing required to be safe (Mohammed, 2020). In addition, police and military officers were enlisted to enforce lockdowns (Ghanaweb, 2020). In other African countries such as Nigeria, Uganda, Rwanda, and Kenya the enforcing of lockdowns by members of the police force had life-threatening implications (Hammond, 2020). In Nigeria, at a time when COVID-19 had only led to 11 deaths, the enforcement of lockdown by police officers led to 18 deaths (Nigerian Human Rights Commission). As a result of the potentially grave consequences of enforcing lockdowns using police and military force, it would have been more effective for the government to fund more community-based programs led by community members, instead of enlisting the help of the police and military who might have fraught relationships with the community. The discordance between health information dissemination and policies that constrained the abilities of individuals to take the actions advocated again highlights the importance of establishing policies that support and enable protective health behaviors.

Finally, even when sound policies were put in place, there are examples of political leaders themselves neglecting orders. For example, although President Nana Addo instituted a ban on public gatherings, his political party flouted this ban several times by organizing rallies and large funerals. This set a negative precedent for citizens in their own responses to directives.

Finally, there have been concerns of corruption in Ghana’s response to the virus which can create mistrust between public health practitioners and citizens. For example, like in other countries, there has been doubt raised about the transparency of procurement processes related to COVID-19 testing and equipment at Kotoka International Airport (Corruption Watch Ghana, 2021).

ENACTMENT OF AGENCY BY INDIVIDUALS & COMMUNITY MEMBERS

Despite these structural challenges, community agency was still enacted in the way that individuals and community groups, through local means and meanings, worked to fill gaps in health education. Some organizations took advantage of already-existing information services infrastructure to make COVID-19 health information accessible to the most disenfranchised groups (Mohammed, 2020). Noting the inaccessible communication campaigns for deaf people during the pandemic, the Northern Regional Association for the Deaf advocated for COVID-19 education in sign language (Mohammed, 2020). In Krobo Odumase, community members worked with opinion leaders to produce COVID-19 public health campaigns to be broadcast on loudspeakers at vantage points in the community (Desmon, 2021). Culturally, it is imperative to note that these urban information centers mirror indigenous modes of information dissemination like the town-crier walking through the community to announce and share important information with the public. We assert that these indigenous modes of communication should be leveraged, particularly as they have established legitimacy in these communities given that many announcers have connections to, and often take orders from, the chief’s palace. Complementing these modern information dissemination strategies with already existing indigenous communication structures that are still concordant with contemporary cultural practices will help fill gaps left by information deserts. Individual citizens and groups can and should be provided with the resources necessary to enact their agency, creating strategies that align with local cultural values and practices.
CONCLUSION

We have expounded upon health information dissemination about COVID-19 in Ghana, highlighting the ways in which cultural and structural factors interacted with health dissemination efforts to enable or constrain the enactment of agency through protective health behaviors. While Ghana made exemplary strides in advocating protective health behaviors, these measures, examined in the context of larger sociocultural structures, were limited in their impact, to the detriment of the most vulnerable communities. The challenges presented in this essay are not unique to Ghana but are merely reflective of a reality pervasive in many contexts globally. Health information dissemination should be a multisectoral effort that occurs with a strong understanding of culture. Furthermore, institutions, government agencies, and nongovernmental organizations must move beyond shallow efforts to convince, persuade, and nudge individuals toward health behaviors and move toward broader actions to dismantle structures that produce inequitable outcomes.

ETHICS STATEMENT

This commentary is not based on research with human participants, and therefore did not require approval from an institutional review board.

AUTHOR BIOGRAPHIES

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