

# Examining the Snags of Access to Covid-19 Information among the Deaf Community in Ghana

Issaka Cecilia Alimatu<sup>1</sup>, Mahama Alhassan<sup>2</sup>, Fatima Iddrisu Abu<sup>3</sup>

<sup>1</sup>Senior Lecturer, University for Development Studies, Ghana  
Faculty of Education, Department of Educational Foundations Studies

<sup>2</sup>Lecturer, University for Development Studies, Ghana  
Faculty of Education, Department of Educational Foundations Studies

<sup>3</sup>Lecturer, Tamale Technical University, Ghana

**Abstract:** This study aimed at exploring the Access to Covid-19 Health Information among the Deaf Community in Ghana. The study employed randomly selected 40 Junior High School respondents from the designated deaf schools in the Northern Region of Ghana. The study is an exploratory research with cross-sectional survey as its main design. The instruments for data collection was mainly questionnaire administered manually and through electronic medium (Google forms), interviews and focus group discussions were also conducted over a certain period of time. The data was analysed in SPSS and Pearson Moment Correlation.

Access to information is vital during this pandemic, the study however revealed that there is adequate Covid-19 information available for the deaf, and the major bottleneck is dissemination since there is no universally recognized sign language for Covid-19 information. The affected group has to endure this difficulty which often resulted into infection and even death.

Covid-19 management and aid with fair health care navigation approaches should be provided to the deaf community. The health-care system owes it to deaf patients to assist them in obtaining primary health-care services. To assist communicate health information online, public health professionals should ensure that public service announcements are accessible and widely distributed through deaf community trust agents.

Greater efforts should be made to ameliorate the perceptions of the Covid-19 pandemic that is devouring the world through educational campaigns and information dissemination through various media to a larger deaf population.

**Keywords:** Covid-19, Deaf, Community, Health, Information, Pandemic, Sign language, Availability, Ghanaian.

## I. INTRODUCTION

It is over 100 years since the Spanish flu, recounted as the deadliest outbreak cracked its whip on the world population and economy (WHO, 2018). In 2014, the West African Ebola outbreak also taught the global economy that it is never immune to pandemics and hence the need for prudent national and international health security management systems in anticipation of future outbreaks.

"Outbreaks are a reality of life, and the globe remains susceptible as outbreaks can occur at any time (WHO, 2018, p.10)," said World Health Organization Director-General Dr. Tedros Adhanom Ghebreyesus in 2018. Though he couldn't

predict where or when the next worldwide pandemic will strike, he predicted it would have a catastrophic impact on human life and the global economy. In the middle of the fourth quarter of 2019, the Coronavirus that causes the Covid-19 sickness emerged from Wuhan, China, nearly a year after his prediction.

According to Ghebreyesus (2018) "No one is safe until everyone is safe," an epidemic at a time will quickly spread to other countries and eventually become a global pandemic. At the moment, efforts are made to produce a few numbers of vaccines or cure and researchers and health expert's advice on preventive efforts to halt the spread of the viral disease.

Various media houses, information ministries and departments, religious bodies, non-governmental organisations, philanthropists and many individuals in their varied ways are doing their best to spread information about the incidence, spread and precautionary measures to combat the virus. These measures include education on frequent washing of hands with soap under running water, wearing personal protective equipment like face masks when one is going out, frequently using alcohol-based hand sanitizers, maintaining social distance at public places and staying indoor when one has nothing to do outside.

Since such information is needed among the general population, they are equally important for vulnerable groups. However, rapid information on the Covid-19 pandemic disseminated has increased awareness of some existing social inequalities in access to information among vulnerable groups. The need for "quick-fix" solutions to the virus and its ravaging impacts seem to have resulted in less attention to most vulnerable groups especially persons with disabilities (Tripathi, R. et al. 2020).

It is believed that in the midst of pandemics, existing vulnerable groups are usually at a greater disadvantage due to their restricted access to information (Kumumwe, 2020). While the Covid-19 pandemic poses a threat to all parts of society, people with disabilities are disproportionately affected as a result of the Covid-19 response's attitudinal, environmental, and institutional hurdles (UN, 2020). Thus, persons with disabilities are more likely to be affected in

complex ways particularly as a result of their lack of access to information.

The Regional Risk Communication and Community Engagement (RCCE, 2020) argued that access to information is often a barrier for persons with disability who have specific communication needs. Kumumwe (2020) expressed fears that crucial disease warnings distributed by health authorities, phone firms, and broadcasters do not reach people with impairments, because of digital exclusion resulting from the lack of access and unaffordability of the requisite tools and equipment. This is exacerbated by the fact that broadcasters and telecommunications companies have failed to deliver information and services in accessible formats for people with impairments.

It is however a fact that effort to end the spread of the virus and its impact would be less successful if these vulnerable groups do not have access to information that others receive effortlessly. It should therefore be a major concern for all about the mode of disseminating information to individuals with disabilities in general and for those with hearing impairment in particular.

Nelson Mandela asserted that “If you talk to a man in a language he understands, that goes to his head, if you talk to him in his language that goes to his heart.” In support, it has been indicated that people communicate best in their 'mother tongue' in any type of crisis or trauma, so the need to make information available in sign language to the deaf community (Centre for Deaf Studies, University of the Witwatersrand, Johannesburg, 2020).

The lack of universal sign language leaves much to speculate about access to Covid-19 information among the deaf community. Barnett, McKee, Smith and Pearson (2011) contended that the deaf population have their health needs understudied and underserved because sign language is neither universal nor dependent on any one spoken language.

Castro (2020) reported that there is difficulty in accurate dissemination of information about the coronavirus, because there is no uniform signing vocabulary for Covid-19 illness, it poses a difficulty in deaf cultures. She recommended the need for the World Health Organization to establish a coronavirus and Covid-19 illness international signing convention among countries affected by the pandemic in order to prevent misinformation and possible risky behaviours among the deaf community and society in general.

According to Poku (2008), lack of accessible hearing impaired friendly information was identified as a probable cause of ignorance and inaccessible quality information on health issues. It is therefore crucial to pay attention to these vulnerable groups in the wake of this pandemic.

Kakusa and Matafwali (2015) found language barrier as a challenge in the dissemination of health information among the hearing impaired as a result of lack of vocabulary and insufficient materials tailored for the hearing impaired. It is

possible that persons with hearing impairments know about the Covid-19 pandemic due to certain restrictions put in place by governments of affected nations, they are obviously likely to have limited information due to language barriers (Kakusa & Matafwali, 2015).

In our quest to fight against the Covid-19 pandemic, it is important to consider ways in which information about the pandemic reach those who traditionally have limited access to public information. In Ghana, various emergency numbers have been given to the general public for emergency response when persons begin to experience symptoms of Covid-19. The deaf community is clearly left out in Ghana in almost all the emergency efforts to combat the Covid-19 pandemic. There is no accessible information to the Ghanaian deaf community and means they can communicate with the emergency response team when the need be.

Generalizability is limited due to the small sample size. As a result, several surveys were conducted at different times, which is a crucial concern for a study on the dynamically shifting pandemic experience.

We therefore seek to investigate the availability and accessibility of information about Covid-19 to the deaf community in Ghana.

#### *Problem Statement*

The Covid-19 pandemic is ravaging the entire world, and the cascading effect is dire. There is no single country in the world that has not had a share of the brunt. The world literally came to a halt because of Covid-19; measures are being put in place to restore societies. Developing countries especially Ghana had a heavy knock on all aspects of life resulting from the effects of the pandemic; including shutting down schools, businesses, airports and borders etc.

The World Health Organization rolled out several precautionary measures to contain the virus. But the marginalized group of persons living with disabilities are not fully catered for. The deaf community in Ghana are left to wonder on their own; since sensitization and advocacies do not address their concerns.

The government of Ghana has since 2019 engaged in sending out crucial information to citizens, but there is a wide disparity between the general population and the deaf in terms of information dissemination; not so much acceptable effort is directed at the deaf community. The Television adverts carry very important information but lack a universalized sign language for the hard-of-hearing. This has rendered them vulnerable, and if care is not taken, the country will record so many cases within the deaf community especially now that different variants are detected every single day.

Research has shown that there are large quantities of information regarding Covid-19; the gap however has to do with the deaf population. The study sort to assess the availability of acceptable universal sign language for the deaf

community in Ghana and whether they are abreast with trends regarding the Covid-19 pandemic in the country. Information regarding the virus will help the deaf community to guard against the pandemic, and also know how to seek health attention when the need arise.

#### *Purpose of the Study*

The purpose of this study is to find out the availability and accessibility of information about the Covid-19 pandemic among the deaf community in Ghana and to propose measures to counter the wrecking effects of the virus. Also to ascertain whether there are acceptable universal signing vocabularies for the Covid-19 among the deaf community in the country.

#### *Research Objectives*

The paper sort to;

1. Find out the availability of adequate universal signing Covid-19 pandemic vocabulary for the Deaf Community in Ghana
2. Ascertain whether Covid-19 pandemic information is accurately disseminated among the Deaf Community in Ghana
3. Assess the suitability of the mode of dissemination of Covid-19 information among the Ghanaian Deaf Community

## II. REVIEW OF RELATED LITERATURE

### *Dissemination of Pandemic Information to the Deaf Community (Ghanaian Context)*

"People with disabilities are among the world's most marginalized and stigmatized even under normal circumstances," said Buchanan, deputy disability rights director at Human Rights Watch. People with disabilities will be at high danger of illness and death as the pandemic advances unless governments take fast measures to include them in their response to Covid-19.

International statements (such as the Alma Ata Declaration of 1978) demand for universal access to primary health care for all members of society. Unfortunately, Deaf individuals are regularly refused complete and equal access to health care in many countries, resulting in a violation of not just their right to health but also their right to life.

When the first case of the Covid-19 pandemic was recorded in Ghana, government swiftly addressed the nation on ways to guard against and contain the spread of the virus. The Ghana National Association of the Deaf (GNAD) upon realizing that there were no provisions of sign language targeted at the deaf community called on the government and registered their displeasure. Subsequent broadcast included interpretation in sign language for the deaf community.

This confirms the level at which this group (deaf) are consistently marginalized and discriminated against regarding crucial education of the pandemic. Ghana government and public health institutes are now working with GNAD to

ensure that deaf people have access to accurate and timely information about the Covid-19 virus. Even with these, there is a glaring gap in the dissemination of crucial information on Covid-19 to deaf people in Ghana (Ruth et al., 2020).

The information about covid-19 that gets to the deaf community should be a subject of public interest but usually these marginalised groups are not given the needed attention in situations such as this. The first language of the deaf community is sign language and there is a common notion that the best way to communicate in times of crisis is to communicate in one's native language. It therefore presupposes that the deaf community may engage in some risky behaviour during this pandemic because of their lack of access to information.

This has been espoused by Yap, Chaudhry, Jha, Mani, and Mitra (2020) that the covid-19 pandemic has impacted on persons with disabilities in general and in particular the deaf communities due to their lack of knowledge about safety precautions including hand washing, social distance, facemask compliance, and lockdowns, which surges their exposure to and management of embodied danger and susceptibility.

Societies need to consciously provide services to satisfy the specialized communication and information needs of deaf persons. Televised campaigns and ads are rarely subtitled, captioned, and/or interpreted into Sign Language much in the same way as adverts in newspapers and magazines may enclose ambiguous messages that are not forthright enough for the deaf.

It appears public information about the covid-19 is targeted at the general population who can hear and read a spoken language and not the deaf people who have difficulty understanding a spoken language and may not read well because it is essentially their second language. This unwittingly exacerbates the risk behaviour of Deaf people, and in turn increases their vulnerability to pandemics.

The coronavirus pandemic, according to Yap, Chaudhry, Jha, Mani, and Mitra (2020), creates specific problems for individuals with disabilities and exacerbates existing disparities due to impediments to knowledge, resources, and care. There are a number of tools available to safeguard people with disabilities in disasters and promote information equity.

The United Nations Convention on the Rights of Persons with Disabilities, which has been adopted by 181 nations, provides special protection for individuals with disabilities during humanitarian crises (Article 11), as well as equitable access to information (Article 21). These are being tested in these times of health crisis to see the sufficiency of these international laws not only in their provisions but also in their implementation capacities.

Yap et al (2020) reported that during Covid-19 press briefings, none of the international organizations, including the WHO, have a Sign Language Interpreter present, and thus

recommended that national and international organizations reconsider ways to make press conferences accessible to a wide audience in general, and to hearing impaired communities in particular, by including a SLI.

Though it has been observed that Sign Language Interpreters are used in most of the government of Ghana press briefings on covid-19, the appropriateness and how the information becomes meaningful to the deaf community needs to be authenticated.

#### *Universal Sign Language for the Corona Virus Pandemic*

It should be noted that any effort to make information accessible to persons with disabilities in the midst of the pandemic is not a favour done them rather it bothers on human rights. Barnett, McKee, Smith and Pearson (2011) contended that the sign language used for the deaf population is inadequate; because sign language is neither worldwide nor based on a local spoken language, it leaves their health needs unstudied and unmet.

Castro, As, Amorim, and Ratcliffe (2020) stated that accurate pandemic information dissemination among deaf communities is a problem due to the lack of a universal signing vocabulary for the virus, and suggested that the World Health Organization create an international signing convention for the coronavirus and the Covid-19 disease.

#### *Suitability of the Mode of Dissemination of Information about a Pandemic among the Deaf Community*

Castro, As, Amorim and Ratcliffe (2020) highlighted that the public has to know how to recognize, report and contain the Covid-19 coronavirus if we are to put the current pandemic under control. Castro et al (2020) reported from their study that several signs depicting the coronavirus and covid-19 are used, many of which are not founded on scientific variants and may elicit dread of an animal's bite.

Because of the deaf community's varying levels of knowledge of the second language, even delivering written information is unreliable.

Castro et al. (2020) indicated that the deaf community perpetuates misinformation and fosters misguided actions as a result of a lack of information about the Covid-19, putting themselves and society at risk.

According to Amorim, Ramos, Junior, Afonso, and Castro (2020), there is the need to avoid possible linguistic impairments concerning significant threats such as the coronavirus, ensure that information is delivered to the entire society, especially vulnerable groups such as the deaf community.

Our society, however, is made up of many different groups of people, including linguistic minorities such as the deaf community (e.g. Sign Language) (Du, 2020), who rely on linguistically adapted/translated materials (e.g. press and online) to access preventive and protective information and/or

guidance (e.g. washing of hands, guard from coughing and human fluids).

The consequences of the deaf people's lack of access to coronavirus information in sign language may jeopardize not just their own health but also that of their community, which includes children, family, and friends (Castro et al., 2020).

### III. METHODS AND MATERIALS

This study aimed at exploring the access to covid-19 health information among the deaf community in Ghana. This study was an exploratory research with cross-sectional survey as its main design. The target population of the study was the persons with hearing impairment in Ghana. The accessible population was the persons with hearing impairment in the Tamale Metropolis.

Forty (40) samples were randomly selected for the study. The instrument for data collection was mainly questionnaire administered manually, face-to-face interviews, focus group discussions and through electronic medium (Google forms). A period of two weeks was used to obtain the data from the participants.

The data was analysed in SPSS and Pearson Moment Correlation was used to analyse the data. Reliability and validity was ensured through pilot studies carried out in the Upper West Region of Ghana since it adds to the effectiveness of the study conducted.

### IV. RESEARCH FINDINGS AND DISCUSSIONS

The following information was gathered when respondents were asked to state their gender.

From Table 1, it should be emphasized that female respondents form the majority by 52.5% while male are represented by 47.5%. This implies that more females living with disability are denied access to Covid-19 safety information than their male counterparts.

Table 1: Gender Representation of Respondent for the Study

Gender	Frequency	Percent
Male	19	47.5
Female	21	52.5
Total	40	100.0

Sources: Field data (2021)

#### *Educational Attainment of Respondents*

The responses to the question on respondents' educational levels are listed below.

Table 2 shows that the highest professional certification of all the respondents who took part in the study were Junior High School graduates with 100%. The research was targeted at a particular respondent population.

Table 2: Highest Educational Qualification of Respondents

Educational Status	Frequency	Percent
JHS	40	100.0
Total	40	100.0

Sources: Field data (2021)

### *Accuracy of information disseminated about Covid-19 pandemic among the deaf in Ghana*

Eighty-eight percent of participants who are deaf reported not having access to information about Covid-19. With regards to reading about Covid-19 in local newspaper, 95% of the

participants agreed to the statement. When asked about getting information about Covid-19 through electronic media, 2.5% of respondents agreed to the statement. However, participants equally do not fully have access to signed videos on Covid-19 (agreed [17.5%] Neutral [2.5%] Disagree [80%]).

Regarding information about Covid-19 mostly through sign language interpretation on television (agreed 40 [100%]) and there are community-based information centres to share information about Covid-19 in ways that participants understand (87.5%) of the respondents disagreed with the assertion than their peers who are hearing, (see table 3).

Table 3: Accuracy of information disseminated about Covid-19 pandemic among the deaf in Ghana

S/N	Statement	Agree, f (%)	Neutral f, (%)	Disagree, f, (%)	Total (%)
1	I have access to information about Covid-19(N = 40)	2 (5.0%)	3 (7.5%)	35 (87.5%)	40 (100%)
2	I read about Covid-19 in local newspaper (N = 40)	38 (95%)	2 (5%)	-	40 (100%)
3	I get information about Covid-19 through electronic media (N = 40)	1 (2.5%)	2 (5%)	37 (92.5%)	40 (100%)
4	I have access to signed videos on Covid-19 (N = 40)	7 (17.5%)	1 (2.5%)	32 (80%)	40 (100%)
5	I get information about Covid-19 mostly through sign language interpretation on television (N = 40)	40 (100%)	-	-	40 (100%)
6	There are community-based information centres to share information about Covid-19 in ways that I understand (N= 40)	3 (7.5%)	2 (5.0%)	35 (87.5%)	40 (100%)

Sources: Field data (2021)

The majority of the participants in this study do not have access to deaf-friendly information regarding Covid-19. Even though there are governments efforts ongoing to ensure regulation and compliance of procedures, as well as constant broadcasting by various news outlets emphasizing the importance of hand hygiene and other preventive measures as a precaution.

The respondents were asked to answer the following questions; to illicit qualitative information from them:

Do you think the the Covid-19 information disseminated to you is accurate?

*Respondent A:*

*To me it is accurate, so far as it helps me to keep myself from getting infected by the Covid-19 virus*

*Respondent D:*

*I am not able to tell since there is no internal sign words that are accepted by all. The ones I see on TV helps me a lot to wear my mask and sanitize my hands very well*

### *Knowledge of universal signing language vocabulary for the corona virus nationally and internationally*

Out of 40 respondents, the statement, if there is international sign language vocabulary on Covid-19, the response rate to questions on the Covid-19 knowledge questionnaire was 95% disagreement, Ghanaian sign language has adequate vocabulary for Covid-19 was 82.5% disagreement, I have been educated on sign language vocabulary for Covid-19 was 5.0%. The participants also responded to this statement: Local associations disseminate information about Covid-19 (Agree [40%] and Disagree [60%]) and efforts have been made to disseminate information about Covid-19 among deaf community in Ghana were (Agree 20 [50%] and Disagree 20 [50%]).

The deaf community in Ghana has been side-lined in the dissemination of information about Covid-19 with the highest correct answer disagreeing to the statement (85%) and considering the mode of transmission of information about Covid-19 disability friendly (Agree 1 [2.5%] and Disagree 39 [97.5%]) (see table 4).

Table 4: Knowledge of universal signing language vocabulary for the corona Virus nationally and internationally

S/N	Statement	Agree, f (%)	Neutral f, (%)	Disagree, f, (%)	Total (%)
1	There is international sign language vocabulary on covid-19 (N = 40)	2 (5%)	-	38 (95%)	40 (100%)
2	Ghanaian sign language has adequate vocabulary for Covid-19 (N = 40)	5 (12.5%)	2 (5.0%)	33 (82.5%)	40 (100%)
3	I have been educated on sign language vocabulary for Covid-19 (N = 40)	2 (5.0%)	-	38 (95%)	40 (100%)
4	Local associations disseminate information about Covid-19 to members (N = 40)	16 (40%)	-	24 (60%)	40 (100%)
5	Efforts have been made to disseminate information about Covid-19 among deaf community in Ghana (N = 40)	20 (50%)	-	20 (50%)	40 (100%)
6	The deaf community in Ghana has been side-lined in the dissemination of information about Covid-19 (N= 40)	3 (7.5%)	3 (7.5%)	34 (85%)	40 (100%)
7	I consider the mode of transmission of information about Covid-19 disability friendly (N= 40)	1 (2.5%)	-	39 (97.5%)	40 (100%)

Sources: Field data (2021)

Due to the challenges of lack of knowledge of universal signing language vocabulary, deaf people were not able to fully recognize Covid-19 signs and take preventative measures.

The outbreak of Covid-19 coincided with an avalanche of health-related statistics from government-sponsored institutions, which are generally viewed as trustworthy and dependable sources of data.

Fortunately for the deaf populace, information on these platforms was typically accessible from reliable agents or firms who had consistently shown concern for the deaf community's interests and had developed a rapport with them (Brogan & Smith, 2009). Furthermore, an ideal trust agent is someone who the community can relate with, encouraging source trust and willingness to change behavior (Kramer et al., 2001).

In response to the pandemic and the desire for accessible information, deaf and sign-fluent medical practitioners began distributing information online and via social media on Covid-

19. A Covid-19 Resource List was created by the Association of Medical Professionals with Hearing Losses (2020), which includes additional deaf-run organizations that give Covid-19 information.

This was especially critical when translators for Covid-19-related public service messages were in poor supply, prompting the filing of litigation to bring some institutions into conformity (Campbell 2020; Via, Rada, 2020).

#### *Knowledge of the signing vocabulary used in the Ghanaian deaf communities*

Majority of the respondents in the study (80%) disagreed with the assertion that; Information about Covid-19 is readily available in accessible formats among the deaf community. Respondents who are deaf mentioned lack of assistive technology prevent them from accessing information in accessible formats (72.5%). Specifically, respondents who are deaf have no means of accessing information about Covid-19 (55%) (See table 5).

Table 5: Knowledge of the signing vocabulary used in the Ghanaian deaf communities

S/N	Statement	Agree, f (%)	Neutral f, (%)	Disagree, f, (%)	Total (%)
1	Information about Covid-19 is readily available in accessible formats (N = 40)	8 (20%)	8 (20%)	32 (80%)	40 (100%)
2	Lack of assistive technology prevents me from accessing information in accessible formats (N = 40)	29 (72.5%)	4 (10%)	7 (17.5%)	40 (100%)
3	I have no means of accessing information about Covid-19 (N = 40)	22 (55%)	13 (32.5%)	5 (12.5%)	40 (100%)

Sources: Field data (2021)

The internet presents a vast and diverse supply of health information, posing the difficulty of determining whether data is correct. The deaf population lacks the skill to verify the authenticity of information available online (Fajardo et al., 2004; McEwen & Anton-Culver, 1988).

This is crucial because, as previously documented and confirmed by this study, deaf people are more likely to acquire information about health from their colleagues, using online interfaces and web-based sources, rather than from their relatives and health-care providers (McKee, Schlehofer et al., 2011; Valentine & Skelton, 2009).

Officials from the Department of Public Health should regularly include ASL access in public service announcements and informational webpages; interacting with trust representatives on social media as doyens who propel access to reliable data should supplement this.

Deaf participants in this study were more likely than hearing participants to have risk factors for poor health literacy, as prior research has shown (McKee, Paasche-Orlow et al., 2015). Deaf persons were not different from hearing participants in terms of basic knowledge about the virus, but they were different in terms of health care navigation strategies, with deaf participants being less likely to stay at home rather than seek medical attention if they exhibited symptoms of the virus.

This is consistent with previous study outcomes showing persons the deaf who are nearly twice as likely to seek treatment in an emergency fashion (McKee, Winters et al., 2015). This could be owing to emergency units often having procedures in place to access translators of sign language, as well as the fact that deaf persons may find it challenging to access primary care or urgent care in order to receive equitable health services.

Furthermore, persons-of-color, whether hearing or deaf, were less likely to intend on staying at home rather than getting medical help right away if they felt they had Covid-19 symptoms. These people have a higher rate of Covid-19 issues than the universal populace, with higher degrees of cases, hospitalizations, and fatalities (Abel & McQueen, 2020; Abuelgasim et al., 2020; Dowling & Kelly, 2020; Pareek et al., 2020; Yancy, 2020).

Qualitative responses are thematically presented below with respect to Knowledge of the signing vocabulary used in the Ghanaian deaf communities;

*Respondent C:*

*We the deaf do not have any uniform way of signing about the Covid-19 virus. We try to explain in our own way for colleagues to understand. They have not taught us the signs of some words of the virus.*

*Respondent D:*

*In Ghana here we don't know any signing vocabulary for Covid-19, we just try to watch TV and also follow what people do everyday*

*Suitability of the mode of dissemination of information about Covid-19 among the deaf community in Ghana*

When asked about additional considerations for dissemination of information among the deaf during the Covid-19 outbreak (92.5%), respondents agreed to the statement. With suitable information to unlocking barriers to accessing healthcare (87.5%) disagreed to the statement.

In terms of suitable information to overcome the barriers to practice and implement basic hygiene measures such as hand washing (97.5%) agreed to the statement. For a special training provided and rapid upskill of the disability care workforce regarding infection control(90%) disagreed to the statement, (see table 6).

Table 6: Suitability of the mode of dissemination of information about Covid-19 among the deaf community in Ghana

S/N	Statement	Agree, f (%)	Neutra l f, (%)	Disagree, f, (%)	Total (%)
1	There are additional considerations for dissemination of information among the deaf during the Covid-19 outbreak (N = 40)	37 (92.5%)	2 (5%)	1 (2.5%)	40 (100%)
2	There are suitable information to unlocking barriers to accessing healthcare (N = 40)	3 (7.5%)	2 (5%)	35 (87.5%)	40 (100%)
3	Was there suitable information to overcome the barriers to practice and implement basic hygiene measures such as hand washing (N = 40)	39 (97.5%)	-	1 (2.5%)	40 (100%)
4	Was a special training provided and rapid upskill of the disability care workforce regarding infection control (N = 40)	3 (7.5%)	1 (2.5%)	36 (90%)	40 (100%)

Sources: Field data (2021)

The Republic of Ghana's Constitution (Republic of Ghana 1992) provides that everyone has the right to equal educational opportunities and facilities, and that Persons with Disabilities (PWD) have their rights protected and promoted against all types of discrimination, marginalization, and abuse (Singal et al. 2015).

The deaf community must not face any discrimination and must have equal access to all public spaces, according to the Constitution. However, the outcomes of this study show that, in terms of inclusivity, this concept of access does not solve the linguistic and communication challenges that deaf people face.

The practical efforts taken in Ghana to make critical information about Covid-19 available and accessible to deaf people are now in conformity with the WFD's seven-point guidance measures for international deaf organizations, governments, and public health institutions. These findings highlight the importance of providing deaf people, including children, teens, and adults, with proper access to critical Covid-19 information in the language and format of their choice.

Respondents were asked to generally comment on the suitability of the mode of dissemination of information about Covid-19 among the deaf community in Ghana. These are the qualitative responses;

*Respondent A:*

*I think we are limited to just a few information about the virus. Nobody really cares as to whether we get adequate information to guard against the virus or not. The mode of given out information to us is not the best since only a privilege few are preview to some information*

*Respondent B:*

*We only see the media talking about it on TV and Radio; they don't even sign for us to understand. We depend on close relatives to explain to us what is happening regarding the virus. We are left out and something has to be done about it.*

*Study Limitations*

The study suffered budgetary and time constraints; despite these setbacks, our research sheds light on how the deaf approached the pandemic.

## V. CONCLUSIONS AND POLICY RECOMMENDATIONS

The selected population of Ghana's deaf community has a satisfactory understanding of Covid-19, which is consistent with previous studies. The challenge however is the availability of information and modes through which the relevant available data is disseminated to the deaf populace.

The vast majority of responders said they seek Covid-19 data always, but it is not updated on a regular basis. News websites, traditional media and other primary sources such as social networking sites, radio and television broadcasts are the means through which covid-19 data is disseminated.

As the threat of Covid-19 grows, more efforts should be taken to enhance deaf people's perspectives of the disease by educational campaigns and information dissemination through various ways. These data suggest that during Covid-19, basic

public health information should be made available by relevant bodies to the deaf people.

Crucial information such as risk alleviation and recognizing Covid-19 symptoms should be taught to the deaf inhabitants to bridge the information gap between the general population and the deaf community in Ghana.

More information on Covid-19 management, as well as aid with fair health care navigation techniques are needed for the deaf community. The health-care system must assist deaf persons in obtaining primary care.

Public health professionals should make public service broadcasts reachable, and they should consider contacting deaf community agents who can use their social capacity channels to promote health information in ASL online.

## REFERENCES

- [1] Abel, T., and McQueen, D. (2020). The COVID-19 pandemic calls for spatial distancing and social closeness: not for social distancing!. *International journal of public health*, 65(3), 231. <https://doi.org/10.1007/s00038-020-01366-7>
- [2] Abuelgasim, E., Saw, L. J., Shirke, M., Zeinah, M., and Harky, A. (2020). COVID-19: Unique public health issues facing Black, Asian and minority ethnic communities. *CurrProblCardiol*. 2020 Aug; 45(8):100621. doi: 10.1016/j.cpcardiol.100621. PMID: 32448759; PMCID: PMC7207142.
- [3] Amorim, G., Ramos, A. S. L., de Castro Junior, G., de Souza Afonso, L., and Castro, H. C. (2020). Coronavirus, Deafness and the Use of Different Signs of the Area in Health during a Period of Pandemic Time: Is That the Best Option to Do? *Creative Education*, 11, 573-580. <https://doi.org/10.4236/ce.2020.114042>
- [4] Barnett, S., McKee, M., Smith, S.R., and Pearson, T. A. (2011). Deaf sign language users, health inequities, and public health: opportunity for social justice. *Prev Chronic Dis*: A45. PMID: 21324259; PMCID: PMC3073438.
- [5] Brogan, C., and Smith, J. (2009). Trust agents: Using the web to build influence, improve reputation, and earn trust. John Wiley & Sons.
- [6] Campbell, J. (2020). Judge orders Andrew Cuomo to add sign-language interpreter to coronavirus briefings. *Democrat and Chronicle*: <https://www.democratandchronicle.com/story/news/politics/albany/2020/05/11/judge-orders-andrew-cuomo-add-asl-interpreter-covid-19-briefings/3112892001/>
- [7] Castro, H. C., Lins, R. A. S., Amorim, G., and Ratcliffe, N. A. (2020). COVID-19: don't forget deaf people. *Nature*. 579(7799):343. doi: 10.1038/d41586-020-00782-2. PMID: 32184486.
- [8] David, S. (1998). 'Finding the Perfect Balance', *English in Education*, 32:1, 38- 44, DOI: 10.1111/j.1754-8845.1998.tb00141.
- [9] De Castro-Hamoy, L., and Leonardo, D. C. (2020). Age matters but it should not be used to discriminate against the elderly in allocating scarce resources in the context of COVID-19. *Asian Bioethics Review* 12 (3):331-340. 10.1007/s41649-020-00130-6.
- [10] Dowling, M. K., and Kelly, R. L. (2020). Policy solutions for reversing the color-blind public health response to Covid-19 in the US. *Journal of the American Medical Association*, 324, 229-230 Advance online publication. 10.1001/jama.2020.10531 PMID:32496524
- [11] Fajardo, I., Abascal, J., and Cañas, J. J. (2004). The role of working memory and long term memory in deaf users' hypertext navigation: Review of guidelines for web accessibility. In Stary C. & Stephanidis C. (Eds.), *ERCIM workshop on user interfaces for all* (pp. 320-325). Springer. 10.1007/978-3-540-30111-0\_27
- [12] Kramer, R. M., Hanna, B. A., Su, S., and Wei, J. (2001). Collective identity, collective trust, and social capital: Linking group identification and group cooperation. In Turner M.

- E. (Ed.), *Groups at work: Theory and research* (pp. 173–196). Lawrence Erlbaum Associates Publishers.
- [13] McEwen, E., and Anton-Culver, H. (1988). The medical communication of deaf patients. *The Journal of Family Practice*, 26(3), 289–291 PMID:3346631
- [14] McKee, M. M., Paasche-Orlow, M. K., Winters, P. C., Fiscella, K., Zazove, P., Sen, A., and Pearson, T. (2015). Assessing health literacy in deaf American Sign Language users. *Journal of Health Communication*, 20(Suppl. 2), 92–100. 10.1080/10810730.2015.1066468
- [15] McKee, M., Schlehofer, D., Cuculick, J., Starr, M., Smith, S., and Chin, N. P. (2011). Perceptions of cardiovascular health in an underserved community of deaf adults using American Sign Language. *Disability and Health Journal*, 4(3), 192–197. 10.1016/j.dhjo.2011.04.001 PMID: 21723526
- [16] Pareek, M., Bangash, M. N., Pareek, N., Pan, D., Sze, S., Minhas, J. S., Hanif, W., and Khunti, K. (2020). Ethnicity and COVID-19: An urgent public health research priority. *Lancet*, 395(10234), 1421–1422. 10.1016/S0140-6736(20)30922-3 PMID:32330427
- [17] Poku, K. A. (2008). Sexual and reproductive health status and HIV/AIDS and STI-related knowledge, attitude, and behaviours among persons with disabilities in Ghana. Unpublished report, Ghana AIDS Commission.
- [18] Singal, N., Mahama, E., Iddrisu, K., Casely-Hayford, L. and Lundebye, H. (2015). The impact of education in shaping lives: Reflections of young people with disabilities in Ghana. *International Journal of Inclusive Education*. 19. 1-18. 10.1080/13603116.2015.1018343.
- [19] The Declaration of Alma Ata (1978). International Conference on Primary Health Care: Declaration of Alma-Ata. *WHO Chron.* 1978 Nov; 32(11):428-30. PMID: 11643481.
- [20] Tripathi, R., Alqahtani Saad, S., Albarraq, A. A., Meraya, A. M., Tripathi, P., Banji, D., Alshahrani, S., Ahsan, W., Alnakhli, F. M. (2020). Awareness and Preparedness of COVID-19 Outbreak among Healthcare Workers and other Residents of South-West Saudi Arabia: A Cross-Sectional Survey. *Frontiers in Public Health*. Vol; 8 URL=<https://www.frontiersin.org/article/10.3389/fpubh.2020.00482> DOI=10.3389/fpubh.2020.00482
- [21] Valentine, G., and Skelton, T. (2009). An umbilical cord to the world. *Information Communication and Society*, 12(1), 44–65. 10.1080/13691180802158573
- [22] Via, Y., and Rada, N. (2020). Judge orders White House to provide sign language interpreters at Covid briefings. *NBC News*. <https://www.nbcnews.com/politics/donald-trump/judge-orders-white-house-provide-sign-language-interpret-covid-briefings-n1240954>
- [23] World Health Assembly , 71. (2018). Address by Dr Tedros Adhanom Ghebreyesus, Director- General. World Health Organization. <https://apps.who.int/iris/handle/10665/276267>
- [24] Yancy, C. W. (2020). COVID-19 and African Americans. *JAMA*. 2020;323(19):1891–1892. doi:10.1001/jama.2020.6548
- [25] Yap, J., Chaudhry, V., Jha, C.K., Mani, S., and Mitra, S. (2020). Are responses to the pandemic inclusive? A rapid virtual audit of COVID-19 press briefings in LMICs. *World Dev.* 2020 Dec; 136:105122. doi: 10.1016/j.worlddev.2020.105122. PMID: 32834393; PMCID: PMC7388791.