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Effectiveness of Communication and Compliance with WHO and Ministry of Health COVID-19 Guidelines in Tanzanian Healthcare Facilities

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Abstract

Background: COVID-19 is caused by SARS-CoV-2, which emerged in China in December 2019 and spread rapidly worldwide. In one year, more than 79.2 million people were infected and more than 1.7 million died.

Method: A qualitative exploration survey of healthcare workers was conducted from August 24 to October 3, 2022, in the Dar es Salaam, Arusha, Dodoma, and Mwanza regions. About 96 healthcare workers from 24 health facilities participated in the study. Individual and key informant interviews were recorded using the Kobo Toolbox, and the data were analyzed using thematic analysis.

Results: Most participants said that healthcare facilities followed guidelines provided by the Ministry of Health of Tanzania which were not fully complied with the guidelines provided by the World Health Organization. In communication channels, almost all the healthcare workers said that the instructions came from the higher level authorities, especially the ministry was emphasizing orders of the government and the leaders at the districts level and regional level implemented orders given by the government even when they appeared to contradict the health welfare of the public.

Conclusion: The study investigated poor compliance with WHO and Tanzanian Ministry of Health guidelines and ineffective communication, mainly affected by political or governmental orders. Therefore, Tanzania as a country should strengthen its political commitment to dealing with pandemic cases in the future.

Keywords: Communication Effectiveness, Compliance, Guidelines, Healthcare Facilities, COVID-19, Tanzania.

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Introduction

Coronavirus Disease 2019 (COVID-19) is caused by SARS-CoV-2, which emerged in China in December 2019 and spread rapidly worldwide.[1,2] In one year, more than 79.2 million people were infected and more than 1.7 million died.[3] Around the world, doctors and other healthcare workers (HCWs) are on the front lines of the fight against the COVID-19 pandemic despite being at high risk of contracting COVID-19.[4] Healthcare workers worked long and hard during this pandemic, and many suffer from fatigue due to excessive work and constant stress.[5] In response to this pandemic, the World Health Organization (WHO) issued infection prevention and control (IPC) guidelines in March 2020 to prevent the transmission of SARS-CoV-2 during healthcare.[6] WHO recommended that each healthcare facility should have a special trained team or IPC team to protect patients and healthcare workers.[7,8]

On March 16, 2020, the first case of COVID-19 was reported from Mount Meru Hospital in Arusha, a public hospital in northern Tanzania. The Tanzanian government ordered the closure of all schools and universities the following day and banned all public gatherings except churches and mosques.[9] Tanzania's response to COVID-19 was controversial. In the early months of this epidemic, between February and April 2020, the Government of Tanzania quickly implemented various measures recommended by WHO, and by February 27, 2021, about 15 guidelines had been issued by the Ministry of Health of Tanzania.[10,11] On the other hand, Tanzania stopped publishing data on COVID-19 as of April 2020. Some 509 positive cases, 21 deaths, and 183 recoveries were reported, a number was not changed since the investigation began.[10]

As the government imposed strict regulations on information about COVID-19, Tanzanians used social media and public meetings to publish information about the sudden increase in pneumonia patients in the country. Local media and government officials were aware of this development. Tanzanian newspapers publish information on how to avoid contracting the disease.[11] The Ministry of Health issued a notice on the treatment of pneumonia in mid-January 2021. One of Tanzania's parliamentarians testified before Parliament about the large number of pneumonia patients and deaths resulting from respiratory problems.[12] In addition to the measures outlined in the national guidelines to protect against COVID-19, the Ministry of Health of Tanzania also encouraged the use of natural medicines to prevent the symptoms of COVID-19 since the official treatment of the disease was unknown.[13] The people received this advice and it was quickly used, as the use of local herbs to treat various diseases is widespread in Tanzania.

In Tanzania, the region of Dar-es-salaam leads in the number of cases, followed by the regions of Mwanza, Arusha, and Dodoma.[14] This study aims to explore the effectiveness of communication and compliance with COVID-19 guidelines set forth by the WHO and the Ministry of Health in Tanzanian healthcare facilities. The findings of this study highlight the urgent need for strengthened political commitment and improved communication strategies to ensure better compliance with health guidelines, ultimately enhancing the effectiveness of pandemic responses in Tanzania and beyond.

Method

Study Area

This study was conducted in the Dar es Salaam, Arusha, Dodoma, and Mwanza regions; the districts of Ilala, Arusha, Nyamangana, and Dodoma were selected respectively due to their potential and high incidence of COVID-19 infection.[14]

Study Design and Population

A qualitative exploration of communication effectiveness and adherence to the COVID-19 guidelines established by WHO and the Ministry of Health in Tanzanian healthcare facilities was conducted from August 24 to October 3, 2022. It involved diverse healthcare professionals, including nurses, clinicians (physicians), pharmaceutical staff, laboratory personnel, administrative personnel, and additional healthcare support staff from selected public hospitals, health centers, and dispensaries. The study focused exclusively on government-owned healthcare facilities, omitting private institutions. This decision was made to ensure a concentrated evaluation of standardized practices and protocols characteristic of government-operated healthcare settings and streamline the analysis of communication and adherence to COVID-19 guidelines like personal protective equipment (PPE) uses and supplies typically managed by the government. Moreover, to ensure the reliability of the qualitative data, student healthcare practitioners on short-term placements were excluded, allowing the study to focus on established, long-term practices for valid and robust findings.

Sample Size and Sampling Procedure

The qualitative sample size for this study included 96 participants drawn from 24 healthcare facilities (HCFs), determined based on the principle of saturation. About 48 key informants, including healthcare workers

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(HCWs) and administrative leaders involved in the COVID-19 response team during the outbreak, were selected purposefully for in-depth interviews. Additionally, individual interviews were conducted with 48 randomly selected participants who were not directly engaged in the COVID-19 response team to gather diverse perspectives on the effects experienced by individuals outside the frontline team. The random selection was performed using a stratified sampling method to ensure representation across different demographics within the study population.

Data Collection and Analysis

Data were analysed through thematic analysis utilising semi-structured interview guides to extract insights from respondents via the Kobo Toolbox. The researcher, proficient in both Kiswahili and English, conducted the data collection personally to effectively capture the nuances of communication. The interviews comprised a series of meticulously designed questions, such as: "How did you typically receive information about COVID-19 protocols and guidelines in your facility?" and "What do you think about the effectiveness of the communication from the Ministry of Health regarding COVID-19?" Additionally, the researcher asked, "In your observation, how well do healthcare facilities comply with the WHO and Ministry of Health's guidelines?" and "How has the inconsistency in guidelines affected your work and the well-being of healthcare workers?". This detailed process entailed repeatedly listening to recorded interviews, transcribing them in Kiswahili, and translating them accurately into English. The interviewer underwent training to refine qualitative interviewing techniques and emphasized the importance of avoiding leading questions to capture authentic responses.

Results

Socio-demographic Characteristics of Participants

The study involved 96 participants, with 56 (58.3%) females and 40 (41.7%) males. Most are young to middle-aged: 25 (26.0%) are 20-29 years old, and 32 (33.3%) are 30-39. The largest group was nurses at 34 (35.4%), followed by 24 (25.0%) administrative staff and 22 (22.9%) clinicians. Regarding education, 41 (42.7%) had diplomas, and 36 (37.5%) held bachelor's degrees. Notably, 50% were part of COVID-19 teams, highlighting their critical roles during the pandemic. Experience varies, with 32 (33.3%) having 6-10 years of service, as detailed in the Table.

Table: Socio-demographic characteristics of participants (N=96)

Variables	Frequency (n)	Percentage (%)
Gender		
Male	40	41.7
Female	56	58.3
Age in years		
20 – 29	25	26.0
30 – 39	32	33.3
40 – 49	16	16.7
50 and above	23	24.0
Field profession		
Clinician (doctor)	22	22.9
Nurse	34	35.4
Pharmaceutical personnel	9	9.4
Laboratory personnel	7	7.3
Administrative staff	24	25.0
Highest level of education		
Certificate	13	13.5
Diploma	41	42.7
Bachelor degree	36	37.5
Master degree	6	6.3
Dedicated in the COVID-19 team		
Yes	48	50.0
No	48	50.0
Service experience in years		
1 – 5	22	22.9
6 – 10	32	33.3

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11 – 15	20	20.8
16 – 20	14	14.6
Above 20	8	8.3

Themes and Sub-Themes Emerged

Two primary themes emerged regarding communication and adherence to the COVID-19 guidelines issued by the World Health Organization (WHO) and the Ministry of Health (MoH). Each theme comprises five sub-themes, as illustrated in the Figure.

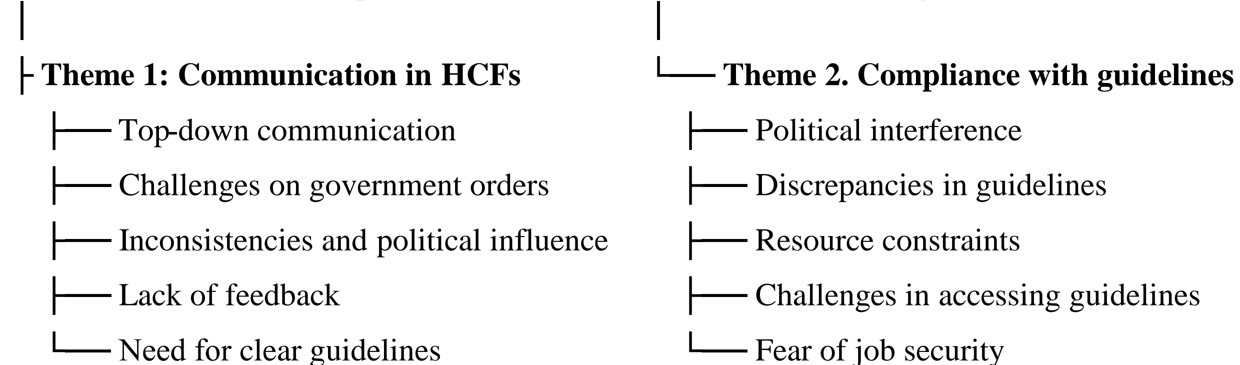

Figure: Themes and sub-themes on communication and adherence to COVID-19 guidelines

Communication in Healthcare Facilities in the Fight against COVID-19

Five sub-themes emerged concerning communication in healthcare facilities in the fight against COVID-19.

Top-Down Communication from Higher Authorities to HCFs

A recurrent sub-theme across both Individual Interviews (IIs) and Key Informant Interviews (KIIs) is the top-down nature of communication. Healthcare workers repeatedly highlighted those directives primarily came from higher authorities without adequate input from healthcare facilities.

- II Insight: *"The orders were coming from the top to the lower levels in our facility."* (II, Health Center D).
- KII Insight: *"The government gave us more instructions, although we do not know if they were listening to professional advice from the ministry."* (KII, Hospital F).

Challenges in Implementing Government Orders

Due to logistical and resource constraints, healthcare workers faced significant challenges in implementing government directives. This was particularly evident in the isolation of COVID-19 patients and emergency response capabilities.

- II Insight: *"We decided to isolate COVID-19 patients in a separate area, but later, we were given instructions to have only special areas where the patients of COVID-19 will be placed in the region despite lacking ambulances for effective responses."* (II, Hospital U).
- II Insight: *"Sometimes you can be told to wear a mask, then people are told not to wear a mask and told there is no COVID-19."* (II, Hospital X).

Inconsistencies and Political Influence

Participants noted inconsistencies in the directives received, sometimes influenced by political leaders rather than based on professional medical advice. This led to confusion and potentially hindered effective COVID-19 response.

- II Insight: *"We were being given more orders from higher-level authorities, but I think the best way was to prepare guidelines that will be used to guide every facility in the country rather than political orders"* (II, Dispensary G).
- KII Insight: *"Sometimes the government leaders themselves give instructions in media"* (KII, Hospital M).

Lack of Feedback from Higher Authorities to HCFs

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There was a significant lack of feedback from higher authorities to lower-level healthcare workers. This created a communication gap where facilities' challenges and recommendations were not adequately addressed or acknowledged.

- II Insight: *"We were also not given feedback on what we have reported"* (II, Health Center N).
- II Insight: *"There was no chance of discussions to a large extent"* (II, Health Center J).

Need for Clear Guidelines

Healthcare workers expressed the need for clear, consistent, and professionally developed guidelines to navigate the complexities of the pandemic rather than ad-hoc orders.

- KII Insight: *"The best way was to prepare guidelines that will be used to guide every facility in the country rather than political orders"* (KII, Health Center D).

Identifying these themes clearly shows that improving communication channels, ensuring consistent and professional directives, and establishing a feedback mechanism are critical steps for handling future health crises more effectively.

Healthcare Facilities' Compliance with the Guidelines Issued by the World Health Organization and the Ministry of Health

Five sub-themes were generated concerning Tanzanian healthcare workers' experience in compliance with COVID-19 guidelines.

Political Interference

Politics plays a significant role in implementing and adhering to healthcare guidelines. Participants frequently mentioned that political agendas and pressures often overshadowed the scientific and practical recommendations from WHO. This interference created inconsistencies and challenges within the healthcare system, as decisions were sometimes made based on political motives rather than public health best practices.

- II Insight: *"Politics often interfered with the entire health system"* (II, Hospital R).
- II Insight: *"Sometimes the Ministry started giving direction that was not in line with the direction of the WHO according to what the government or politicians wanted"* (II, Hospital F).
- KII Insight: *"Later politics became very big on this issue even though the government believed it was the right way to save people"* (KII, Health Center I).
- KII Insight: *"There was much political pressure, so people waited for the government to tell them what to do"* (KII, Dispensary K).

Discrepancies Between the Ministry of Health and WHO Guidelines

There were notable differences between the guidelines provided by the Ministry of Health and those recommended by WHO. Participants highlighted that these discrepancies led to confusion and inconsistent practices across healthcare facilities. While the Ministry of Health attempted to address local conditions, this sometimes meant deviating from WHO guidelines, which created challenges in ensuring standard care.

- II Insight: *"Our guidelines were not 100% compatible with WHO's"* (II, Health Center N).
- II Insight: *"Most of the time, the government was in a different direction from what was emphasized by WHO"* (II, Hospital F).
- KII Insight: *"We were directed by the Ministry of Health in the right direction to deal with COVID-19, although I cannot say it was really perfect because we did not keep up with the speed of WHO"* (KII, Hospital M).

Resource Constraints

Resource limitations significantly impacted the ability to fully comply with WHO guidelines. Due to budget constraints, healthcare facilities had to adapt using locally available resources and alternative methods. These adaptations were sometimes necessary but deviated from international standards, potentially compromising the quality of care.

- II Insight: *"Instructions can be given without having PPEs to protect people, so you can't say that the guidelines were fully followed if the guidelines direct you to wear a mask but it is not available"* (II, Health center T).
- KII Insight: *"The WHO guidelines needed a big budget and there was none, so the government looked for its own way to fight"* (KII, Hospital W).

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- KII Insight: *"Using three masks for working hours for each health worker could be difficult thus why we decided to use fabric masks that people can wash and use them again"* (KII, Health Center O).

Challenges in Accessing Guidelines
Healthcare workers faced difficulties in accessing and implementing WHO guidelines. The reliance on the Ministry of Health to disseminate these guidelines meant that, in many cases, healthcare workers were following orders rather than clear, written protocols. This lack of direct access to WHO guidelines resulted in inconsistent application across facilities.

- II Insight: *"It became very difficult for everyone to find the WHO guidelines as an individual"* (II, Hospital R).
- II Insight: *"We were often given instructions, not guidelines"* (II, Dispensary K).
- KII Insight: *"Many times, they gave instructions by announcing in the media, not guidelines prepared and well written"* (KII, Dispensary C).

Fear of Job Security
The fear of losing their jobs forced healthcare workers to comply with government directives even when these directives were not in alignment with WHO guidelines. This created a culture of compliance based on job security rather than adherence to international health standards, which could undermine the effectiveness of healthcare responses.

- II Insight: *"People waited for the government to tell them what to do because if you do your job opposite to the government direction you could be fired"* (II, Hospital R).
- KII Insight: *"Healthcare workers worried about going against the government for job security"* (KII, Health Center O).

Discussion
Concerning compliance of healthcare facilities with the guidelines issued by the World Health Organization and the Tanzanian Ministry of Health, healthcare workers stated that their healthcare facilities did not fully follow both guidelines. They mentioned that the Ministry of Health's orders sometimes had political influence rather than being based on medical standards. Poverty and local circumstances were suggested as reasons for not fully adhering to WHO guidelines, leading to practices such as making fabric masks and using unproven alternative medicines for COVID-19 treatment.

Emerging diseases know no national borders, and the COVID-19 pandemic revealed how dangerous international cooperation can be. The decision of the United States to withdraw from the WHO, mistrust among countries regarding data collection and reporting methods, and competition for equipment and medical response measures are just a few examples that have threatened the fight against COVID-19.[15,16] The second approach highlighted the need for countries to prepare plans to classify coordinated methods to deal with the pandemic, from providing data and disease information to ensuring equal distribution of resources and personnel.[16]
Considering the pandemic as an ongoing process, regularly updated data should be collected and assimilated from global health agencies like the World Health Organization, Centers for Disease Control and Prevention, and regional health ministries. Collaboration with the media to provide unbiased information will be helpful. Social distancing makes field visits difficult, so online surveys or telephonic communication might yield valuable information.[17]

Tanzania's initial COVID-19 response was swift and aligned with WHO recommendations. By April 2020, the government had implemented 15 guidelines, closed schools and universities, and limited public gatherings.[10,11] However, after a short time, the Tanzanian government underestimated the seriousness and severity of the disease. By April 2020, the country stopped publishing COVID-19 data.[10]

In particular, the government never closed churches and mosques and allowed religious services to continue as usual, and citizens were strongly encouraged to continue their income-generating activities.[18] These instructions affected healthcare practices and compliance with the WHO and Tanzanian Ministry of Health guidelines. Also, Tanzania promoted uncontrolled religious practices and the use of herbal medicines, which can be blamed for contributing to the spread of the disease outbreak caused by unscientific communications.[18,19] However, it was not quantified due to a lack of transparency on COVID-19 data and limited research, which was caused mainly by the political situation in Tanzania by the late present.[19,20] Therefore, Tanzania as a country should strengthen political commitment in dealing with pandemic cases in the future.

Following a question about how the communication system was conducted between the healthcare facility

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and higher-level authorities, the health workers stated that instructions came from higher-level authorities, such as the Ministry of Health, and that the government's orders were prioritized over public health concerns. Communication within healthcare facilities decreased as a result. The situation contrasts with that of Vietnam where the transparency of updated information and clear communication messages on COVID-19 through official and social media were essential contributors to changing community behaviors towards wearing masks, hand washing, and social distancing.[21, 22] An appropriate combination of the government's command, control, incentives, and communication on both sides was key to ensuring the public's compliance with the government agenda, and a stronger emphasis was placed on the central management and leadership by the MOH and the government.[23]

In Tanzania, political leaders heard the most about providing health education in the media instead of utilizing healthcare professionals to build trust among citizens. Although the best practice could be providing more exposure and airtime for medical professionals, scientists, and public health personnel to provide authentic, useful, and transparent information to the public.[24] Direct and effective communication between scientists and the public about global issues is important to reduce fear and prevent misconceptions. Although the role of scientific journals and institutions is critical to the dissemination of evidence-based science, scientists and medical professionals are in a unique position to enable people to access the truth through interviews, op-eds, podcasts, blogs, and social media.[25- 27] During disasters, social media platforms can sponsor the posts of health officials to ensure that reliable sources and accurate information guide exposure and understanding.[24] Therefore, Tanzania should utilize healthcare professionals in addressing the health crisis for accurate scientific communication for the public to get scientific measures about the problem.

Implications of the findings of this study
The implications of this study underscore the critical necessity for enhanced policy alignment between the Tanzanian Ministry of Health and the World Health Organization (WHO) to navigate future health crises effectively. The country's response frameworks can be significantly bolstered by reinforcing adherence to WHO guidelines. Furthermore, the findings reveal the urgent need for more effective communication channels among healthcare authorities, healthcare workers, and the public, advocating for the development of clear, consistent, and structured communication strategies vital for pandemic management. Additionally, the study emphasizes the importance of transparent data reporting and robust surveillance systems; improving data collection and sharing practices is essential for facilitating timely decision-making during health emergencies.

Strengths and Limitations of the Study
The study highlights several strengths, especially in its use of qualitative methods, which offer valuable insights into the experiences and perceptions of healthcare workers regarding communication and adherence to WHO and Ministry of Health guidelines during the COVID-19 pandemic. By involving participants from various regions and health facilities, as well as different age groups and levels of work experience, the research provides a well-rounded perspective on the challenges faced in effective communication and compliance with guidelines.

The study presents certain limitations that must be acknowledged. Its qualitative nature may introduce bias, as participants could interpret events differently, resulting in variability in the data collected. Additionally, the timeframe in which the data was gathered is specific, meaning that the perspectives of healthcare workers may evolve in response to the ongoing changes in the pandemic situation. Consequently, it may impact the long-term applicability of the findings.

Conclusion
The health workers in Tanzania reported unsatisfactory adherence to WHO and Tanzania Ministry of Health guidelines due to political influence and poverty. Communication from higher authorities emphasized government orders over health welfare. Tanzania should prioritize scientific communication and strengthen its political commitment to address future health crises.

Declarations
Ethical Consideration: The research contained in the manuscript has not been published, and the manuscript is not under consideration elsewhere. One author has participated in the concept and design, analysis and interpretation of data, drafting or revising of the manuscript, and approved the manuscript as submitted for publication. The Open University of Tanzania approved the research authorization letter with reference number PG202001923. Then, the permission to conduct this research was provided by regional and district medical officers in the selected regions. Then, at the facility, participants were asked to complete a consent form to ensure confidentiality. Only participants who agreed to complete the consent form participated in this study.

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