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Trends in Communication Strategies through Traditional Medicine: Responding to the COVID-19 Pandemic in Tanzania

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Abstract: This study sought to establish trends in communication strategies through traditional medicine in Tanzania. The study employed the descriptive content analysis design as it was crucial for gaining insights into how language and communication strategies impact the utilization of traditional medicine in the context of COVID-19 management in Tanzania. The study involved a comprehensive documentary review of COVID-19 communication materials used in Tanzania to establish how language and communication strategies impact the utilization of traditional medicine in the context of COVID-19 management in Tanzania. Data was analyzed through the qualitative content analysis approach.The study concludes that COVID-19 communication materials made commendable efforts to reach the diverse linguistic communities in Tanzania, taking into account the country's linguistic diversity. Kiswahili and English emerged as the dominant languages, which aligns with the linguistic distribution of the population. This approach promotes inclusivity and ensures access to information. The materials demonstrated effective translation and interpretation, highlighting a commitment to accurate translation and cultural sensitivity. It is advisable to incorporate multiple languages, including local languages, to make the campaigns more accessible and relatable to linguistically diverse communities in Tanzania. Secondly, it is imperative to maintain clear communication strategies that empower individuals with varying levels of health literacy. Furthermore, when discussing traditional remedies, adopting an objective approach and stressing the significance of consulting healthcare providers for well-informed decision-making is essential. Moreover, the strategic use of visual elements should be employed to ensure a consistent and well-structured presentation of crucial information.

Keywords: COVID-19; Language; traditional medicine; Communication strategies; Magufuli.

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Introduction

Traditional medicine, deeply rooted in Tanzanian culture and practiced by a significant portion of the population, represents an essential part of the healthcare landscape (Eshete & Molla, 2021). The significance of traditional medicine in Tanzania has been recognized by Stangeland et al. (2008) and World Health Organization (2002). Traditional medicine in Tanzania has unique features that are deeply rooted in the country's diverse cultural and ethnic landscape. These practices involve using locally sourced herbs, plants, and rituals passed down through generations (Andimile & Floros, 2022). This aligns with the World Health Organization's report that 80 percent of Africans use traditional medicine for primary healthcare (Richey et al., 2021).

Under President Magufuli's leadership, Tanzania actively embraced the herbal agenda. Notably, the government allocated additional funds to the Institute of Traditional Medicine, emphasizing the medicinal value derived from the same plants employed in pharmaceuticals. In the June 2020

budget speech, the then President Magufuli emphasized the use of traditional medicines as a strategic response to the Covid-19 pandemic. He advocated the need for locally tailored approaches to combat the pandemic. This endorsement indicates an effort to integrate traditional medicine into Tanzania's healthcare strategy during the COVID-19 crisis (Richey *et al*., 2021).

The intersection of traditional medicine and modern healthcare systems has long been a prevalent and integral aspect of healthcare in Tanzania (Stangeland et al., 2008). Against the backdrop of the global COVID-19 pandemic, the role of traditional medicine in managing the health crisis gained renewed attention, providing a unique context in which tradition and innovation coexist. Effective management of the COVID-19 pandemic required the development of medical treatments and vaccines and the implementation of communication strategies that empower individuals and communities with accurate information and guidance. In Tanzania, a nation characterized by its ethnic languages, cultures and belief systems, language and communication strategies played a pivotal role in shaping public understanding and healthcare choices during this crisis.

Research by Brach and Fraser (2000) emphasized the importance of communicating health information in a manner understandable to individuals with varying levels of health literacy. Ratna (2019). also stresses the importance of effective communication in health practice as a fundamental component of high-quality healthcare systems. In Tanzania, which is characterized by significant linguistic and cultural diversity, these principles take on added significance.

Literature Review

This section presents a review of related literature and studies. It deals with both theoretical and empirical literature.

Behavior Change Theories

Behavior change theories have been instrumental in health communication for several decades. For example,

The Health Belief Model (HBM), established in the 1950s by social psychologists Irwin M. Rosenstock and Stephen Hochbaum and Social Cognitive Theory (SCT), developed by Albert Bandura in the 1960s have been pivotal in health communication (Bandura, 2004; Rosenstock et al., 1988; Ryan, 2009). The HBM focuses on individual perceptions of health risks and benefits while the SCT underscores the role of social and environmental factors in shaping behavior through observational learning, self-efficacy and self-regulation. The content of these theories, including the HBM's elements of perceived susceptibility, severity, benefits, barriers, cues to action and self-efficacy as well as SCT's emphasis on observational learning, provide crucial frameworks for understanding and promoting health-related behavior changes (Bavel et al., 2020; Baranowski et al., 2008; Chater et al., 2020; Clark et al., 2020; Glanz et al., 2008). Applying these theories in health communication campaigns, particularly during the COVID-19 pandemic, has proven effective in addressing specific factors outlined in the theories and motivating individuals to adopt preventive behaviors.

Cross-Cultural Communication Theory

Various scholars have developed the Cross-cultural communication theory. Geert Hofstede, a prominent figure in cross-cultural communication theory, introduced Hofstede's Cultural Dimensions in the late 1960s and early 1970s, focusing on the impact of cultural factors on workplace dynamics and communication. This theory identifies key cultural dimensions such as power distance, individualism-collectivism, masculinity-femininity, uncertainty avoidance and long-term orientation (Hofstede, 1980). This study sought to explore the application of Hofstede's theory in health communication campaigns, emphasizing its relevance in tailoring messages to resonate with varying cultural values and norms, particularly amid the linguistic and cultural diversity encountered during the COVID-19 pandemic.

The Intercultural Communication Competence (ICC) model, evolving over several decades with contributions from various scholars, highlights cultural awareness, knowledge, sensitivity, adaptability and empathy as crucial components for effective intercultural communication (Chen & Starosta, 2003; Gudykunst & Kim, 2003; Jackson & Parboteeah, 2020; Kim & Gudykunst, 2005). This model guides health communicators, stressing the importance of understanding cultural backgrounds, sensitivity to differences and adapting communication strategies accordingly (Betancourt et al., 2020). The review underscores the significance of the theories in shaping culturally sensitive health communication campaigns, particularly during the COVID-19 pandemic, by

fostering cultural awareness, adaptability and empathy in communication strategies.

Language and Communication Strategies in COVID-19 Public Health Campaigns

The emergence of the COVID-19 pandemic in 2019 urgently needed effective communication strategies to disseminate crucial information and mitigate the spread of the virus. Language and communication are central in this endeavor, as the success of public health campaigns depends on how diverse populations convey, understand and act upon sound information. The study reviewed six criteria for content analysis, including language choice, clarity and simplicity of messaging, cultural sensitivity, mention of traditional medicine, language accessibility and health literacy. Effective communication during crises, such as the COVID-19 pandemic, is crucial for conveying critical information, ensuring public understanding and motivating behavior change. Language choice and linguistic diversity are central to successful crisis communication, which significantly impact the accessibility and inclusivity of messages.

Scholars in public health communication emphasize the importance of using multiple languages to reach diverse linguistic communities. This aligns with recommendations from experts like Brach and Fraser (2000), who highlighted the significance of providing health information in understandable languages for diverse audiences. Piller et al. (2020) also emphasized the importance of linguistic diversity and inclusivity in communication materials during health crises. They argued for inclusion of dominant and minority languages to ensure effective communication. The COVID-19 pandemic highlighted the importance of linguistic diversity in communication campaigns, where multilingualism emerged as a key strategy to reach diverse communities. Studies emphasized the need for materials in multiple languages to ensure that non-native speakers can access critical information (Levinson, 2020). For instance, research in the United States underscored the necessity of Spanish-language materials for the Latinx population (Fernandez, 2020).

Additionally, scholars maintain that effective public health campaigns strive for inclusivity by representing linguistic minorities. For example, in Canada, campaigns included Indigenous languages to ensure that Indigenous communities received accurate information (Rice, 2023). Research during the COVID-19 pandemic highlighted the significance of featuring content in local languages to bridge language barriers (Gibbs et al., 2023). This approach respects cultural diversity and enhances trust and engagement within these communities. The assessment of whether the choice of dominant languages aligns with the linguistic distribution of the population is a common practice in content analysis, grounded in sociolinguistic principles. Furthermore, promoting inclusivity, especially through the representation of minority languages, aligns with the cultural and linguistic diversity principles advocated by organizations like the United Nations Educational, Scientific and Cultural Organization (UNESCO).

Effective crisis communication is crucial for conveying information, guiding public behavior and mitigating the impact of emergencies, such as the COVID-19 pandemic. A central aspect of successful crisis communication is the clarity of language and health literacy, ensuring that messages are accessible and comprehensible to diverse audiences. In health literacy and plain language, scholars like Brach and Fraser (2000) emphasized the importance of using plain language and avoiding jargon to improve health communication. Furthermore, Zarcadoolas et al. (2005), who extensively studied the importance of plain language in health communication, stressed the need to present information clearly and understandably to a broad audience.

The use of plain language in health communication is widely recognized as essential for ensuring understanding among diverse audiences (Sagi et al., 2021; Lusekelo et al., 2021). Complex medical terminology can hinder comprehension, particularly for individuals with lower health literacy levels. Research indicates that clear and concise language avoids ambiguity and helps individuals process and retain vital information during emergencies (Pan American Health Organization, 2009). Additionally, individuals with limited health literacy are less likely to engage in preventive behaviors and may struggle to navigate complex healthcare systems (Berkman et al., 2011). Studies suggest using visual aids, simplified language and reinforcing key points to enhance the accessibility of information (Neter & Brainin, 2012; Norman & Skinner, 2006). Furthermore, materials should be written to accommodate individuals with limited formal education, enabling even those with lower literacy

levels to understand the information (Fernandez, 2020).

Berkman et al. (2011) argued that designing materials that accommodate varying levels of health literacy is a widely accepted practice in health communication. Besides, Nutbeam (2008) discusses health literacy levels and the importance of making health information actionable. The paper highlights the need to provide guidance and recommendations that are understandable and actionable for individuals with varying levels of health literacy.

Scholars like Sentell and Braun (2012) presented the value of multilingual resources and visual aids in enhancing healthcare communication for diverse populations. Health literacy and communication experts believe that visual aids improve understanding, particularly for individuals with limited literacy. Language clarity and health literacy are integral components of effective crisis communication. Clear and concise language, tailored messaging and accessibility measures are vital to ensuring that information reaches and is understood by diverse audiences. Addressing health literacy disparities and employing strategies to enhance language clarity are essential during crises for promoting public understanding and health-related behavior change.

Cultural sensitivity is crucial in crisis communication, ensuring cultural relevance and avoiding stereotypes. The World Health Organization (WHO) provides guidelines in their "Health Promotion Glossary" document, stressing the importance of addressing cultural relevance and steering clear stereotypes. Kreuter et al. (2003) also emphasized the need for culturally tailored messaging. This section explores the significance of cultural sensitivity in crisis communication, drawing insights from various fields, including healthcare, disaster management, and intercultural communication.

Cultural sensitivity extends beyond language and encompasses understanding cultural norms, beliefs and practices. The global COVID-19 campaigns have underscored the value of respecting cultural diversity, with studies emphasizing that culturally competent communication fosters trust and behavior change. Furthermore, it is crucial to understand the cultural nuances and beliefs of the target audience to ensure that translated messages are contextually appropriate (Drennan & Swartz, 2002). Studies highlight the importance of culturally sensitive interpreters who refrain from imposing their beliefs on patients) and advocate using professional translators to ensure linguistic accuracy and cultural sensitivity (Ayre et al., 2022). Effective health communication necessitates cultural adaptation, emphasizing the tailoring of health messages to cultural norms, beliefs and languages for increased message acceptance and effectiveness (Kreuter et al., 2003). It is imperative not to generalize or reinforce cultural stereotypes in messages, as this can lead to miscommunication (Kleinman et al., 1978). Crisis communication should integrate cultural knowledge to ensure messages align with community practices (Pan American Health Organization, 2009).

Traditional medicine often holds cultural significance, and therefore, communication materials should acknowledge and respect its role within cultural contexts (Eshete & Molla, 2021). Striking a balance in presenting traditional medicine involves providing information about safety, efficacy and cultural importance without endorsing or dismissing it. Generally, cultural sensitivity is fundamental in crisis communication across various domains, including healthcare and disaster response. It plays a central role in reducing disparities, enhancing message effectiveness and building trust with diverse populations. As healthcare systems and emergency responders engage with culturally diverse communities, cultural sensitivity remains pivotal in ensuring equitable and effective crisis communication.

Language and communication strategies in COVID-19 public health campaigns are crucial for reaching diverse populations, promoting health literacy and motivating behavior change. Multilingualism, clear language, professional translation, cultural sensitivity and applying behavioral and cross-cultural communication theories are key elements in successful campaigns. Effective communication conveys information, builds trust, fosters community engagement and ultimately contributes to better public health outcomes during a global crisis like the COVID-19 pandemic.

Methodology

Design

This study employed the descriptive content analysis design, which was crucial for gaining insights into how language and communication strategies impact the utilization of traditional medicine in the context of COVID-19 management in Tanzania. The design provides a structured and

systematic approach to examining communication materials and drawing meaningful conclusions that can inform public health communication strategies and policies.

Data Collection

The methodology employed for this study involved a comprehensive documentary review of COVID-19 communication materials used in Tanzania to establish how language and communication strategies impact the utilization of traditional medicine in the context of COVID-19 management in Tanzania.

Selection of Materials

The researcher used the systematic approach to select a representative sample of COVID-19 communication materials. These materials included pamphlets, posters, brochures, public service announcements and online content disseminated to the Tanzanian population during the pandemic. The researchers collected the materials from various sources, including government websites, healthcare facilities and community distribution points. Materials selected for analysis were those publicly available, published between January 2020 and August 2021 and designed explicitly for COVID-19 communication. A total of 50 COVID-19 communication materials were included in the sample, ensuring diversity in format, language and target audience.

Treatment of Data

The researchers employed the qualitative content analysis approach to examine the communication materials. This involved a systematic review of the text, images and visual aids within the selected COVID-19 communication materials to identify patterns and themes related to language choice, cultural sensitivity, clarity of messaging, mentions of traditional medicine, health literacy, and the integration of behavior change theories and cross-cultural communication theories.

Examining linguistic and cultural diversity involved assessing the use of multiple languages, representation of local languages, clarity of language and incorporation of cultural elements. Additionally, the evaluation of health literacy and actionability aspects focused on how the materials catered for varying health literacy levels and provided actionable guidance for COVID-19 prevention and management, including considerations related to traditional medicine. Furthermore, the clarity of messaging was scrutinized to determine adherence to principles of plain language and health literacy, emphasizing clear, concise language and visual aids. Cultural sensitivity was assessed by examining the materials' approach to respecting local customs, beliefs and practices, including those related to traditional medicine, with particular attention to non-critical language, cultural inclusivity and the integration of local examples and stories. The study also delved into the integration of behavior change theories, such as the Health Belief Model and Social Cognitive Theory to establish their role in motivating individuals to adopt recommended health behaviors, including the consideration of traditional medicine, with a focus on key features like perceived susceptibility, severity, benefits, barriers, cues to action and self-efficacy. Finally, the researchers examined the application of cross-cultural communication theories, specifically Hofstede's Cultural Dimensions and the Intercultural Communication Competence (ICC) model to assess how the materials addressed linguistic and cultural diversity, encompassing aspects such as cultural awareness, knowledge, sensitivity, adaptability and empathy within the materials.

Validity and Reliability

To enhance the validity of the data, predefined criteria for language utilization, clarity, cultural sensitivity, and mentions of traditional medicine based on established guidelines and theories. For reliability, the researcher did random sampling of the COVID-19 communication materials and regular quality checks during the coding process. This reduced bias and ensured representative samples while identifying and addressing analysis issues.

Ethical Consideration

Ethically, the researcher was culturally sensitive throughout the study and maintained professionalism during the documentary review and content analysis.

Results and Discussion

This section reports findings and discussions of the findings

Language Choice and Linguistic Diversity

Effective communication begins with language choice and considerations of linguistic diversity within a given population. In Tanzania, a country rich in languages spoken by different ethnic groups, addressing this diversity is paramount.

The analyzed COVID-19 communication materials found that linguistic diversity is a notable feature, reflecting the rich languages spoken in Tanzania. The materials demonstrated an effort to reach various linguistic communities within the country. Two languages were employed to ensure accessibility and inclusivity. While linguistic diversity was evident, Kiswahili and, to a lesser extent, English emerged as the dominant languages used in most COVID-19 communication materials. Kiswahili, the national language and widely spoken lingua franca was prominent. This finding aligns with Lusekelo et al. (2021), who reported the dominance of Kiswahili signposts about COVID-19 in higher learning institutions in Tanzania. English was present in official government documents and specific media coverage, catering to educated and urban populations. These choices seemed to align with the linguistic distribution of the population, as Kiswahili and English are commonly spoken and understood in Tanzania. The language selection criteria employed in the COVID-19 communication materials strive to strike a balance between the utilization of prevalent languages, namely Kiswahili and English. This approach advances the objective of guaranteeing that crucial information is disseminated effectively among various linguistic communities in Tanzania, fostering inclusivity and facilitating information accessibility.

The findings corroborate the importance of linguistic diversity in COVID-19 communication materials. Similar observations have been made in studies worldwide. For example, Baranova (2023) emphasized the significance of multilingual communication during the COVID-19 pandemic, especially in countries with linguistic diversity like Tanzania. They argue that utilizing multiple languages can enhance access to vital information among diverse communities, thereby promoting inclusivity.

Figure 1: Diverse Languages

Clarity of Language and Health Literacy

Clear and concise language is essential for effective health communication, particularly during a public health crisis. The materials assessed in the study maintained a focus on clarity, avoiding complex medical jargon, which aligns with recommendations for plain language in health communication (Brach et al., 2012). This approach ensures that information is accessible to individuals with varying levels of health literacy, which is critical for empowering communities to make informed health decisions.

The materials were designed to cater to individuals with limited formal education. They were written in a way that ensured comprehension even among those with lower literacy levels, which is critical for effective public health communication. The findings are consistent with the principles of plain language and health literacy advocated by the World Health Organization (World Health Organization, 2020). The WHO underscores the importance of clear, concise and culturally appropriate communication to reach diverse populations effectively.

Translation and Interpretation

Effective translation and interpretation are crucial in bridging language barriers and ensuring that information is both accurate and culturally appropriate. The study's findings confirm that materials provided clear evidence of accurate translation and maintained cultural sensitivity (Figure 2).

In cases where materials were not originally produced in Kiswahili, clear evidence of accurate

translation was observed. Translated versions were readily available alongside the original content, ensuring that language barriers were addressed comprehensively (See Figure 2). Translated content maintained the intended message's accuracy and cultural appropriateness. For instance, the translations were carried out with the utmost regard for cultural aspects and sensitivities. As a specific illustration, the term "Respiratory Disorder" within the context of the natural remedy for COVID-19, fever, influenza and respiratory disorder, was precisely rendered in Kiswahili as "*matatizo ya mfumo wa upumuaj*i" instead of other associated connotations of the disorder. This meticulous translation approach greatly facilitates effective communication.

These findings resonate with the importance of professional translation and cultural appropriateness highlighted by the Transatlantic Translations Group (2023) who argued that translation should transcend linguistic accuracy and encompass cultural nuances to facilitate effective communication in multicultural societies.

Figure 2: Accurate Translation

Clarity of Messaging

The materials displayed a clear information hierarchy. This means important information was prominently presented and positioned on the first pages or sections of the posters. Primary recommendations and instructions were given priority and stood out distinctly compared to supplemental information. The materials maintained a consistent layout, contributing to logical information flow. This consistency aided readers in navigating the content, ensuring that critical messages were not lost within the document. Besides, important COVID-19 prevention and management guidelines were often highlighted using bold text, larger fonts or color accents, making them stand out and reinforcing their significance (see Fig 3).

Visual aids, such as illustrations, diagrams and infographics, were consistently used to supplement textual information. These aids were strategically placed throughout the materials, enhancing overall comprehension. Visual aids were vital in enhancing comprehension, especially for audiences with lower literacy levels. Complex concepts, such as proper handwashing techniques or mask usage, were simplified through visual representations, making it easier for individuals to grasp the information.

Overall, assessing the clarity of messaging indicated a strong focus on presenting information well structured. The materials effectively used information hierarchy to prioritize key messages. For example, in Figure 4, the text explains the causes, symptoms, and prevention measures of the disease and then provides contact information for more details. Visual aids enhanced comprehension, particularly among audiences with varying levels of literacy. These findings suggest a commitment to clear and accessible communication to disseminate crucial COVID-19 information in Tanzania.

Figure 3: Clear Instruction

Figure 4: Traditional Medicine efficiency

Presentation of traditional medicine included information about safety, efficacy and potential risks. For example, in a video clip: https://www.youtube.com/watch?v=udaLh1sD7DQ, the presenter described how best the ***BayCaro*** (a COVID-19 remedy) is effective and warns the users not to mix the BayCaro with modern medicine as doing so would result into harmful side effects. This information provided individuals with a comprehensive understanding of the potential benefits and limitations of traditional remedies. The materials required individuals to consult healthcare providers before using traditional remedies. This recommendation shows the importance of seeking professional guidance to make informed healthcare decisions, including considering traditional medicine.

Cultural sensitivity

Cultural sensitivity within communication materials is vital to respect local customs, beliefs and practices. The study reveals that materials adopted a respectful approach towards cultural practices and beliefs, including those related to traditional medicine. This approach aligns with recommendations from Gudykunst and Kim (2003), who stressed the significance of cultural sensitivity in intercultural communication, particularly in healthcare contexts.

The materials generally maintained a non-critical stance towards local cultural practices and beliefs, including those related to traditional medicine. There was no evidence of criticism or demeaning language targeting these practices. The materials neither endorsed nor discouraged traditional medicine. They presented information in a neutral tone, allowing individuals to make informed decisions regarding healthcare options, including traditional remedies. The materials consciously avoided cultural stereotypes and biases. They did not generalize or make assumptions about specific cultural groups. Instead, they emphasized respecting individual cultural backgrounds and beliefs. For example, on 17th July 2021, the BBC quoted the then Minister of Health, Dr Doroty Gwajima, who emphasized the proper use of traditional medicine by respecting health procedures. As she said, '..matumizi ya nyungu ni tiba ya asili ambayo iliwasaidia wengi na bado itatumika lakini sasa panafaa kuwa na tahadhari zaidi kwasababu ya aina mbalimbali ya virusi vya Corona'.{The use of Nyungu as a natural remedy has

helped many and will continue to be used. However, caution should now be exercised due to the presence of various types of Coronaviruses}.

In addition, the materials, particularly the audio and video content, incorporated local examples, stories, or testimonials that resonated with the cultural context of the target audience. These materials often showcased community members who had successfully managed and prevented COVID-19 while considering traditional medicine. By including local examples, the COVID-19 communication materials in Tanzania enhanced their relatability. For instance, on February 5th, 2020, the late Dr. Magufuli, the president, made the following statement: "...*Kuna dawa inaitwa COVIDOL zinafanya kazi kwa sababu zimekuwa proved [zimethibitishwa] na mkemia Mkuu, na zile zinaleta reaction [matokeo] ya ku-affect [kuathiri] kwenye virus [virusi] na bakteria kwa asilimia 99, mimi nawaeleza ukweli...,"* which translates to "...There is a drug called COVIDOL that works because it has been proven by a national chemist, and it causes a reaction [results] that affects viruses and bacteria by 99 percent, I am telling you the truth...". These anecdotes presented genuine experiences within the cultural framework of the audience, thereby making the information more relevant and relatable (Boudreau, 2023).

Mentioning of Traditional Medicine

In Tanzania, the COVID-19 communication materials demonstrated to acknowledge the cultural significance of traditional remedies. This was evident in the messaging, which showed both respect and recognition for the role of traditional medicine within the local context. At the same time, the materials emphasized the importance of evidence-based healthcare practices.

For example, as reported by the BBC on February 4th, 2021, the late Dr. Magufuli stated, "Mungu ametuma hii mimea na ikabarikiwa, tuitumie, lakini tuitumie kwa kufuata masharti na utaalamu mzuri. Kwa hiyo Taasisi yetu ya Wizara ya Afya inayosimamia dawa za asili, huu ni wakati wa kuyatumia kikamilifu. Na Wizara ya Afya isiwakatishe tamaa watu hawa, na madaktari wanatumia hizo hizo dawa" ("God sent us these plants as a blessing to us. Let us use them, but use them according to professional guidance. Therefore, for the Ministry of Health section that deals with traditional medicines, this is the time to use the plants fully. Moreover, the Ministry of Health should not discourage these people since even the doctors are using the same drugs"). This approach aligns with global efforts, such as those led by the World Health Organization (WHO), to incorporate traditional medicine into healthcare systems to ensure safety, effectiveness, and quality.

The materials did not reject modern medicine as a healthcare option; instead, they presented information in an unbiased manner, allowing individuals to develop their own perspectives (refer to Figure 3). The materials took a neutral stance by acknowledging the coexistence of traditional and modern medicine and emphasizing the individual's freedom to choose traditional remedies as part of their healthcare options. Additionally, the materials demonstrated an understanding of the cultural importance of traditional medicine practices in Tanzanian society. Rather than segregating traditional medicine, they integrated it into the wider cultural and healthcare context.

The findings indicate that the COVID-19 communication materials adopted an objective and informative approach when mentioning traditional medicine. They provided individuals with balanced information about traditional remedies, including safety, efficacy and the importance of consulting healthcare providers. The materials acknowledged the cultural significance of traditional medicine and its role as a potential healthcare option, allowing individuals to make informed choices based on their cultural beliefs and healthcare needs. This approach aimed to respect cultural diversity and promote healthcare decision-making aligned with individual preferences and beliefs.

Health Literacy

In the communication materials about COVID-19 in Tanzania, efforts were made to improve understanding among people with different levels of health knowledge. Instead of using medical terms like "Dyspnea," the materials described it as "*kubanwa mbavu na kupumua kwa shida*," which means "chest tightness and difficulty breathing." This made the information more accessible to a wider audience. The materials also emphasized the importance of using clear and simple language. They avoided complex medical or technical terms. By following this approach, people with limited health knowledge were able to understand the information effectively. This ensured that the content was accessible and engaging for the intended readers.

Figure 5: Mention of Traditional Medicine

The content consistently provided actionable steps and guidance for COVID-19 prevention and management. It included clear recommendations on hand hygiene, mask usage, physical distancing and what to do if individuals experienced COVID-19 symptoms. The materials also offered actionable guidance when traditional medicine was mentioned. They encouraged individuals to consult healthcare providers before using traditional remedies, emphasizing the importance of seeking professional advice when considering traditional medicine as a healthcare option.

The materials were designed carefully with varying health literacy levels among the target audience in mind. They used plain language and presented information clearly and understandably. Additionally, the content provided actionable steps and guidance for COVID-19 prevention and management, including recommendations concerning the use of traditional medicine. These features aimed to empower individuals with the information they needed to take effective measures to protect themselves and their communities during the pandemic, irrespective of their health literacy levels.

Behavior Change Theories

The integration of behavior change theories, such as the Health Belief Model and Social Cognitive Theory reflects the recognition of the role of psychological factors in motivating individuals to adopt recommended health behaviors. These findings align with the recommendations of Glanz et al. (2008) who emphasized the importance of behavioral change theories in designing effective health communication campaigns. These theories provided a framework for understanding individual motivations and barriers to behavior change.

Based on the Health Belief Model, the findings indicate that the COVID-19 communication materials successfully conveyed the perception of susceptibility to the virus and the severity of the disease. Furthermore, they emphasized the benefits of adopting preventative measures and addressed barriers such as limited resource availability. This approach promotes behavioral change. In addition, the materials included action prompts, such as clear instructions and visual cues, as shown in Figures 3 and 4. By providing individuals with practical guidance, they enhanced their confidence in engaging in preventative behaviors while also promoting the consideration of traditional medicine alongside modern healthcare.

In alignment with the Social Cognitive Theory, the materials effectively utilized observational learning by including visual aids, testimonials and relatable examples of individuals practicing recommended behaviors. These elements encouraged individuals to learn from others' experiences, making behavior adoption more relatable and attainable. Moreover, the materials enhanced self-efficacy by offering practical steps for behavior change and showcasing success stories, acknowledging the reciprocal

determinism between personal factors, the environment, and behavior. They emphasized the positive outcomes of adopting recommended behaviors, encouraged self-regulation through clear instructions and goal setting, and ultimately shaped a communication strategy that successfully motivated behavior change during the pandemic.

Cross-Cultural Communication Theories

Cross-cultural communication theories, such as Hofstede's Cultural Dimensions and the Intercultural Communication Competence (ICC) model, play a crucial role in addressing linguistic and cultural diversity. These theories highlight the importance of cultural awareness, adaptability, and empathy in promoting effective communication across different cultures. These findings support the argument made by Kim and Gudykunst (2005) that cross-cultural communication theories are essential in successfully navigating intercultural interactions.

In Tanzania, COVID-19 communication materials were tailored to the cultural context, taking Hofstede's Cultural Dimensions into account. An essential aspect was recognizing the considerable power distance prevalent in Tanzanian society. This was demonstrated by utilizing culturally appropriate language and tone when addressing individuals in positions of authority. For example, instead of issuing direct instructions, the materials employed a respectful and deferential tone to guide essential actions. For instance, on 1st February 2021, the then Minister of Health, Dr. Gwajima, said: '' *Elimu ambayo imekuwa ikitolewa na wataalamu wa Afya ikiwemo kuimarisha usafi wa mazingira, usafi wa kibinafsi, kunawa mikono kwa kutumia maji na sabuni, kwa kutumia vipukushi, kujifukiza, kufanya mazoezi mbalimbali , kula lishe bora, kunywa maji ya kutosha bila kisahau matumizi ya tiba asili ambayo taifa la Tanzania limejaliwa nazo.' {*Health professionals have been providing mass education that includes strengthening environmental and personal hygiene, washing hands using soap and water, using disinfectants, steaming, doing various exercises, eating healthy food, and drinking enough water, not to mention the use of natural remedies, which the nation of Tanzania has been blessed with} (https://www.bbc.com/swahili/habari-55888145). This approach aligns with the Tanzanian cultural value of displaying deference towards authority figures.

Another key element to consider was the communal nature of Tanzanian societies. The materials highlighted the importance of collective responsibility and community involvement in the fight against COVID-19. For example, the dominant slogans, such as '*Nike nikukinge Vaa Barakoa*' (Protect me, I protect you, put on the face mask), placed more emphasis on the potential impact of collaborative endeavors. This approach aligns with the collectivist principles that prevail in Tanzanian society, where the well-being of the community is often prioritized over individual pursuits.

The study findings support the effectiveness of the materials in bridging linguistic and cultural gaps among Tanzanian communities. The materials demonstrate cultural awareness by recognizing linguistic and cultural diversity. For instance, they were translated into Kiswahili, English, and occasionally ethnic languages to ensure understanding across different communities in the country. This approach avoids a one-size-fits-all approach. Cultural knowledge was also shown through the inclusion of local examples, stories, and practices. Traditional proverbs like *Nyungu and kaswagara,* as well as relevant anecdotes familiar to the target audience, were used to enhance the cultural relevance of the materials.

Furthermore, the materials showcased cultural sensitivity by respecting local customs, beliefs, and practices, including those related to traditional medicine, without promoting stereotypes or biases. They also demonstrated cultural adaptability by providing information in multiple languages and formats to ensure accessibility and understanding among diverse communities. Lastly, the materials exhibited cultural empathy by portraying the challenges and experiences of individuals within the cultural context, making them relatable and engaging. Overall, these efforts contributed to effective cross-cultural communication during the pandemic in Tanzania**.**

Conclusion and Recommendations

Conclusions

The study concludes that COVID-19 communication materials made commendable efforts to reach the diverse linguistic communities in Tanzania, taking into account the country's linguistic diversity. Kiwahili and English emerged as the dominant languages, which aligns with the linguistic distribution of the population. This approach promotes inclusivity and ensures access to information. The materials demonstrated effective translation and interpretation, highlighting a

commitment to accurate translation and cultural sensitivity. The inclusion of translated versions alongside the original content addressed language barriers comprehensively.

Moreover, the COVID-19 communication materials objectively presented traditional medicine, recognizing its cultural significance. The discussion of traditional medicine was balanced, providing information on its safety, efficacy, and potential risks. The emphasis on consulting healthcare providers reflected a responsible approach, respecting cultural diversity and individual choices. Integrating behavior change theories and cross-cultural communication theories in COVID-19 communication materials motivated individuals and promoted cultural awareness during the pandemic.

Recommendations

It is advisable to incorporate multiple languages, including local languages, to make the campaigns more accessible and relatable to linguistically diverse communities in Tanzania. Secondly, it is imperative to maintain clear communication strategies that empower individuals with varying levels of health literacy. Furthermore, when discussing traditional remedies, adopting an objective approach and stressing the significance of consulting healthcare providers for well-informed decision-making is essential. Moreover, the strategic use of visual elements should be employed to ensure a consistent and well-structured presentation of crucial information. Lastly, integrating behavior change and cross-cultural communication theories can significantly bolster the effectiveness of the campaigns. This can be achieved through collaboration with cultural experts and the incorporation of local examples in communication materials.

References

Andimile, M. & Floros, C. (2022). Traditional Medicine In Tanzania; Rapid Assessment Of Wildlife Used In Traditional Medicine In Three Urban Centers In Tanzania: Tanga, Dar Es Salaam And Unguja, Zanzibar. TRAFFIC.

Ayre, J., Muscat, D. M., Mac, O., Batcup, C., Cvejic, E., Pickles, K., Dolan, H., Bonner, C., Mouwad, D., Zachariah, D., Turalic, U., Santalucia, Y., Chen, T., Vasic, G., & McCaffery, K. J. (2022). Main COVID-19 information sources in a culturally and linguistically diverse community in Sydney, Australia: A cross-sectional survey. Patient education and counseling, 105(8), 2793–2800. https://doi.org/10.1016/j.pec.2022.03.028 .

Bandura, A. (2004). Health promotion by social cognitive means. Health education & behavior: the official publication of the Society for Public Health Education,31(2), 143–164. https://doi.org/10.1177/1090198104263660.

Baranova V. (2023). Linguistic In/Exclusion in Medicine: Multilingual COVID-19 Communication in Russia. *Journal of Eurasian Studies*, 18793665231185792. https://doi.org/10.1177/18793665231185792

Baranowski, T., Buday, R., Thompson, D. I., & Baranowski, J. (2008). Playing for real: video games and stories for health-related behavior change. American journal of preventive medicine, 34(1), 74–82. https://doi.org/10.1016/j.amepre.2007.09.027.

Bavel, J.J.V., Baicker, K., Boggio, P.S. et al. (2020). Using social and behavioural science to support COVID-19 pandemic response. Nature Human Behaviour, 4(5), 460-471. https://doi.org/10.1038/s41562-020-0884-z.

Betancourt, J., Rosenberg MA, Z. A., Brown JR, M. M. (2020).)The Impact of COVID-19 on Telemedicine Utilization Across Multiple Service Lines in the United States. Healthcare (Basel).;8(4):380. doi: 10.3390/healthcare8040380.

Berkman N, D., Sheridan, S.L Donahue, K. E., Halpern, D J & Crotty, K. (2011). Low health literacy and health outcomes: an updated systematic review. Ann Intern Med;155(2):97–107. doi: 10.7326/0003-4819-155-2-201107190-00005.

Boudreau, D. (2023, July 3). Recognizing the impact of culture in inclusive communication [LinkedIn post].

Brach, C., D. Keller, L. M. Hernandez, C. Baur, R. Parker, B. Dreyer, P. Schyve, A. J. Lemerise, D. Schillinger. (2012). Ten Attributes of Health Literate Health Care Organizations. NAM Perspectives. Discussion Paper, National Academy of Medicine, Washington, DC.

Brach, C., & Fraser, I. (2000). Can Cultural Competency Reduce Racial and Ethnic Health Disparities? A Review and Conceptual Model. Medical Care Research and Review, 57, 181–217. https://doi.org/10.1177/1077558700057001S09.

Chater, A., Lewis, L., Arden, M. A., Byrne-Davis, L., Chadwick, P., Drury, J., Epton, T., Hart, J., Kamal, A.,

McBride, E., O'Connor, D., Shorter, G., Swanson, V., & Armitage, C. (2020). Health psychology, behavioural science, and Covid-19 disease prevention. Health Psychology Update, [2].3-10.

Chen, G. M., & Starosta, W. J. (2003). A review of the concept of intercultural awareness. In L. A. Samovar and R. E. Porter (Eds.), Intercultural communication: A reader (pp. 344-353). Belmont, CA: Wadsworth.

Clark, C., Davila, A., Regis, M., & Kraus, S. (2020). Predictors of COVID-19 voluntary compliance behaviors: An international investigation. Global transitions, pp. 2, 76–82. https://doi.org/10.1016/j.glt.2020.06.003.

Drennan, G., & Swartz, L. (2002). The paradoxical use of interpreting in psychiatry. Social science & medicine (1982), 54(12), 1853–1866. https://doi.org/10.1016/s0277-9536(01)00153-8.

Eshete, M.A., & Molla, E.L. (2021). Cultural significance of medicinal plants in healing human ailments among Guji semi-pastoralist people, Suro Barguda District, Ethiopia. Journal of Ethnobiology and Ethnomedicine, 17(1), 61. https://doi.org/10.1186/s13002-021-00487-4

Gibbs, L., Thomas, A. J., Coelho, A., Al-Qassas, A., Block, K., Meagher, N., … Hellard, M. (2023). Inclusion of Cultural and Linguistic Diversity in COVID-19 Public Health Research: Research Design Adaptations to Seek Different Perspectives in Victoria, Australia. International journal of environmental research and public health, 20(3), 2320. https://doi.org/10.3390/ijerph20032320.

Fernandez, A. (2020). Using Health Literacy Principles to Enhance Communication in the Time of COVID-19. Preventing Chronic Disease, p. 17, E58.

Glanz, K., Rimer, B. K., & Viswanath, K. (Eds.). (2008). Health behavior and health education: Theory, research, and practice (4th ed.). Jossey-Bass.

Gudykunst, W.B. and Kim, Y.Y. (2003). Communicating With Strangers: An Approach to Intercultural Communication. 4th Edition, McGraw-Hill, Boston.

Hofstede, G. (1980). Culture's Consequences: International Differences in Work-Related Values. Sage.

Jackson, J., & Parboteeah, P. (2020). Virtual Teams in the Age of COVID-19: Achieving Effectiveness in Communication and Teamwork. Journal of Business Research, 124, 489-491.

Kim, Y. Y., & Gudykunst, W. B. (2005). Theories in Intercultural Communication. Sage.

Kleinman, A., Eisenberg, L., & Good, B. (1978). Culture, illness, and care: clinical lessons from anthropologic and cross-cultural research. Annals of Internal Medicine, 88(2), 251–258. https://doi.org/10.7326/0003-4819-88-2-251.

Kreuter, M. W., Lukwago, S. N., Bucholtz, R. D., Clark, E. M., & Sanders-Thompson, V. (2003). Achieving cultural appropriateness in health promotion programs: targeted and tailored approaches. Health education & behavior: the official publication of the Society for Public Health Education, 30(2), 133–146. https://doi.org/10.1177/1090198102251021.

Levinson, R. (2020). Language Equity and Coronavirus: Why we Need to Ensure Everyone Understands the Information they Need to Stay Safe. BMJ, p. 369, m1404.

Lusekelo, A., Alphonce C., & Nyinondi, O. (2021). The Language of the Public Spaces in Tanzanian Universities during the COVID-19 Pandemic. ETHNOLOGIA ACTUALIS. 21(2), 36–58. DOI: 10.2478/eas-2022-0003. http://41.73.194.142/handle/123456789/5490.

Neter, E., & Brainin, E. (2012). eHealth literacy: extending the digital divide to the realm of health information. Journal of medical Internet research, 14(1), e19. https://doi.org/10.2196/jmir.1619

Norman, C. D., & Skinner, H. A. (2006). eHEALS: The eHealth Literacy Scale. Journal of Medical Internet Research, 8(4), e27. doi: 10.2196/jmir.8.4.e27.

Nutbeam D. (2008). The evolving concept of health literacy. Social science & medicine (1982), 67(12), 2072–2078. https://doi.org/10.1016/j.socscimed.2008.09.050.

Pan American Health Organization (2009). Information management and communication in emergencies and disasters: manual for disaster response teams. Washington, D.C.: PAHO.

Piller, I., Zhang, J. & Li, J. (2020). Linguistic diversity in a time of crisis: Language challenges of the COVID-19 pandemic. Multilingua, 39(5), 503–515. https://doi.org/10.1515/multi-2020-0136.

Ratna, H. (2019). The Importance of Effective Communication in Healthcare Practice. *Harvard Public Health Review*, pp. *23*, 1–6. https://www.jstor.org/stable/48546767.

Rice, K. (2023). Indigenous Language Revitalization in Canada. In The Canadian Encyclopedia. Retrieved from https://www.thecanadianencyclopedia.ca/en/article/indigenous-language-revitalization-in-canada.

Richey, L., Gissel, L.E, Kweka, L, o., Bærendtsen, P., Kragelund, P., Hambati, H. & Mwamfupe, A (2021). South-South humanitarianism: The case of Covid-organics in Tanzania. World Development (141) 105375.

Rosenstock, I. M., Strecher, V. J., & Becker, M. H. (1988). Social learning theory and the Health Belief Model. Health education quarterly, 15(2), 175–183. https://doi.org/10.1177/109019818801500203.

Ryan P. (2009). Integrated Theory of Health Behavior Change: background and intervention development. Clinical Nurse Specialist CNS, 23(3), 161–172. https://doi.org/10.1097/NUR.0b013e3181a42373.

Sagi, D., Spitzer-Shohat, S., Schuster, M. Daudi, L & Rudoff, M.C (2021. Teaching plain language to medical students: improving communication with disadvantaged patients. BMC Med Educ **21**, 407. https://doi.org/10.1186/s12909-021-02842-1.

Sentell, T., & Braun, K. L. (2012). Low health literacy, limited English proficiency, and health status in Asians, Latinos, and other racial/ethnic groups in California. Journal of health communication, 17 Suppl 3(Suppl 3), 82–99. https://doi.org/10.1080/10810730.2012.712621.

Stangeland, T, Dhillion S.S, Reksten, H. (2008). Recognition and development of traditional medicine in Tanzania. J Ethnopharmacol. 8;117(2):290-9. doi: 10.1016/j.jep.2008.02.008.

Transatlantic Translations Group (TTG). (2023, March 5). The Importance of Cultural Sensitivity in Translations [LinkedIn post].

World Health Organization (2002). WHO Traditional Medicine Strategy 2002–2005. World Health Organization.

World Health Organization (2020). Risk Communication and Community Engagement (RCCE) Action Plan Guidance COVID-19 Preparedness and Response. WHO.

Zarcadoolas, C., Pleasant, A., & Greer, D. S. (2005). Understanding health literacy: an expanded model. Health promotion international, 20(2), 195–203. https://doi.org/10.1093/heapro/dah609.