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Interventions and messaging in behaviour change communication response to COVID-19: A qualitative analysis of covid campaign in Kenya coastal counties

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Effectiveness and compliance to intervention measures that mitigate the spread of COVID-19 has heavily relied on awareness and willingness of the public to adhere to directives. In this study, Behaviour Change Communication (BCC) interventions in response to COVID-19 are analyzed with the aim of identifying opportunities and gaps that can inform on going and future efforts. The study focuses on a BCC campaign rolled out between June and October 2020 in select coastal counties of Kenya by the Ministry of Health. The aim is to establish the communication activities undertaken in the campaign as well as analyse the messaging. The study employs a qualitative approach whereby the campaign materials and related documents are subjected to content analysis. Data gathered shows that several key activities were undertaken before, during and after the campaign. Further, the campaign messaging created awareness instructed and persuaded. The analysis concludes that the dissemination of the IEC materials was largely successful. However, within the scope of this study, the impact of the campaign in improving adherence to COVID-19 protection measures and ultimately reduced positive cases cannot be ascertained.

Key words: Behaviour change communication, campaign, case study, content analysis, Covid-19 infection, ministry of health.

INTRODUCTION

The corona virus disease 2019 COVID-19) began in December 2019 in Wuhan, China. Corona viruses are a large family of virus that cause illness ranging from the common cold to more severe diseases. The virus that causes COVID-19 is mainly transmitted through droplets generated when an infected person coughs, sneezes, or exhales.

The World Health Organization (WHO) declared COVID-19 a global pandemic on 11 March 2020. This is due to the rapid spread of the virus across the globe causing adverse impact on the economic, social and psychological aspects of human life including death. According to W.H.O, globally there have been over 196 million confirmed cases of COVID-19 including over 4.2

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million estimated deaths, as at 30 July 2021 (WHO, 2021).

The signs and symptoms of COVID-19 range from mild to severe. Common signs of infection include fever, sore throat, tiredness, cough, shortness of breath and breathing difficulties. In more severe cases, the infection can cause pneumonia, severe acute respiratory syndrome, kidney failure and even death (CDC, 2020).

To prevent the spread of COVID-19, standard recommendations have included regular hand washing, covering mouth and nose when coughing and sneezing, use of facemasks especially in public and crowded places as well as avoiding close contact with anyone showing symptoms of respiratory illness such as coughing and sneezing (WHO, 2020a).

The spread COVID-19 has varied greatly in different countries and continents. While there is scant evidence as to why this is the case, there has been hypothesis that continents such as Africa could be experiencing lower COVID-19 numbers as compared to other regions because of demographic features and climate considerations, that is, COVID-19 is less prevalent in countries closer to the equator, where heat and humidity tend to be higher (Chen et al., 2021).

In Africa, the first confirmed case of COVID-19 was reported on 14 February 2020 in Egypt and this was followed by Nigeria. Owing to its weakened health systems and inadequate resources to effectively respond to COVID-19, the region was expected to experience a beyond heavy toll of COVID-19. However, with the favourable demographic structure and climate, many countries have had a good standing in the face of the pandemic in comparison to other countries in the world. Additionally, Africa has had experience in recent years having dealt with different epidemics such as ebola, polio and cholera where African governments have drawn lessons on response, strategies and preparedness to deal with COVID-19.

While initially, Africa seem to be affected only moderately by COVID-19, the spread of COVID-19 has been sporadic. In June 2020, the continent only had 156,000 confirmed cases, numbers that have surged up to the height of 6 million as at July 2021. The surge is driven by public fatigue on key health measures, increased variants and overstretched health systems that lack adequate critical care capacity to manage mass testing as well as care for confirmed cases.

In Kenya, the first case of COVID-19 was confirmed on 12 March 2020 in Nairobi by the Ministry of Health. The Government responded swiftly by rolling out several contingency measures. These included tracing all possible individuals who had contact with the patient and activation of a national response plan. The government has also been carrying out vigorous sensitization and behaviour change communication (BCC) campaigns. Since the first case, the number of confirmed cases has rapidly increased as well as deaths from COVID-19

related complications. Data from the WHO - COVID-19 dashboard records 201,009 confirmed cases of COVID-19, with 3,910 deaths in Kenya, as at 30 July 2021 (WHO, 2021).

Communication and behaviour change in COVID-19 response

During outbreaks of infectious diseases such as COVID-19, many interventions rely heavily on public participation, community engagement and ownership, for effective prevention and control efforts to work. The world is experiencing COVID-19 for the first time while for some it is after a long time. Literature suggests that like in past pandemics, effective communication, risk communications and behaviour change communication among other interventions are central in the response against COVID-19 (WHO, 2020b; Schmälzle et al., 2017; Verroen et al., 2013; Park et al., 2020).

The novelty of COVID-19 means that governments and actors are both learning and swiftly responding to the virus on the go. It is unknown how long this outbreak will last and as such the first hope of any government is community engagement to promote and institutionalize non-pharmaceutical interventions (Moghadas et al., 2021; Iezadi et al., 2020).

At such a time of COVID-19 pandemic, which is considered a public health emergency, people need information about the health risks they face and the actions they can take to protect themselves. Risk communication therefore becomes an integral part of any public health emergency response. A 2009 WHO report on *'why health communication is important in public health'* argues that many of the threats to global public health (through diseases and environmental calamities) are rooted in human behaviour (WHO, 2009).

In the context of COVID-19, this has been evident where the effectiveness of preventive and mitigative measures has relied on behavior change and adherence of the public to health measures such as social distancing, wearing of masks and hand-washing hygiene (Rimal and Lapinski, 2009).

BCC is an interactive process with communities (as integrated with an overall programme) to develop tailored messages and approaches using a variety of communication channels to develop positive behaviours; promote and sustain individual, community and societal behaviour change; and maintain appropriate behaviours. It is an effective communication approach grounded in theory and is evidence-based to help to promote changes in knowledge, attitudes, norms, beliefs and behaviours (FHI and USAID, 2002; Michie and West, 2021; Michie et al., 2020).

While the Government of Kenya has intensively employed BCC in its response to COVID-19, the rising numbers of COVID-19 cases in the country are evidence

that people are not effectively adhering to the mitigative directives provided. 2020 Knowledge, Attitudes, Perception and Practice (KAPP) survey on COVID-19 among the Kenyan population confirms this. In the KAPP assessment, respondents reported not to observe COVID-19 control measures all the time despite having access to facemasks, and water and soap or hand sanitizers (Kenya Ministry of Health, Kenya Medical Research Institute, and African Institute for Development Policy, 2020).

Counties in Kenya have recorded disproportionate COVID-19 numbers. Nairobi has been and remains the epicentre of COVID-19 in Kenya as at the time of the study. According to Statista, a German company specializing in market and consumer data, the capital (as of July 29, 2021) registered most of the confirmed COVID-19 cases in the country. The amount, 84,852 corresponded to about 42% of the total cases in Kenya (Statista, 2021).

Other counties that have recorded very high numbers to the extent of being put under lockdown measures include Mombasa, Kisumu and counties within the Nairobi Metropolitan Region such as Kiambu, Kajiado and Machakos.

Against this backdrop, the Government has rolled out sensitization and behavioural change campaigns at national level and local levels, and some targeting hotspot areas.

The Ministry of Health (MoH) and Accelerating Sustainable Control and Elimination of Neglected Tropical Diseases (ASCEND) behaviour change communication for COVID-19 response campaign

Due to increased community transmission of COVID-19 in the coastal region of Kenya and need for BCC to address practices that contribute to the transmission of the disease, the Ministry of Health (MoH) rolled out a communication campaign to promote precautionary action against COVID-19 between June and October 2020. The BCC campaign was rolled out in the select coastal counties - Mombasa, Kilifi, Kwale, Lamu, Tana River and Taita Taveta.

The campaign was supported by the Accelerating Sustainable Control and Elimination of Neglected Tropical Diseases (ASCEND) and implemented by the University of Nairobi Enterprises and Services (UNES).

The overall objective of the MoH/ASCEND Behaviour Change Communication for COVID-19 response Campaign was to raise awareness about COVID-19 and promote positive behaviour among residents of the coastal counties to curb the spread of the virus.

The objective of this study is therefore to analyse the campaignn with the aim of establishing the communication activities undertaken, and examine the communication messages employed to identify opportunities and gaps that can inform ongoing and future efforts combating COVID-19 and any outbreak that might arise.

Research questions

RQ 1: What communication activities were undertaken in the MoH/ASCEND COVID-19 BCC Campaign?
RQ 2: Which messaging and message types were used in the campaign and how were they used?

MATERIALS AND METHODS

Study design

This study was approached qualitatively to allow a rich understanding of the context and phenomenon (COVID-19) and associated behaviors among the public, through examination of actions, activities and records. This research approach tends to be more flexible and inductive hence allowed the researcher to take experiences and perceptions into consideration and adapt the research process in accordance with the emergent results (Creswell, 2017). Case study was employed as a tool and research method to understand influences.

Sampling

The study employed purposive sampling given the pre-conceived ideas about the required characteristics of the sample. Materials sampled – four (4) TV video commercials, two (2) Kiswahili audio spots for radio, five (5) print media (poster and stickers) and 10 documents, were arrived at using the saturation sample selection criteria. They were sourced from the campaign actors, the Kenya MoH, and the funder/partner ASCEND. The sample was considered sufficient when similarity in data occurred. As purposive sampling involves selection of a sample with a precise purpose in mind (analyse the MoH/ASCEND COVID-19 BCC Campaign), it was deemed most suitable for the study in selecting the content to be analysed.

Data collection

The study utilized secondary data sources, and content analysis was the primary method of data collection. Data collection was guided by a data collection guide (Additional file 1) to ensure focused data collection which was in line with the set objectives of the study. The content analyzed provided the study with data and in-depth details about how the MoH/ASCEND COVID-19 BCC Campaign was undertaken, the strategies employed, and the messaging.

FINDINGS

Data collected through the content analysis of documents, print and broadcast IEC materials used in the MoH/ASCEND COVID-19 BCC Campaign yielded several findings discussed below.

Theme one: Communication activities

Data revealed that key activities were undertaken before, during and after, to realise the objectives set out for the MoH/ASCEND Behaviour Change Communication for COVID-19 Response Campaign.

Developing information, education and communication materials

Data generated from campaign reports and related documentation shows that COVID-19 related information targeting the public was packaged in various forms of Information, Education and Communication (IEC) materials that included TV commercials (4), audio spots for radio (5) as well as posters and stickers. Aspects in the IEC materials including the messages, colour and themes were developed, pre-tested and approved for use by six working groups within the MoH- Department of Health Promotion (DHP).

Translation of IEC materials

The selection of the COVID-19 IEC materials was followed by a translation exercise. The researcher identified five languages as target dialects that the IEC materials were translated into. The languages included Kiswahili, Taita, Orma, Pokomo and Digo. Within the translation exercise, five translators were recruited each to translate the materials from English to the respective local languages. The recruitment was based on their education level, ability to communicate effectively and their knowledge of the local language. Data gathered shows that a total 28 COVID-19 IEC materials were translated, ready for dissemination.

Dissemination channels

The analysis found that the campaign utilised broadcast, print and online media to reach target audiences. Specifically, the campaign used TV, radio, posters and stickers, as well as social media.

The specific TV and radio stations engaged were selected based on reach, the target audience, the languages used, the popularity and familiarity of the broadcasting shows and presenters driving the show (with audience), the airing during high listenership time, and cost of airing the messages.   Based on this consideration, five broadcast stations were selected as follows:

(1) Kaya Radio FM: Selected for its popularity in the Coastal region. Broadcasts in Nduruma, Digo and Mijikenda languages, which transmits all over the coastal region.

(2) Kwale Ranet: Also based on popularity in the region. It is a Kiswahili station, most popular in Mombasa and Kwale towns.
(3) Tana River Broadcasting Station (TBS): The station is the most popular in Tana River County and also reaches Kilifi. It broadcasts in Orma, Pokomo and Kiswahili.
(4) Mwanedu FM: Selected because of its popularity in Taita Taveta County where it covers, and further parts of Tanzania borders. It broadcasts in Kitaita and Kiswahili.
(5) Tandao TV - This is a Kiswahili broadcasting television which is popular in Mombasa and its environs.

Posters and stickers were developed to be used for outdoor advertisement (markets, vehicles, health facilities or walls) for the printed versions and soft copy version of the same for social media.
Four social platforms were utilised for online engagement, which include Twitter, Facebook, Instagram and WhatsApp. Social media influencers as well media personalities from the region were brought on board to enhance impact on social platforms because of their many followers and listenership respectively, and ability to influence.

Campaign messaging

Types of messaging

The analysis found out that the campaign had messages of awareness. Messages of awareness in public campaigns or advertisements should define the topic; inform the target audience on what to do and how to perform the action.

Awareness creation was achieved in the campaign with messages focusing on what COVID-19 is and how it is spread. The public was also advised and encouraged to take precautionary action and how to go about it.

The campaign had messages of instruction. The IEC materials such as posters not only provided what to do and how but went on to demonstrate. At least all IEC provided one or more instructions for audiences on the precautionary action (s) needed to protect oneself and others from COVID-19. Atkin (2001) describes messages to be instructive when they define how to perform the action, when to perform it and where it should be performed.

The campaign had messages of persuasion. Beyond awareness and education, the campaign also presented messages that highlighted why the audience should take up precautionary action against COVID-19. This was the incentive strategy where both the negative and positive appeals of following or not following the guidelines were presented.

The campaign also attempted to persuade audiences by use of radio stations and presenters that were known and popular hence deemed credible to the audience. The campaign used engaging styles and techniques to help

attract attention. These included the use of music in the radio audio spots; highly graphical short videos; and poster messages presented in a visual, comprehensive and comprehensible manner to contribute to recipient processing.

Message content

The analysis found that messaging in the MoH/ASCENDS COVID-19 BCC campaign had uniformity and consistency. This was mainly due to the nature of COVID-19 emergency response in the country whereby all COVID-19 IEC materials were developed centrally by the MOH-DHP to prevent any misinformation.

The languages used in the campaign identified with the target audience who are the residents of coastal counties; Mombasa, Kilifi, Kwale, Lamu, Tana River and Taita Taveta. Swahili was largely used in the campaign and on the IEC materials because most of the coastal counties use it and is close to the local dialects. Other language used were Taita, Digo, Pokomo and Ormo which are the dialects used by the different communities at the coast.

The campaign used media personalities and social media influencers from the community as messengers, well known and even popular with the audience. This was to ensure the audience resonated with the messenger and to an extent the message. The campaign also featured public officials from MoH who participated for a one-hour live interview on radio. The session had a segment where radio listeners interacted with the MoH officials on air and could pose questions or concerns for the MoH officials to respond to.

All campaign IEC materials had a theme line and utilised symbols that represented the main idea which was COVID-19. The theme and tagline of the campaign, reflected in all its IEC materials was '*komesha corona okoa Maisha.*' This was a simple and direct tagline that quickly gave audiences an idea of what the campaign was about. All the IEC materials incorporated the MoH and the National Emergency Response Committee (NERC) logos, communicating that this was a government driven project. Other sets of IEC materials (posters and stickers) used the UKaid-ASCEND logo in addition to the MoH and NERC logos.

Campaign dissemination

Broadcast media

Once broadcast platforms (radio and TV stations) were selected, UNES negotiated with the stations for the best time and cost for airing the COVID-19 messages. Parties settled on using an activation package system (Additional file 2) that allowed for different and various messages to be included in one.

Social media

The campaign utilised four social media platforms namely Twitter, Facebook, Instagram and WhatsApp. Three influencers, and several media personalities (from the broadcast stations engaged) from coastal areas were engaged to promote and drive the campaign online. On each social platform, messages were posted daily by the influencers and presenters on their personal accounts. The team not only shared the soft copy version of IEC materials including posters and stickers but also engaged online audiences. The online campaign also leveraged on question formats to provoke audiences into action. Documents reviewed provided examples of such questions. For instance, audience were asked about their opinion on COVID-19 protections and this question was accompanied by posters and stickers.

The key messages shared through social media focused on sensitizing the public on self-care and protection at market places and inside *matatus*. They included messages encouraging limited travel during the COVID-19 pandemic thus minimizing exposure to COVID-19, hand washing, social distancing, and use of facemasks as well as avoiding to touch one's face (especially nose, mouth and eyes).

Printed IEC materials

The study found that 955 posters and 1650 stickers (Additional file 3] were printed and distributed in the six coastal counties. The materials were distributed to public places. The stickers were used to brand matatus, tuktuks, bodaboda, buses and trucks, while the posters were pasted in GoK health facilities, chief offices, police posts, shops, *matatu* and *bodaboda* stages, markets, bus booking offices as well as terminus.

DISCUSSION

The study established that the campaign carried out a number of key activities that contributed to the successful implementation of the campaign. These include but are not limited to developing IEC materials, translating the materials to Kiswahili and local dialects, pre-testing, dissemination and monitoring. These interventions and activities contributed to enhancing the successful roll-out of the campaign.

The campaign messages included messages of awareness, instruction and persuasion. Specifically, the messages highlighted COVID-19, its spread, status of virus spread in the country, effects of COVID-19, promoted measures that should be adopted, reinforced

the need to adhere to the directives provided and provided care guidelines for COVID-19 patients. Atkin (2001) posits that if PSAs contain the messages of awareness, instruction and persuasion, then individuals are more motivated to make a behaviour change. It can therefore be concluded that the application of the message types in the campaign influenced the target public to take up the desired behaviour to a great extent.

The study found that as part of the BCC interventions, IEC materials were developed and packaged as TV infomercials, audio spots for radio, posters, stickers and social media posts. The campaign employed TV, radio, print and social media platforms to strategically disseminate the materials and reach the target audience. As much as the dissemination channels were different, a unified theme and consistent display of the MoH and NERC logos contributed to the cohesiveness of the campaign. With the use of the same campaign theme and logos across all IEC materials, it can be concluded that campaign had consistency and the materials were easily recognizable.

The campaign employed social media as one of the dissemination channels. Messages were pushed on Facebook, Twitter, WhatsApp and Instagram in form of posts, questions, digital stickers and posters. A study by Abroms, et al (2007) found that by integrating new media into health campaigns, the success of results was enhanced. Therefore, the use of new media in the MoH/ASCEND COVID-19 BCC Campaign can be assumed to have contributed to more widespread reach and results.

The analysis also established that the campaign had on-going monitoring and tracking during and after the campaign. Monitoring during the campaign involved feedback from both the senders and receivers, for instance the presenters and listeners in the case of radio activations. Feedback collated was used to inform adjustments (where needed) in subsequent messaging. Overall, monitoring showed that the campaign had been well received by the residents of the target counties.

Conclusion

The study concludes that the MoH/ASCEND COVID-19 BCC Campaign was successfully rolled out, particularly the dissemination of IEC materials. There was deliberate effort to package information in different formats for wider reach and messages met the criteria adopted from Atkin's guides for PSAs. The study cannot however make generalized conclusions about the impact, if any or to what extent the campaign had in influencing behaviour change because only a content analysis was performed. A better understanding of whether the campaign achieved the expected effects can be gained through an outcome evaluation of the campaign. Furthermore, a broader understanding of the effectiveness of campaign

messages and strategies can be achieved through the use of different methods such as surveys and focus groups to determine if the campaign influenced change in behaviour and improved adherence of COVID-19 protective measures in the target counties.

Recommendations

The study identified several gaps mainly based on the feedback collated from audiences especially through radio and social media as provided in the campaign reports prepared by the MoH/ASCEND. These included the sentiments of the public held about COVID-19 and why they found it hard to fully follow the precautionary directives. As at the time of the study, the author did not come across any impact level evaluations within the documents provided thus the aspect of ascertaining the extent to which the campaign influenced behaviour change was not available. The study therefore recommends the following.

Outcomes and measures

The study recommends an outcome/measure of effect for this campaign and other campaigns on BCC for COVID-19 response. This recommendation is against the backdrop of the goal of the MoH/ASCENDS COVID-19 BCC Campaign, which was to among others raise awareness about COVID-19 and encourage the residents of the target counties to take up precautionary measures against the virus. The campaign has effectively carried out front-end evaluations along the way; measuring efforts and direct outputs of the campaign. However, back-end evaluation had not been done as at the time of the study. It is important to determine if indeed there was any behaviour change outcome in the target populations because of the campaign. This will help stakeholders to understand the impact of such a project and inform the potentiality of programme replication as well as iinfluence the course of future actions.

Bottom-top approach

The study recommends a bottom-top approach where the target population participates in the development and roll-out of BCC campaigns. This allows the target population to be actively involved rather than passive participants. A bottom-up approach will promote more ownership thus acceptance of the BCC initiative because the target population will feel they were involved in deliberations and decision-making. The MoH/ASCEND COVID-19 BCC Campaign has been developed, pre-tested and approved for use by six working groups within the MoH-DHP.

Consider environmental and economic factors

The study recommends that BCC campaigns specifically on COVID-19 account for environmental or economic factors that may hinder adherence to the recommended action. Among the feedback collated from the dissemination of the IEC materials were sentiments from some residents who felt that the printed materials were a waste of money. Further, some in the communities requested for sanitizers and facemasks instead of the posters. Generally, one key challenge that COVID-19 response has faced in the country has been the cost implication of adhering to the measures, which most Kenyans cannot meet. There are costs associated with buying masks, hand sanitizers, washing hands frequently (lack of water), or reducing travel (work or business gets affected). As such, it becomes economically and environmentally unsustainable to adhere to the measures even when one understands and appreciates the need.

Accessibility for all

Lastly, the study recommends ensuring the campaign materials are accessible to all in the community including persons with different disabilities. Each member of the community is susceptible to COVID-19 and as such, the MoH/ASCENDS COVID-19 BCC Campaign targeted everyone in the target counties. The study found no evidence to insinuate that the IEC materials factored persons with visual and hearing problems. There is need to address this in future campaigns by ensuring inclusive IEC materials by producing information in braille, simplified messaging such as pictograms and pictures or use of a sign language interpreter. The channels of dissemination can also be diversified to include dialogues, home visits or community awareness raising activities in addition to mainstream channels.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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