ANALYSIS OF BEHAVIOUR CHANGE COMMUNICATION IN COVID-19 RESPONSE: A CASE OF THE KENYA MINISTRY OF HEALTH AND ACCELERATING SUSTAINABLE CONTROL AND ELIMINATION OF NEGLECTED TROPICAL DISEASES (ASCEND) CAMPAIGN IN COASTAL COUNTIES

ANN WAITHAKA
K50/33925/2019

A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS OF THE AWARD OF MASTER OF ARTS DEGREE IN COMMUNICATION STUDIES, SCHOOL OF JOURNALISM AND MASS COMMUNICATION, UNIVERSITY OF NAIROBI

2021

DECLARATION

I, the undersigned, declare that this is my original work and has not been submitted to any other college, institution or university for examination or academic purposes other than the University of Nairobi

....J. WAITHAKA..... ....16/11/2021.....

Student
Ann Waithaka
K50/33925/2019

Date

This project has been presented for examination with my approval as the appointed supervisor.

..... 16/11/2021

Supervisor
Dr. Samuel Siringi
Senior Lecturer
Department of Journalism and Mass Communication
University of Nairobi

Date

DEDICATION

To my dear parents, thank you for always believing in me.

I dedicate this paper to those we have lost to COVID-19 and their families. Take heart. To our COVID-19 front-line response, the courage and effort you have put in day in and day out to provide care and management of the virus is not lost on us. Thank you.

ACKNOWLEDGEMENTS

First, I thank and acknowledge God. I am grateful for his sufficient grace that has enabled me to progress in my education and see this project to the end.

I am highly indebted to my supervisor, Dr. Samuel Siringi for walking and working with me on this project. Your support, dedication and guidance throughout has been instrumental not only to completing the project in a timely manner but also producing quality work. I also wish to thank all the lecturers from the School of Journalism who I have had the opportunity to study under in my coursework. The coursework was not only stimulating but enjoyable.

I acknowledge the Kenya Ministry of Health (MoH), particularly the Division of Health Promotion and the Accelerating the Sustainable Control and Elimination of Neglected Tropical Diseases (ASCEND) for their provision of materials and reference to important sources. I single out Gladys Mugambi (MoH) and Duncun Ochol (ASCEND).

I would also wish to thank my family especially my parents for their unwavering support and always believing in me. My brother Waithaka for your encouragement and interest in my studies. My late grandmother, I know you would have been proud of how far I have come.

Lastly I thank my friends Angela Ng'ossor , Antony Kiarie and Jay Mugo, for always providing a listening ear and pushing me to get things done. Aurelia, Shyne, Abigail, Majoni and my many friends in the Graduate School of Journalism, 2019 cohort, you have been amazing classmates, group mates and study buddies.

Blessings upon blessings to you all!

LIST OF ABBREVIATIONS AND ACRONYMS

ASCEND:	Accelerating the Sustainable Control and Elimination of Neglected Tropical Diseases
BCC:	Behavior Change Communication
CDC:	Centers for Disease Control and Prevention
COVID-19:	Coronavirus Disease 2019
DIT:	Diffusion of Innovations Theory
DHP:	Division of Health Promotion
FAO:	Food and Agriculture Organization
HBM:	Health Belief Model
IFAD:	International Fund for Agricultural Development
IBM:	Integrated Behavioral Model
IEC:	Information, Education and Communication
ILO:	International Labour Organization
KAPP:	Knowledge, Attitudes, Perception and Practice
MoH:	Ministry of Health
NERC:	National Emergency Response Committee
NPIs:	Non-Pharmaceutical Interventions
PIs:	Pharmaceutical Interventions
PSA:	Public Service Advertisements
SARS:	Severe Acute Respiratory Syndrome
SCM:	Stages of Change Model
SCT:	Social Cognitive Theory
TPB:	Theory of Planned Behavior
TRA:	Theory of Reasoned Action
WHO:	World Health Organization

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

ABSTRACT

This study sought to analyze behavior change communication in response to coronavirus disease 2019 (COVID-19), with a focus on a campaign carried out by the Kenya Ministry of Health (MoH) and the Accelerating Sustainable Control and Elimination of Neglected Tropical Diseases (ASCEND) between June and October 2020. The campaign was rolled in the select coastal counties of Mombasa, Kilifi, Kwale, Lamu, Tana River and Taita Taveta. It was implemented by the University of Nairobi Enterprises and Services (UNES). The study's specific objectives were to: establish the communication activities undertaken in the campaign; to analyze the communication messages in the campaign; and to determine the use or non-use of health communication theories in the campaign, specifically the health belief model and the social cognitive theory. To achieve these objectives, the research adopted a qualitative approach. Data was generated through a content analysis of Information, Education and Communication (IEC) materials developed and disseminated during the campaign as well as related documents. The analysis of the data collected was guided by three coding sheets and the findings presented narratively. The study found that the MoH/ASCEND Behaviour Change Communication for COVID-19 Response Campaign carried out several communication activities that contributed toa successful roll-out. These included development of IEC materials, translation of the materials to Kiswahili and local dialects of the target counties, identification of media channels, and dissemination. Findings indicate that the MoH/ASCEND Behaviour Change Communication for COVID-19 Response Campaign used broadcast media (radio and TV), social media and print media (posters and stickers) to reach target audiences. An analysis of the messaging used in the campaign revealed that messages of awareness, persuasion and of instruction were employed with the goal of motivating behaviour change. The study also found that the campaign applied the health belief model and social cognitive theory concepts to develop communications that promoted precautionary action against COVID-19. The study concluded that the MoH/ASCEND Behaviour Change Communication for COVID-19 Response Campaign was successfully rolled out, particularly the dissemination of IEC materials. However, the study cannot make further generalized conclusions about the success of the campaign because only a content analysis was performed on the campaign materials and strategies used before and during the campaign's implementation. 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 behavior and improved adherence of COVID-19 protective measures in the target counties.

CHAPTER ONE

BACKGROUND OF THE STUDY

1.1 Overview

In this chapter, background of the study will be discussed, the problem elaborated, research objectives outlined and the scope of the research, justification as well as the conclusion provided.

1.2 Background

The coronavirus disease 2019 (COVID-19) began in December 2019 in Wuhan, China. Coronaviruses are a large family of viruses 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 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.

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

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 WHO, globally there have been over 196 million confirmed cases of COVID-19 including over 4.2 million deaths, as at 30 July 2021 (WHO, 2021).

COVID-19 has hit the world at a time of immense world challenges such as climate change, violence and terrorism, food insecurity, poverty and diseases. The COVID-19 pandemic presents further unprecedented challenges to food systems, public health as well livelihoods.

Measures to control or mitigate COVID19 outbreaks are affecting service delivery of among other things health care; border restrictions are affecting work related travel and business activities as well as disrupted global food supply chains further deepening the food crisis situation in the world. (United Nations, 2020).

According to International Labour Organization (ILO), Food and Agriculture Organization (FAO), International Fund for Agricultural Development (IFAD) and WHO (2020), the economic and social disruption caused by the pandemic is devastating: tens of millions of people are at risk of falling into extreme poverty, while the number of undernourished people, currently estimated at nearly 690 million, could increase by up to 132 million by the end of the year.

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, S., Prettner, K., Kuhn, M. 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 favorable 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 like ebola, polio and cholera where African governments have drawn lessons on response, strategies and preparedness to deal with COVID-19.

While initially, Africa seemed 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. Since then, 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).

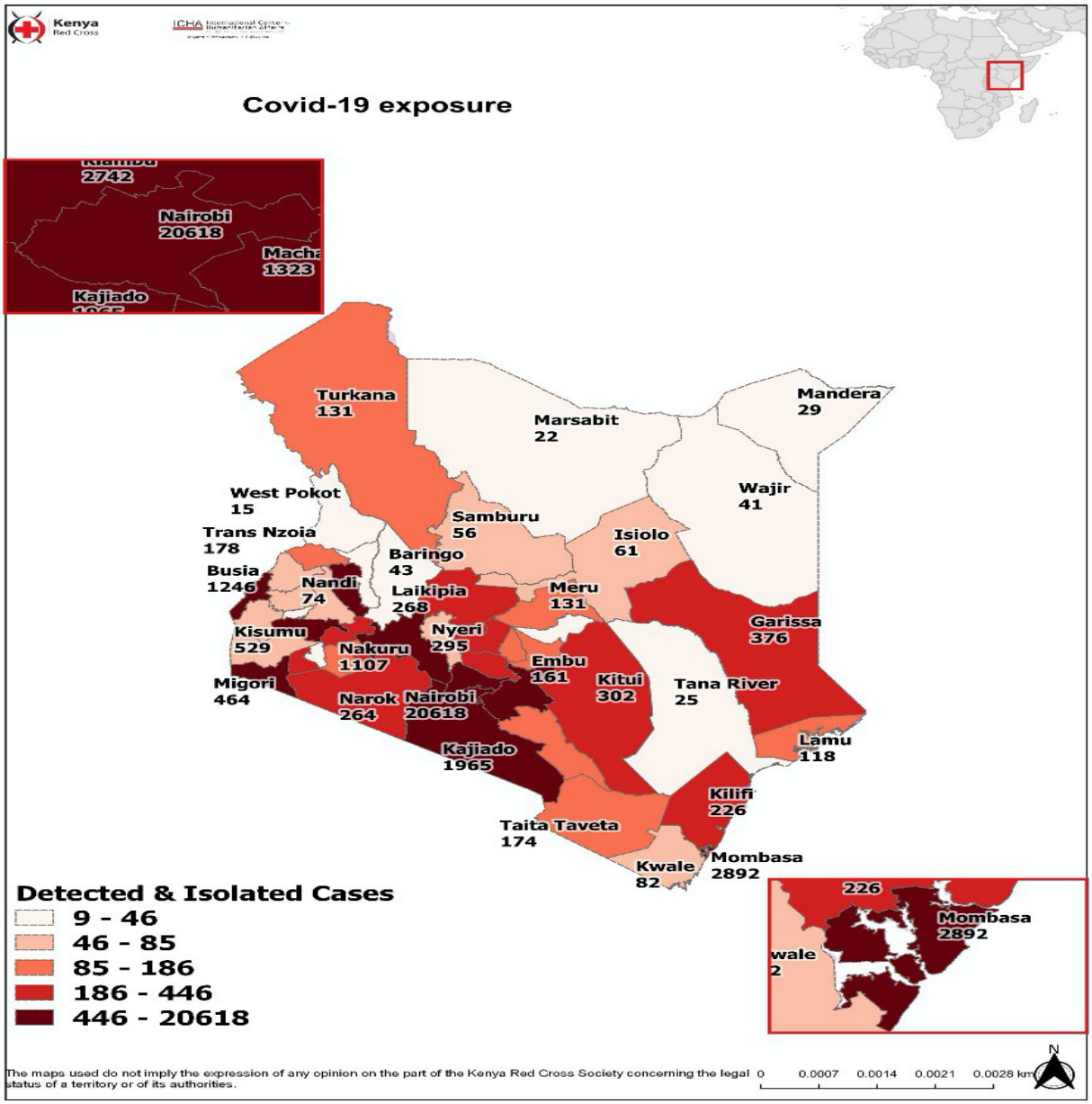
Kenya's COVID-19 response plan to COVID-19 has included the setting up of the National Emergency Response Committee (NERC) on Coronavirus, and various sub-committees to deal with the various aspects of the response and provide technical support to NERC on Coronavirus. The government has also been keen to promote measures and mitigations provided by WHO which include regular hand-washing with soap, covering mouth and nose when coughing and sneezing, social distancing and staying at home unless necessary as well as wearing masks especially in public and highly populated places.

Further, between 2020 and 2021, the government has enforced specific measures such as closure of schools, cessation of inter-county movement, closing international borders, introduction of dusk-dawn curfews and banning of public gatherings including social and religious gatherings. The review and decision to lift or maintain the measures has been subject to COVID-19 numbers recorded and the overall ability of to manage COVID-19 at county and national level. To note is that the enforcement of especially the lock-down and movement measures has left a heavy toll on both the social life of Kenyans and the economy of the country.

Counties in Kenya have recorded disproportionate COVID-19 numbers. Nairobi has been and remains the epicenter of COVID-19 in Kenya as at the time of this 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 percent of the total cases in Kenya. Other counties that have

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

Figure 1: Cumulative confirmed COVID-19 cases in different counties of Kenya



Source: International Center for Humanitarian Affairs - Modelling COVID-19 Risk in Kenya To Enhance Humanitarian Response (June 2021)

Like other developing countries, Kenya's major challenges in effectively responding to COVID-19 lies in its inefficient health care system that is already overburdened as well lack of resources to cushion its citizens against the effects of COVID-19 including the

implications of mitigative measures. Efforts have also been affected by community fatigue in regard to adhering to the COVID-19 containment measures and the cost-related implications that comes with adhering to some of the measures that are unsustainable for the common 'mwananchi.'

The development and roll out of COVID-19 vaccine have been a great step towards getting back to normal life. Globally, the first mass vaccination programme started in early December 2020. Kenya received the AstraZeneca Vaccine in March 2021. First priority group for the two-dose vaccine was front line health workers; those who are over 58 years of age; teachers, police and military personnel. So far, a total of 1,673,272 vaccine doses have been administered, as at 25 July 2021 (WHO, 2021).

While getting vaccinated does not guarantee that one cannot get infected with COVID-19, studies show that the vaccine is effective at preventing severe illness from COVID-19. This therefore means that the public must continue observing directives such as wearing masks, cleaning hands, social distancing and ensuring good ventilation indoors.

1.2.1 The Ministry of Health (MoH) and Accelerating Sustainable Control and Elimination Of Neglected Tropical Diseases (ASCEND) Behaviour Change Communication for COVID-19 Response Campaign

Against the backdrop of increased community transmission of COVID-19 in Kenya and need for behaviour change communication to address practices that contribute to the transmission of the disease, the Ministry of Health (MoH) rolled out a communication campaign to promote behaviour change for COVID-19 Response between June and October 2020.

The campaign was supported by the Accelerating Sustainable Control and Elimination of Neglected Tropical Diseases (ASCEND) and rolled out by the University of Nairobi Enterprises and Services (UNES). The campaign targeted select counties in the coastal region which included Mombasa, Kilifi, Kwale, Lamu, Tana River and Taita Taveta.

A county such as Mombasa had been identified as a high risk from aspects of health and humanitarian impact of COVID-19, with potential to overwhelm national response capacity. This was characterized by high COVID-19 cases recorded cumulatively and high number of vulnerable populations.

1.3 Problem Statement

The outbreak of COVID-19 has posed great stress on the health, social and economic well-being of populations across the globe. Nations have moved swiftly to take immediate preventative and protective measures to curb the spread of COVID-19. Containment measures within the COVID-19 outbreak have focused on identifying; treating and isolating infected people; contact-tracing of persons in contact with confirmed positive cases; travel and movement restrictions; as well as sensitization and promotion of precautionary behaviors among the public.

In Kenya, the government through the NERC on Coronavirus has put in place several measures to reduce disease transmission and increase prevention efforts including but not limited to: mandatory use of face masks in public, promotion of frequent hand hygiene, dusk to dawn curfew, periodic cessation of movement particularly in and out of hot-spot counties as well as promotion of social and physical distancing.

Additionally, the government has invested heavily on creating awareness about COVID-19 and empowering the public with information to encourage and equip citizens to take up preventative and protective behaviors. Activities to achieve this have included use of various communication and media channels to provide information and educate the public; production and dissemination of COVID-19 Information, Education and Communication (IEC) materials as well as social and Behaviour Change Communication (BCC) campaigns activities across the country.

Despite the government's considerable efforts to manage and curb the spread of the infectious COVID-19, numbers are still on the rise. At the time of this study, Kenya faces a catastrophic fourth wave which has been described as a faster and fitter strain of COVID-19. The successful application of mitigative interventions against COVID-19 has and will continue to rely largely on individual and collective action and adherence to protective measures. Therefore, the psychological and behavioral responses of the overall population are crucial within the control of the outbreak.

While the Kenyan government has intensively employed BCC in its response against 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. A 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 face-masks, and water and soap or hand sanitisers (Kenya Ministry of Health, Kenya Medical Research Institute and the African Institute for Development Policy)

The on-going situation – rising numbers and government's response therefore provides a unique platform to analyze the behaviour change communication campaigns in the country in response to the COVID-19 pandemic with the aim of informing and/or refining BCC approaches and ensure successful intervention programmes in this pandemic and for future pandemics.

1.4 Objectives

The general objective of the study was to analyze the MoH/ASCEND Behaviour Change Communication for COVID-19 Response Campaign, rolled out between June and October 2020 in select coastal counties of Kenya.

Specific objectives of study were to:

1. To establish the communication activities undertaken in the MoH/ASCEND Behaviour Change Communication for COVID-19 Response Campaign
2. To analyze the campaign messages used to motivate behavior change
3. To determine the use or non-use of health communication theories (Health belief model, social cognitive theory) in the campaign

1.5 Research questions

1. Which communication activities were undertaken in the MoH/ASCEND Behaviour Change Communication For COVID-19 Response Campaign?
2. Which messaging and message types were used in the campaign and how were they used?

3. Did the campaign adhere to the health belief model and social cognitive theory health communication theories?

1.6 Justification

The emergence of COVID-19 has had adverse and worrying effects on human health, economies and ways of life of populations around the world. In Kenya, the pandemic has severely overburdened the health system, led to loss of life, negatively impacted the economy and eroded strides made towards poverty reduction in the country. The most effective and important approach to responding to, and curbing the spread of COVID-19 has been behavior change and willingness to adhere to preventive and protective measures among the public.

Like most governments around the world, the Kenyan Government has undertaken rigorous public awareness and information campaign to empower citizens with factual information about COVID-19 that informs the needed action. In this regard, the government spent Ksh 3.77 Billion on COVID-19 campaigns between March (when the first case was confirmed) and August 2020 (Cytonn, 2020).

Despite the efforts and investment in educating the public, COVID-cases and deaths continue to rise. It is therefore of essence to analyze such campaigns geared towards public awareness on COVID-19 and behavior change efforts so as to identify learning opportunities including any gaps or factors that might affect effectiveness and required adherence from the public. Data generated from such an analysis can inform future campaigns targeting public sensitization and behaviour change not only during COVID-19 but also in unforeseen future pandemics.

1.7 Significance of the study

For over a year, the COVID-19 pandemic has threatened human health and public safety as well as had adverse impact on social and economic aspects of populations in Kenya and across the globe. The pandemic is not likely to end soon and at the heart of curbing the spread of the virus is rigorous public sensitization and behavior change efforts. The government and actors are likely to roll out numerous campaigns – at different levels (national and sub-national) and at different stages of the pandemic. Analysis of such campaigns is of value for

purposes of learning so as to inform best practices to ensure effective and targeted communication and community engagement efforts.

1.8 Scope and Limitations of the study

This research will elaborately study the MoH/ASCEND Behaviour Change Communication for COVID-19 Response Campaign for the period it was rolled out, June - October 2020 in the select counties of Mombasa, Kilifi, Kwale, Lamu, Tana River and Taita Taveta. The researcher would have wished to have interviews with the residents from the counties listed above to gather first-hand information about their sentiments and perceptions about the BCC campaign but due to the need to limit movement because of COVID-19 as well as time constraints, this will not be possible.

1.9 Operational Definitions

Behaviour Change: efforts in the context of public health towards changing peoples' personal habits and attitudes, to prevent disease

Behaviour Change Communication: strategic use of communication activities and interventions to promote precautionary action against COVID-19

Campaign: organized sequence of activities to sensitize the public about COVID-19

Case study: detailed study of the MoH/ASCEND Behaviour Change Communication for COVID-19 Response Campaign

Communication activities: a series of activities employed in the BCC campaign that contributed to realizing the overall goal

Content analysis: research tool used to analyze the campaign materials to determine the presence of themes and respond to the research questions

COVID-19: a contagious respiratory virus that broke out in 2019 and causes illness in humans

Infection: COVID-19 enters the body and causes one to be sick.

Ministry of Health: government agency charged with spearheading the response to the COVID-19 pandemic

Messaging: how messages about COVID-19 were framed and transmitted

MoH/ASCEND Behaviour Change Communication for COVID-19 Response

Campaign: a public campaign implemented between June-October 2020 in the coastal counties of Mombasa, Kilifi, Kwale, Lamu, Tana River and Taita Taveta.

Precautionary action: individual measures meant to protect one from contracting and spreading COVID-19

Response: strategies and interventions implemented for the control of the COVID-19 pandemic

Self-efficacy: the believe that people can change a behaviour based on the skill and knowledge they have about their new behaviour and confidence that they can do it.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter provides a synthesis of literature review on COVID-19, behavior change communication and discusses the application of behavioural change within an infectious disease and emergency response context. Further, the chapter highlights the theoretical framework, an empirical review as well as outlines the conceptual framework, where the variables under study are conceptualized.

2.2 The Coronavirus Disease 2019 (COVID-19)

The world continues to grapple with the pandemic that originated in the city of Wuhan, China. It was first identified as a new coronavirus (severe acute respiratory syndrome coronavirus 2, or SARS-CoV-2), and later named Coronavirus Disease-19 or COVID-19 (Qiu et al., 2020). The virus belongs to the family of viruses that cause viral pneumonia and include symptoms such as fever, breathing difficulty, and lung infection (Adhikari et al., 2020). The virus has so far spread rapidly throughout the world. While initially, confirmed cases acquired their infection overseas, more and more countries are grappling with community transmission, that is, transmission within borders that is not ideal from an infection control perspective. Below is a timeline of key events, starting from late December 2019.

Table 1: Timeline of key events of COVID-19 pandemic

Event	Date
First pneumonia case discovered in Wuhan, capital city of Hubei Province of China	8 December 2019
Clusters of patients with such pneumonia reported	throughout late December 2019
World Health Organization (WHO) informed of cases of pneumonia of unknown cause in Wuhan City, China	31 December 2019
WHO reports cluster of pneumonia cases in Wuhan, Hubei, China with no deaths – in Wuhan, Hubei province	4 January 2020
WHO identifies COVID-19	7 January 2020
WHO issues an online comprehensive package of technical guidance with advice to all countries on how to detect, test and manage potential cases	10 January 2020
China announces 1st death from COVID-19	11 January 2020

A case of COVID-19 is confirmed in Thailand, the first recorded case outside of China.	13 January 2020
Authorities in the Nepal, France, Australia, Malaysia, Singapore, South Korea, Vietnam and Taiwan confirm cases	17 January 2020
First case of COVID-19 reported in the United States of America	21 January 2020
WHO mission to China issues a statement saying that there was evidence of human-to-human transmission in Wuhan	22 January 2020
China imposes lockdown in the cities of Wuhan, Xiantao and Chibi of the Hubei province	23 January 2020
WHO declares COVID-19 to be a public health emergency of international concern	30 January 2020
First death outside of China in Philippines due to COVID-19 reported	2 February 2020
The death toll in China surpasses that of the 2002-2003 Severe Acute Respiratory Syndrome (SARS)	9 February 2020
Egypt reports first case of COVID-19, first case on the African continent	14 February 2020
COVID-19 cases rise in Italy in what becomes the largest outbreak outside of Asia	23 February 2020
US reports first case of community transmission	27 February 2020
Over 100 countries report COVID-19 cases	8 March 2020
WHO declares COVID-19 a pandemic	11 March 2020
Kenya reports first case of COVID-19 making it the 11th sub-Saharan African country to confirm the coronavirus since the December outbreak	12 March 2020

Source WHO and Africa CDC (2021)

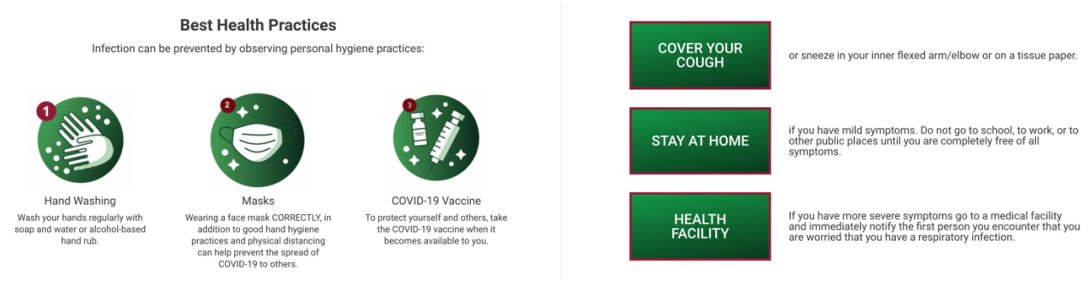
2.2.1 How COVID-19 spreads

The infectious virus spreads when an infected person breathes out droplets and very small particles that contain the virus. According to the Centers for Diseases and Preventions (2021), the virus is mainly spread through three ways; breathing in air when close to an infected person who is exhaling small droplets and particles that contain the virus; having these small droplets and particles that contain virus land on the eyes, nose, or mouth, especially through splashes and sprays like a cough or sneeze; and touching eyes, nose, or mouth with hands that have the virus on them. Because of its high transmission capacity and associated adverse consequences including death, COVID-19 is a global health concern.

Largely because of the novelty of COVID-19, there is not yet a cure for the virus (as of the time of this study) and governments across the world have prioritized on non-pharmaceutical measures such as use of face masks, hand hygiene and maintaining social distancing, all meant to slow down further spread and contain the virus. A systematic review on community interventions in Low- and Middle- Income Countries conducted by Abdullahi et al., (2020) confirms the use of these public health measures in effectively controlling the spread of COVID-19.

However, the effectiveness of the measures is reliant on adherence from individuals and communities. In addition to the recommended public health measures, described as non-pharmaceutical, there is also the COVID-19 vaccine which has offered a potential to save lives through reducing the risk of infection and/or minimizing severe effects should one get infected. While vaccines against COVID-19 are a potential panacea for the pandemic, vaccination alone is insufficient to contain the outbreak (Moore et al., (2021).

Figure 2: Some of the recommended health practices to prevent spread of COVID-19



Source: Africa CDC (2021)

2.3 History of pandemics

Throughout history, the emergence and spread of infectious diseases with pandemic potential has occurred regularly. According to Dobson and Carper (1996), the spread of infectious diseases among humans has been favoured by the shift to agrarian societies that came with expanded trade, movement and interaction. Interactions between humans and animals as a result of this shift has facilitated the transmission of zoonotic pathogens.

Evidence shows that there there has been a notable rise in the frequency of pandemics from the year 2000 and thereafter, particularly due to increased emergence of viral disease amongst animals (Madhav et al., 2017). The table below provides a historical timeline of major pandemics across the World.

Table 2: Historical timeline of major pandemics across the World

Name	**Time Period**	**Type/Pre-human host**	**Estimated Death Toll**
Antonine Plague	165-180	Believed to be either smallpox or measles	5 million
Japanese smallpox epidemic	735-737	Variola major virus	1 million
Plague of Justinian	541-542	Yersinia pestis bacteria/rats, fleas	30 to 50 million
Black Death	1347-1351	Yersinia pestis bacteria/rats, fleas	200 million
New World Smallpox Outbreak	1520-onwards	Variola major virus	56 million
Great Plague of London	1665	Yersinia pestis bacteria/rats, fleas	100,000
Italian Plague	1629-1631	Yersinia pestis bacteria/rats, fleas	1 million
Cholera Pandemics 1-6	1817-1923	V. cholerae bacteria	1 million+
Third Plague	1885	Yersinia pestis bacteria/rats, fleas	12 million (China & India)
Yellow Fever	Late 1800s	Virus/Mosquitoes	100,000-150,000 (US)
Russian Flu	1889-1890	H2N2 (avian origin)	1 million

Spanish Flu	1918-1919	H1N1 virus/pigs	40 to 50 million
Asian Flu	1957-1958	H2N2 virus	1.1 million
Hong Kong Flu	1968-1970	H3N2 virus	1 million
HIV/AIDS	1981-present	Virus/chimpanzees	25 to 35 million
Swine Flu	2009-2010	H1N1 virus/pigs	200,000
SARS	2002-2003	Coronavirus/bats, civets	770
Ebola	2014-2016	Ebolavirus/ wild animals	11,000
MERS	2015-present	Coronavirus/bats, camels	850
COVID-19	2019-Present	Coronavirus – Unknown (possibly pangolins)	4.2M (WHO estimate as of 30 July 2021)

Source: World Economic Forum (2020). Note: Many of the death toll numbers listed above are best estimates based on available research.

2.3.1 Responding to pandemics

During outbreaks of infectious diseases, there are different approaches to manage the pandemic and limit further spread. These include either pharmaceutical interventions (PIs) - drugs, such as vaccines and anti-viral medications, or non-pharmaceutical interventions (NPIs) or public health measures such as isolation, quarantine and border control. Often, PIs are not available in many areas of the world in sufficient quantities to make a significant contribution toward reducing deaths. In the absence of PIs, containment methods have been widely used, such as in the case of COVID-19 today.

According to a USAID toolkit (2011), these NPIs or community mitigative measures, help reduce the impact of a pandemic by:

- Delaying the effects of the pandemic to provide more time for preparedness and response efforts;
- Reducing the number of people who are exposed and then infected; and
- Decreasing the number of people who become infected meaning that fewer people will get sick or die, and that hospitals and doctors will be better able to take care of the sick.

2.4 Behavior change, and risk communication during pandemics

The factors that cause emerging infectious diseases – pandemics as well as epidermis are complex hence cross-sectoral and multi-disciplinary approaches have become vital to address and manage such outbreaks. The most important factor in controlling the spread of COVID-19 is information that empowers and sensitizes people about the outbreak. This is because during outbreaks of infectious diseases, many interventions rely heavily on public participation, community engagement and ownership for effective prevention and control efforts to work. Additionally, social and behavioural interventions have become essential components in mitigating the effects and further spread of outbreaks.

Many countries around the world are experiencing COVID-19 for the first time while some are experiencing such an outbreak after a long time. The novelty of COVID-19 has meant 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 NPIs (Seyed et al.,2021).

Communication surrounding a novel disease of unknown cause, with epidemiological potential such as COVID-19 is often more difficult than that of an established disease. It is at such a time – a public health emergency that 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 (WHO, 2018)

According to WHO (2018), risk communication is viewed primarily as the dissemination of information to the public about health risks and events, such as outbreaks of disease and instructions on how to change behaviour to mitigate those risks. It includes the range of communication capacities required through the preparedness, response and recovery phases of a serious public health event to encourage informed decision-making, positive behaviour change and the fostering public trust.

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. In the context of COVID-19, this has been evident where the effectiveness of preventive and mitigative measures has relied on behaviour change and adherence of the public to health measures such as social distancing, wearing of masks and hand-washing hygiene. Michie et al., (2020) assert that human behaviour will determine how quickly COVID-19 spreads and the mortality. Communication is central in this notion.

Behavior Change Communication (BCC) is an interactive process with communities (as integrated with an overall program) to develop tailored messages and approaches using a variety of communication channels to develop positive behaviors; promote and sustain individual, community and societal behavior change; and maintain appropriate behaviors (FHI, 2002). It is an effective communication approach, grounded in theory and is evidence-based which helps to promote changes in knowledge, attitudes, norms, beliefs and behaviors.

2.5 Theoretical Review: Models of BCC

The Centers for Disease Control and Prevention (2018) define BCC as the strategic use of communication to promote positive health outcomes, based on proven theories and models of behavior. In BCC, the range of commonly applied theories have broad support for use within an infectious disease and emergency response context (Weston et al.,2020). Behaviour change and/or health communication theories bare the roots of BCC (FHI, 2002). They inform relevant and comprehensive communication strategies and interventions.

This study discusses five BCC models and theories namely – the Health Belief Model, the Integrated Behavioral Model, the Stages of Change Model, the Social Cognitive Theory and the Diffusion of Innovations Theory.

A widely used theory in health education and promotion, the *Health Belief Model (HBM)* attempts to explain and predict health behaviors by focusing on the beliefs and attitudes of individuals. According to a 2017 publication by the University of Twente, HBM asserts that individual behavior depends on a number of beliefs about threats to an individual's well - being and the effectiveness and outcomes of particular actions or behaviors.

The model was first developed in the 1950s by social psychologists working in the United States of America who were attempting to explain and predict health behaviors by focusing on the attitudes and beliefs of individuals. Since then, the model has been adapted to explore a variety of long and short -term health behaviors, including sexual risk behaviors and the transmission of HIV/AIDS.

Rosenstock, Strecher and Becker (1994) outline key variables in HBM as follows:

- **Perceived threat:** consists of perceived susceptibility (subjective perception of the risk of contracting a health condition) and perceived severity (feelings concerning the seriousness of contracting an illness or of leaving it untreated, including evaluations of both medical and social consequences).
- **Perceived benefits:** reward that comes with believed effectiveness of strategies designed to reduce the threat of illness.
- **Perceived barriers:** potential negative consequences that may result from taking particular health actions.
- **Cues to action:** events, either bodily (e.g., physical symptoms of a health condition) or environmental (e.g., media publicity) that motivate people to take action.
- **Other variables:** such as diverse demographic, socio-psychological, and structural variables that affect an individual's perceptions and thus indirectly influence health-related behavior.
- **Self-efficacy:** a concept introduced by Bandura in 1977, this is the belief in being able to successfully execute the behavior required to produce the desired outcomes. It is the level of a person's confidence in his or her ability to successfully perform a behavior.

The *Integrated Behavioral Model (IBM)* is framework for understanding and influencing human behavior, centered around intention. It is a combination of two theories: the Theory of Reasoned Action (TRA) and the Theory of Planned Behavior (TPB). TRA is the first theory that led to IBM and aims to explain the connection between attitudes and behaviors within the context of human action. It asserts that behavioural intention or motivation to comply is driven by attitudes and subjective norms (Fishbein & Ajzen, 1980). TPB, developed by Icek Ajzen (1985, 1991) adds on to the TRA model but with the addition of control as a determinant of behavior. It is a general model to predict and explain behavior with a key assumption that behaviors are under one's will/control.

The *Stages of Change Model (SCM)* views behavior change as a sequence of actions or events. It was developed by psychologists in 1982 to compare smokers in therapy and self-changers along a behavior change continuum. The model posits that for individuals to adapt a new behavior, they move through several stages, described by Prochaska, DiClemente and Norcross (1992) to include: pre-contemplation, contemplation, preparation, action, and maintenance.

SCM asserts that to get people to change their behaviors, it is necessary to determine where they are on the continuum of behavior change and then to develop interventions that move them along from stage-to-stage. Movement through these stages does not always occur in a linear manner but may also be cyclical as many individuals can make several attempts at behavior change before they achieve their goals. The model has been useful for research and social marketing, and has also been successfully applied to a variety of addictive behaviors such as smoking, acquisition behaviors, and psychological distress (Alan Andreasen, 1997).

The *Social Cognitive Theory (SCT)* explains how people actively shape and are shaped by their environment. The theory was developed by psychology professor Albert Bandura, starting off as the social learning theory in the 1960s and was later developed into the social cognitive theory in 1986. SCT considers the unique way people acquire and maintain behavior and as agents who both influence and are influenced by the environment. It explains behavior as a dynamic and reciprocal process in which personal factors, environmental influences and behavior constantly interact. SCT posists that people can learn from their own experiences, and by observing actions of others, and outcomes of those actions.

According to Bandura (1997), people can observe behavior conducted by others and imitate these models by reproducing those actions. Observational learning occurs in a sequence of four stages:

- **Attention processes:** refers to the information collected for observation from the environment.
- **Retention process:** recalling the observed information so that it can be successfully reconstructed later.
- **Production processes:** reconstructing memories of the observed behavior for application in an appropriate situation. The observer may not necessarily replicate the behavior exactly but may modify it to suit the context.
- **Motivational processes:** determines whether or not the observed behavior will be reproduced depending on whether it brings desired or undesired outcomes for the model.

In BCC, SCT can be applied through modeling, where the desired behavior, as well as the resulting benefits, can be demonstrated and popularized by role models.

The *Diffusion of Innovations Theory (DIT)* is described by Halton (2019) as a hypothesis outlining how new technological and other advancements spread throughout societies and cultures, from introduction to wider-adoption. The theory seeks to explain how and why new ideas and practices are adopted, with timelines potentially spread out over long periods. It is also the way in which innovations are communicated to different parts of society and the subjective opinions associated with the innovations are important factors in how quickly diffusion—or spreading, occurs.

Developed by Prof. Everett M. Rogers in 1962, DIT originated in communication to explain how, over time an idea or a product gains trust and diffuses (spreads) through a specific population or social system. The result of this diffusion is that people, as part of a social system, adopt a new idea, behavior, or product. Adoption means that a person does something different than what they had previously. For instance during the COVID-19 pandemic, the wearing of masks and frequent hand washing is new behaviours that the public has had to adopt.

DIT identifies five categories that define a person's inclination to accept or adopt an innovation:

- **Innovators:** the quickest to adopt an innovation and sometimes are the first to implement new ideas. To cater to this demographic, very little, if anything, needs to be done.
- **Early adopters:** more mainstream within the community and are characterized by acceptance of innovation. Often, resources, how-to manuals and information sheets are required to be able to adopt the innovation
- **Early majority:** amenable to change but before they are able to implement it, they usually need to see proof that the innovation works. Success stories and proof of the effectiveness of creativity provide tactics to cater to this demographic.
- **Late majority:** skeptical and wary of change, and would only accept an idea after the majority has experienced it.
- **Laggards:** these are most conservative and resistant to change; sometimes, they may never change.

The success and applicability of DIT is guided by some principles that impact whether or not an innovation is taken up by individuals in the community. These include; innovation; communication mechanisms and channels of communication; the passing of time; potential adopters; and the social system. All are essential elements of the theory (Dearing, 2010; Dearing & Cox, 2018; Rudd, 2016).

2.6 Conceptual Review

The 21st century has grappled with outbreaks of infectious disease, particularly those which little or no pre-existing immunity exists such as severe acute respiratory syndrome (2003), H1N1 influenza (2009), Middle East respiratory syndrome (2013), Ebola virus disease (2014-2016 and 2018-2020 in West Africa and Democratic Republic of the Congo, respectively); and now the COVID-19 pandemic. Due to the novelty of the infectious outbreaks, NPIs have been prioritized in responding to the pandemics in the absence of PIs and/or as development of vaccines and cures takes place.

Africa's experience in responding to recent infectious outbreaks such as Ebola in West and Central Africa (WHO, 2005), Nigeria's outbreaks of Lassa fever, Yellow fever, Monkeypox and Cholera (Ochu et al., 2020) among others, has particularly asserted the place of effective communication, risk communication and communication targeting behavior change during outbreaks.

The Ebola outbreak, for instance, first emerged in 1967, simultaneously in the Democratic Republic of the Congo (DRC) and Sudan (now South Sudan). This outbreak has up-to-date ravaged several countries in Africa. The most recent outbreak of Ebola was the 2018-2020 outbreak in the DRC which was declared over just recently, on 3 May 2021 by the DRC Ministry of Health and WHO (CDC et al., 2021).

A 2005 WHO report on outbreak communication notes that the spread of Ebola was directly contributed to, by public beliefs and behaviours such as consumption of chimpanzee meat, washing the bodies of recently deceased patients, and funeral rites involving close contact with the corpse. As such, total engagement of affected communities was identified as key to control the spread of the virus. WHO further notes that for a highly lethal disease like Ebola, which did not have a vaccine or cure (at the time of report publication), information aimed at behavioural change was the principal preventive measure.

Similarly, response to COVID-19 across the world has prioritized on NPIs while efforts towards a cure or vaccine were underway. Even now with the availability of the vaccine, the NPIs are still a priority. WHO, CDC and Public Health England suggest several behaviours as important to managing the transmission of COVID-19 as follows:

Table 3: Recommended non-pharmaceutical interventions/public measures

Intervention	**Behavior**
Face-mask	Wear face-masks in public and crowded places.
Hand hygiene	Wash hands frequently with soap and water for at least 20 seconds and in absence of soap and water, use alcohol-based sanitizer.
Social distancing	Avoid crowded places, maintain distance between yourself and other people and if not caring for a symptomatic person, avoid contact and proximity.

Surface hygiene	Clean and disinfect frequently touched objects and surfaces in environments you are in.
Respiratory	Cover your sneeze and cough with a tissue or crook of elbow.
Quarantine	If symptomatic or suspect infection, stay at home for 14 days.
Healthcare	If experiencing a fever, cough and difficulty breaking seek medical advice as soon as possible.
Personal protective equipment	If caring for a COVID-19 positive person, wear gloves, face masks and if available face shields
Food safety	Clean all vegetables and fruits. Avoid eating raw and undercooked animal products.

Source: World Health Organisation and Centres for Disease Control (2020)

In Kenya like other parts of the world, these practices are not the norm for the public. As such, governments and actors have employed rigorous social and behavioural change communication activities to sensitize the public about COVID-19 and empower them with information with the aim of control the spread of COVID-19 and encouraging public adherence to measures provided.

2.7 Empirical Review

While COVID-19 is a relatively new phenomenon, its reach and adverse implications on all facets of life across the globe has attracted researchers as an area of study, medically, socially, economically and even politically. Among the COVID-19 related studies carried out so far, there exists specific studies that have investigated the areas of effective communication, risk communications and behaviour change communication.

Literature suggests that like in past pandemics, these (effective communication, risk communications and behaviour change communication) are central in the response against COVID-19 (WHO, 2020; Schmälzle et al, 2017; Verroen S et al, 2013; Park et al, 2020)

The importance of encouraging precautionary action and adaptive behaviour change in response to public health emergencies such as COVID-19 is emphasised by WHO, who provide risk communications guidelines in public health emergencies (WHO, 2017). In the context of COVID-19, Michie and West (2020) assert that investment in research and

programs to discover and apply the principles that underpin sustained behavior change is needed to address the continuing threat of COVID-19 and future pandemics.

Kamran and Naeim (2020) point out that it is essential for health promotion professionals to advocate behaviour change interventions and to provide advice to policymakers. They go on to recommend that the designing of health messages should be based on the constructs of behaviour change models and theories.

With a focus on examining the application of behaviour change theories in the context of infectious disease outbreaks and emergency response, Weston & Amlôt (2020) advance that behaviour change theories and constructs should be used to inform the development of policy and practice for increasing uptake of self-protective behaviours in the context of COVID-19.

Lastly, a review by the Lancet COVID-19 Commission Task Force for Public Health Measures to Suppress the Pandemic, underscores the need to understand public behaviors, influences and evidence of the effectiveness of different types of interventions. WHO (2020) asserts that human behaviour remains key to managing the COVID-19 pandemic. Until effective vaccines have been administered at a global scale, changes in public behaviours remain the primary defence mechanism against COVID-19 (Shingler, 2020).

2.8 Gaps in Literature Review

The literature suggests behaviour change communication is essential in the effective response to COVID-19. Ending the pandemic is entirely dependent on the behaviour and actions of the public and ability to adhere to provided guidelines and measures, which is a shift from the norm. So far, there has been limited research investment, and therefore few empirical studies especially on the effectiveness of behavioural interventions on COVID-19 infection rates. In Kenya, the national response to COVID-19 has included ineffective and at times counterproductive measures despite cognizance of the critical place of behaviour in the management of COVID-19. This gap is therefore a motivation to analyze a government BCC campaign (MoH/ASCEND Behaviour Change Communication for COVID-19 Response Campaign) with the aim of enhancing the response to COVID-19 as well as other future pandemics that may occur.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Overview

This chapter provides and justifies the methodological choices used in the study. It also discusses the research design, approach and elaborates on the research method adopted. Lastly, the chapter highlights data analysis and presentation and concludes with ethical considerations of the study.

3.2 Research Design

Kothari (2004) describes research design as the heart of any study as it is the plan, roadmap or blueprint strategy of investigation conceived so as to obtain answers to research questions. A logical sequence, research design links the data gathered to the research questions and conclusions (Yin 2009).

This study adopted a descriptive case-study research design which best fits the study as COVID-19 is an ongoing real world situation faced by Kenyans and people across the world. The research design therefore allowed the researcher to analyze the phenomenon in detail and in-depth. The descriptive research design focused on answering the what, who, when, and where questions of the research problem. This research design was also useful for the study since one of the variables, COVID-19, is novel and not much is known yet about it.

3.3. Research Approach

This study was approached qualitatively. According to Creswell (2014), qualitative research is an approach for exploring and understanding the meaning individuals or groups attribute to a social or human problem. Creswell further elaborates this approach of inquiry to involve emerging questions and procedures, data typically collected in the participant's setting, data analysis inductively building from particulars to general themes, and the researcher making interpretations of the meaning of the data.

Qualitative research was used in this study to allow a rich understanding of the specific 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. Although COVID-19 is a global phenomenon, its effect and response has differed across nations, thus the qualitative approach to the study helped to understand the research problem from the perspectives of the local population (Kenya).

3.4 Research Method

Research methods involve the forms of data collection, analysis, and interpretation that researchers propose for their studies (Creswell 2014). Although inter-related with research design which is the plan to answer the research question, research method is the strategy that will be used to implement that plan. As this study aimed to have an in-depth and detailed investigation of BCC in COVID-19 and its related contextual position, the case study method was employed as a tool to understand influences.

Yin (2009) defines case studies as an empirical inquiry that examines a contemporary phenomenon within its real-life setting. The case study method is further described by Bruce (2000) as that which involves gathering sufficient information about a context, specific person, event, or group to enable the researcher to understand its operations and functions. Case study therefore has the ability to produce wealthier, more contextualized, and more reliable explanation of the study area than any other approach of enquiry. The strengths of the case study method are ideal for this study as the researcher is investigating the novel and complex area of COVID-19 and the role of BCC in its response.

3.4.1 Case selection and description

The MoH/ASCEND Behaviour Change Communication for COVID-19 Response Campaign was selected based on the following criteria:

- Timeliness and data availability: to ensure the likelihood that data would be available, the researcher determined whether the campaign was completed and operational with some good time passed to examine the effect. As COVID-19 is on-going, the researcher wanted to strike a balance between a recent campaign but not too recent such that data needed to complete a meaningful analysis would be available. The case study was rolled out between June-October 2020 and fit the criteria.

- Location and context: Regions and counties in Kenya has been disproportionately affected by COVID-19. The country has had several hotspot areas where COVID-19 cases have risen alarmingly whereas some counties and regions have experienced very little to no COVID case. The response has therefore been varied with more efforts and attention going towards hotspot areas. The case study campaign was carried out in Coastal Counties among them Mombasa, Kilifi and Kwale which had been identified as hotspot areas. The researcher hoped to establish how BCC had been rolled out in such hotspot areas and what was the result of the efforts.
- Selection based on recommendation: the researcher sought the guidance of select players who have had active involvement in COVID-19 response including media, health workers, fellow researchers and government. From this consultation, the researcher was able to generate a list of the BCC campaigns in response to COVID-19 rolled out in the country and further engaged the parties in discussions to select a campaign that would be of value to study.

3.5. Population and Sampling

3.5.1 Sample size

Mugenda and Mugenda (2008) define a population as the entire group of individuals, events, or objects that have common observable characteristics, to which the researcher intends to generalize the results of the study. The target population for this study was campaign IEC materials including TV commercials, audio spots for radio, posters and stickers as well as documents such as reports, related to the MoH/ASCEND Behaviour Change Communication for COVID-19 Response Campaign. The materials – 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. The sample was considered sufficient when similarity in data occurred.

3.5.2 Sampling technique

The study employed purposive sampling given the pre-conceived ideas about the required characteristics of the sample. The research therefore relied on logic and own judgement to identify, target and select the sample that would be able to effectively generate data that would respond to the study questions. As purposive sampling involves selection of a sample

with a precise purpose in mind (analyze MoH/ASCEND Behaviour Change Communication for COVID-19 Response Campaign), it was deemed most suitable for the study in selecting the content to be analyzed. Palys (2008) argues that there is no best sampling method than purposive sampling because it is dependent on the context in which a researcher is working and is tied to the objectives.

3.6 Data Collection

The study aimed to analyze the case of the MoH/ASCEND Behaviour Change Communication for COVID-19 Response Campaign which was carried out between June - October 2020 in the select coastal countries of Mombasa, Kilifi, Kwale, Lamu, Tana River and Taita Taveta. The study had three specific objectives and to achieve the objectives, the study utilized secondary data sources.

3.6.1 Data Collection Process

Content analysis was the primary method of data collection where IEC materials including TV commercials, audio spots for radio, posters and stickers as well as documents such as reports were analyzed. Qualitative data was generated to respond to the study objectives. Stake (1995) and Yin (2009), posit that content analysis is particularly applicable to qualitative case studies—intensive studies producing rich descriptions.

The materials were sourced from MoH and funder/partner ASCEND. The content analyzed provided the study with data and in-depth details about how the MoH/ASCEND Behaviour Change Communication for COVID-19 Response Campaign was undertaken, the strategies that were employed, the messaging and results of the campaign roll out.

3.6.2 Data collection tool

The researcher developed a data collection guide (Appendix A) to ensure focused data collection which was in line with the set objectives of the study.

3.7 Data Analysis

The study employed thematic analysis as the data analysis method. The researcher approached the analysis of the data generated using a hybrid coding approach. The analysis

begun with a set of apriori codes informed by the research questions - Atkin's research on effective Public Service Advertisements (PSA) strategies (2001) as well as the Health Belief Model and Social Cognitive Theory concepts (Appendices B, C and D). The codes and themes were modified (where necessary) as the researcher worked through the data. Bowen (2009) considers thematic analysis, a form of pattern recognition with the data collected.

In performing the thematic analysis, the researcher begun by organizing and preparing the data gathered. The researcher then went ahead to perform an optical and audio scan (close reading and listening) of each IEC material and document selected to familiarise herself with the data. This then progressed into a coding process. The researcher used three coding sheets that had been developed apriori (Appendices B, C and D). This was followed by identification of the broad common themes, building patterns, strategies and categories that arose from the content from bottom up. To ensure the research questions were comprehensively covered, the researcher organized data objective by objective.

3.8 Data Presentation

The qualitative data generated from the content analysis of IEC materials and documentation used in the MoH/ASCEND Behaviour Change Communication for COVID-19 Response Campaign was checked for reliability and verification. The findings were analyzed and categorised using three coding sheets developed apriori. The qualitative data was then summarized and presented in narratives and explanations.

3.9 Reliability and Validity

Mugenda & Mugenda (2003) describes reliability to be about accuracy and precision of a measurement procedure, and validity the degree to which results obtained from the analysis of data actually represent the phenomena under study. All through the study, the researcher was cognizant of the factors that may compromise the trustworthiness of the qualitative research findings. To enhance both reliability and credibility of the research, the researcher put a lot of thought into the collection of the most suitable data for content analysis. This was achieved through the selection of a suitable data collection method and sampling strategy. The researcher also provided an explanation of how the codes and themes were arrived at as an indication of the trustworthiness of study.In terms of reporting, the researcher made efforts to present results in a systematic and clear manner that clearly demonstrates the link between

the research questions, data and the results. Over and above, the researcher strived to uphold objectivity throughout the various phases of the results more so in data analysis and interpretation.

3.10 Research Ethics

The researcher has observed the guidelines of undertaking research as outlined by the University of Nairobi. The researcher also issued a disclaimer to sources that the documents accessed was to be used for the purposes of the study only and none other.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1 Overview

The purpose of this study was to analyze a behaviour change communication campaign for COVID-19 response rolled out by the Kenya Ministry of Health, with support from Accelerating the Sustainable Control and Elimination of Neglected Tropical Diseases (ASCEND) in select coastal counties. This chapter presents findings of the study which were generated using a qualitative content analysis of IEC materials (TV infomercials, audio spots for radio, posters and stickers and social media posts) as well as campaign reports and related documentation.

Three coding sheets, largely developed apriori were used to view and review the materials. This was done three times to ensure consistency and accuracy of the research findings. The coding sheets were informed by the research questions and based on Atkin's research on effective Public Service Advertisements (PSA) strategies (2001), the Health Belief Model and Social Cognitive Theory concepts (Appendices B,C and D). Each IEC material was analyzed with the different coding sheets to wholesomely generate data that responded to all research objectives and questions.

To respond to question one, the researcher was guided by data collection guide (Appendix A). Utilizing the guide, the researcher identified the communication activities undertaken in the campaign. The researcher then examined the materials to identify the messages communicated to the public on COVID-19 and the way they were communicated taking into consideration the channels used and strategies employed to ensure effectiveness. The messenger was also checked to identify who delivered the message and how effectively or lack thereof they did it. This review was modelled after Atkin's research on effective PSA strategies (Appendix B). In responding to question three of the study, the researcher utilized two coding sheets (Appendix C and D) that adapted Health Belief Model and Social Cognitive Theory concepts.

Results from the content analysis of documents, print and broadcast materials used in the MoH/ASCEND BCC COVID-19 Response Campaign yielded several findings. The findings, categorized thematically are discussed extensively in the next section.

4.2 Descriptive Findings

4.2.1 Communication Activities

The Kenya MoH through the Division of Health Promotion (DHP) between June and October engaged UNES to provide media and communications consultancy services to promote Behaviour Change Communication for COVID-19 Response in select counties in the coastal regions. The campaign project was funded by ASCEND and targeted the specific counties of Mombasa, Kilifi, Kwale, Lamu, Tana River and Taita Taveta.

The key objectives of the MoH/ASCEND Behaviour Change Communication for COVID-19 Response Campaign were to:

- Ensure that people in these counties have the life-saving information, raising awareness and promoting positive behaviour and knowledge of COVID-19 to curb the spread of the virus;
- Inform the general public on how the public health response is being conducted and health authorities are being pro-active in monitoring, detecting, and preventing the spread of COVID-19. To ensure participation of, and engagement with relevant communities to address barriers to the implementation and uptake of public health measures;
- Ensure that healthcare workers know how to engage with patients and care givers; detect possible cases; communicate with patients about COVID-19 and report to the relevant health authorities; and to protect themselves in against exposure to the disease in the line of duty.

The analysis of the study found that the campaign implementers undertook key activities before, during and after the campaign to realise the objectives set out for the MoH/ASCEND Behaviour Change Communication for COVID-19 Response Campaign.

4.2.1.1 Developing Information, Education and Communication (IEC) materials

Data generated from campaign reports and related documentation shows that UNES undertook a collaborative approach in developing IEC materials to be used in the campaign. Through deliberation with the MoH-DHP, UNES identified six COVID-19 related thematic areas considered crucial for BCC for the populations of the target audience.

These themes include:

- The history of COVID-19
- General measures for preventing the spread of COVID-19
- Physical distancing and COVID-19
- Safety and work places
- Correct use of non-contact thermometers
- Social gathering and COVID-19
- Stigma and discrimination in the face of COVID-19 pandemic
- Traveling and how it was aiding the spread of COVID-19

The IEC materials were packaged in the form of TV infomercials, audio spots for radio as well as posters and stickers. The study found that the IEC materials developed constituted:

- Four TV infomercials on home-based care guidelines for those infected with COVID-19, their care-takers and family members;
- Five radio infomercials – two in Kiswahili and the rest in the languages of Orma, Pokomo and Taita; and
- Posters and stickers which were first designed in English and later translated into Kiswahili for easier communication with communities in the coastal regions. The materials are provided in Annex 1 of this report.

4.2.1.2 Translation of Information, Education and Communication (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 include Kiswahili, Taita, Orma, Pokomo and Digo. Within the translation exercise, five translators were recruited each to translate the IEC material. 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.

All IEC materials related to the MoH/ASCEND Behaviour Change Communication for COVID-19 Response Campaign including the messages, colour and themes were developed, pre-tested and approved for use by six working groups within the MOH- DHP.

4.2.1.3 Identification of dissemination channels

The analysis found that the MoH/ASCEND Behaviour Change Communication for COVID-19 Response 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.

4.2.1.3.1 Radio and TV

The specific TV and radio stations to be 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:

- **Kaya Radio FM**: selected for its popularity in the Coastal region. Broadcasts in Nduruma, Digo and Mijikenda languages, which spreads all over the coastal region.
- **Kwale Ranet:** slso based on popularity in the region. It is a Kiswahili station, most popular in Mombasa and Kwale towns.
- **Tana River Broadcasting Station (TBS)**: the station is the most popular Tana River County but also reaches Kilifi. It broadcasts in Orma, Pokomo and Kiswahili.
- **Mwanedu FM**: selected because of its popularity in Taita Taveta County which it covers as well as parts of Tanzania borders. It broadcasts in Kitaita and Kiswahili.
- **Tandao TV** - this is a Kiswahili broadcasting television which is popular in Mombasa and its environs.

4.2.1.3.2 Poster and stickers

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.

4.2.1.3.3 Social media

The study identified four social platforms utilised for online engagement for the MoH/ASCEND Behaviour Change Communication for COVID-19 Response Campaign. These include Twitter, Facebook, Instagram and WhatsApp. Social media influencers as well

media personalities from the area were used to enhance the impact of the social media medium because of the many followers and listeners respectively, and ability to influence.

4.2.2 Campaign Messaging

4.2.2.1 Types of messages

The analysis found out that the MoH/ASCEND Behaviour Change Communication for COVID-19 Response Campaign had messages of awareness, to an extent. According to Atkin (2001), 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. In the MoH/ASCEND Behaviour Change Communication for COVID-19 Response Campaign, the COVID-19 topic was clear but was there was not outright definition of COVID-19. The messages focused largely on the spread of COVID-19 and informing people about what to do, that is precautionary action to take to protect oneself.

> Kirusi cha corona kinasambaa kwa haraka sana. Ni hatari zaidi kwa watoto, wazee na walio na magonjwa sugu. La kusitikisha, watu wengi wanazidi kupata ugonjwa huu na kupoteza Maisha yao. Ila kwa kufanya kazi pamoja na tutaokoa maisha ya kila mtu. Kirusi hiki kinaweza kusabazwa kwa watu waliokaribiana, hata watu walio salama wanaweza kusambaza hili gonjwa. Kwa hiyo, unaweza kufanya juhudi binafsi ili kuzuia kirusi hiki. Nenda katika maduka au soko wakati ambapo hamna msongamano. Epuka kwenda katika sehemu za umma na wazazi wako ama wanajamii ambao wako na maradhi kama kisukari, HIV/AIDS, saratani ama pressure kwani wao wako katika hatari kuu ya kuadharika zaidi wanapopata kirusi cha corona.
>
> **Audio spot for radio – Kiswahili**
>
> **Min: 0.36 – 1.24**

The campaign had messages of instruction. The IEC materials such as posters not only provided what and how to do but went on to demonstrate. At least all IEC provided one or more instructions for audience on the precautionary action needed to protect oneself and even 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.

Figure 3: campaign sticker used in the MoH/ASCEND Behaviour Change Communication for COVID-19 Response Campaign demonstrating some actions that can protect and prevent further spread of COVID-19

Source: Kenya Ministry of Health

The MoH/ASCEND Behaviour Change Communication for COVID-19 Response Campaign also 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 respectively the guidelines were presented.

> Lazima tufanye juhudi sasa na kuzuia kirusi hiki kisizidi kusambaa. Lazima tuokoe maisha na itafikia siku tutaweza tena kutoka nje bila wasiwasi na kujivinjali.
>
> **Audio spot for radio – Kiswahili**
> **Min: 0.36 – 1.24**

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 include 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.

4.2.2.2 Message Content

The analysis found that messaging in the MoH/ASCEND Behaviour Change Communication for COVID-19 Response 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 language used in the campaign identified with the target audience who are the residents of coastal countries; 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 withMoH 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 which 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 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.

4.2.3 Campaign dissemination

4.2.3.1 Dissemination of IEC materials on Radio and TV

Once broadcast platforms (radio and TV stations) were selected (discussed on 4.1.1.2.1), the campaign implementer, 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 (Appendix E) that allowed for different and various messages to be included in one package as presented in the table below.

Table 4: Dissemination schedule of broadcast spots/infomercials on both radio and TV

Station	Coverage & language	Package & Duration	Campaign Messages	Show & Time	Campaign Months
TBS	Kilifi / Tana river Orma & Swahili	**Activations** • Presenter mentions • Spot ad, four promos • Two-week campaign for a spread of three months	-Social gathering -Stigma -Safe travel -Keeping distance -Home based care guidelines	Damka Show 8.00-10.00am	28 Jul-9 Aug 27-3 Sept
Kwale Ranet	Mombasa (Swahili)	**Activations** • Three presenter mentions • Three spots ad, four promos • One-week from end of July to early August	-Social gathering -Stigma -Safe travel -Keeping distance	Kauli yako 8.00-10.00am	27 Jul-7 Aug
Mwanedu	Taita Taveta / Mombasa Kitaita & Swahili	**Activations** • Three presenter mentions • Three spots ad, fourpromos • Two-week campaign for a spread of three months	-Social gathering -Stigma -Safe travel -Keeping distance -Home based care guidelines	Morning show 8.00-10.00am	27 Jul-10 Aug 4-12 Sept
Kaya	Mombasa / kwale Duruma , Pokomo & Swahili	**Activations** • Two mentions • Two spots ad, two promos • Two-week campaign for a spread of two months	-Social gathering -Stigma -Safe travel -Keeping distance -Home based care guidelines	Drive show 4.00-7.00pm	3 -16 Aug 8-15 Sept
Tandao TV	Mombasa / Mtwapa Swahili	**Activations** • One-minute commercial spot, three mentions • Campaign for two weeks	-Home based Care guidelines	During prime time 7.00-9.00pm	1-15 Sept

Source: Final report for MoH/ASCEND Behaviour Change Communication for COVID-19 Response campaign prepared by UNES (2020).

4.2.3.2 Dissemination of IEC materials on 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 each day 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. Some responses are highlighted below:

> Najikinga ila kwa usafiri hamna hilo tunakaa mtu tatu, baadhi ya watu barakoa hawana humohumo, hata jana nilijionea ukishikwa huna mia mbili bila barakoa polisi ya kuhusu na kuosha mkono sijui watu wamechoka maana si unajua ukiosha mkono labda ni wakati wa makulati na usisahau baharini twaenda bila wasiwasi tukiwaona wale watu wa utumishi kwa wote sisi chubuluuu ndani ya maji..... Cha mwisho kama serikali haioneshi muongozo mwema hata sisi tunavunja tu hivi.
>
> Najilinda tatizo wenye matatu wanapuuza
>
> Muhimu kuzingatia lkn utaona mtu nyakati za jioni. Matatu imejaa asema aingia hivyo hivyo ukimuuliza akwambia hakuna korona hapo mumebanana kushuka huwezi in usiku, ushalipa pesa huna nyengine utasema upande nyengine mitihani hiyo.
>
> *Source: Final report for behaviour change communication for COVID-19 response project submitted by UNES (2020).*

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 on limited travel during the COVID-19 pandemic thus minimizing exposure to COVID-19, hand washing, social distancing, use of face masks as well as avoiding to touch one's face (especially nose, mouth and eyes).

4.2.3.3 Dissemination of printed IEC materials

The study found that 955 posters and 1650 stickers 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 as shown in Table 5 below.

Table 5: IEC materials printed and dispatched to target counties

County	No of sub-Counties	No of posters	No of vehicle stickers
Kwale	5	1150	2050
Tana-River	3	715	1250
Mombasa	6	1430	2450
Taita Taveta	4	955	1650
Lamu	2	500	900
Kilifi	9	2150	3700
	29	**6900**	**12000**

Source: Final report for behaviour change communication for covid-19 response project submitted by UNES (2020).

4.2.4 Adherence to Health Belief Model

The Health Belief Model attempts to explain and predict health behaviors by focusing on the beliefs and attitudes of individuals. The model suggests that an individual's belief in personal threat of an illness together with a person's belief in the effectiveness of the recommended health behavior or action will predict the likelihood of someone adopting recommended behaviour.

The analysis found that the MoH/ASCEND Behaviour Change Communication for COVID-19 Response Campaign applied aspects of HBM when designing the IEC materials. While not each IEC material applied all the key variables of HBM (perceived threat, perceived

severity, perceived benefits, perceived consequences, cues to action and self-efficacy), the campaign wholesomely did.

For instance, perceived threat and severity were explicitly stated in one of the radio infomercials which noted that everybody was susceptible to contracting COVID-19, and more especially the elderly and those with underlying conditions - *'kirusi cha corona ni hatari kwa kila mtu, ila ni hatari zaidi kwa wale walio na umri mkubwa na walio na magonjwa sugu kama vile kisukari, HIV, saratani na pressure.'*

The consequences of not adhering to the measures have also been stated where in one of the radio infomercials where audiences are reminded that contracting COVID-19 has led to loss of life - *'kirusi cha corona kinasambaa kwa haraka sana. Ni hatari zaidi kwa watoto, wazee na walio na magonjwa sugu. La kusitikisha, watu wengi wanazidi kupata ugonjwa huu na kupoteza maisha.'*

The concept of perceived benefits was also applied in the campaign. For instance, one of the radio infomercials states that taking up precautionary measures will control spread of the virus, will save lives and allow us to get back to normal life – 'lazima tufanye juhudi sasa kuzuia kirusi hiki kisizidi kusambaa. Lazima tuokoe maisha na itafikia siku tutatweza tena kutoka nje bila wasiwasi na kujivinjari.'

All IEC materials had a call to action. The theme line itself 'komesha corona okoa maisha' was a cue to action. Specific materials such the radio infomercials, posters and stickers and one TV infomercial went ahead to provide the specific measures (actions) the audience should take to protect themselves. These include use of masks, avoiding crowded places, limiting travel, washing hands frequently and using hand sanitizers.

The campaign promoted self-efficacy among the audience. This was achieved by first, providing knowledge and the know-how to empower the audience make decisions and also to take up the measures to protect themselves against COVID-19. The campaign materials clearly explained the problem and went ahead to tell and show the audience on how to go about protecting themselves. Secondly, reinforcing both the new behaviours and the need to adopt them attempted to build a sense of confidence among the audience. To get the public to

believe that indeed they can stop the spread of COVID-19, the campaign took a 'we can do it approach,' For instance in the two Kiswahili audio spots analysed, the messenger is optimistic that the audience will take up precautionary action, the virus will be curbed and 'we' will return to normal lives - 'lazima tufanye juhudi sasa kuzuia kirusi hiki kisizidi kusambaa. Lazima tuokoe maisha na itafikia siku tutatweza tena kutoka nje bila wasiwasi na kujivinjari' (Kiswahili audio spot for radio)

4.2.5 Adherence to Social Cognitive Theory

The MoH/ASCEND Behaviour Change Communication for COVID-19 Response Campaign applied the Social Cognitive Theory to an extent. The theory describes the influence of individual experiences, the actions of others, and environmental factors on individual behaviors. All IEC materials in the campaign had messages of expected outcome. The campaign theme line itself 'komesha corona, okoa maisha' implied that the outcome of the public adhering to the COVID-19 measures was to curb the spread of the virus and save their lives. This expected outcome was greatly reinforced.

Through the messages in the various IEC materials, the campaign attempted to make the audience believe they are at risk of COVID-19; that COVID-19 is serious and deadly; and that protecting themselves against COVID-19 is worthwhile and possible. The campaign also clearly provided the action the audience was supposed to take up and made efforts to elaborate and demonstrate some the COVID-19 measures to enhance understanding. Some statements from the different IEC materials demonstrate this:

> *'Kirusi cha corona kinasambaa kwa haraka sana. Ni hatari zaidi kwa watoto, wazee na walio na magonjwa sugu. La kusitikisha, watu wengi wanazidi kupata ugonjwa huu na kupoteza maisha.'*

> *'Watu wengi wanazidi kupata ugonjwa hu una kupoteza maisha yao. Ila kwa kufanya kazi pamoja tutaokoa maisha ya kila mtu. Kirusi hiki kinaweza kusambazwa kwa watu waliokaribiana, hata watu wanaojihisi kuwa salama wanaweza sambaza hili gonjwa. Kwa hivo unaweza kufanya juhudi binafsi ili kuzuia kirusi hiki.'*

'Lazima tufanye juhudi sasa kuzuia kirusi hiki kisizidi kusambaa. Lazima tuokoe maisha na itafikia siku tutatweza tena kutoka nje bila wasiwasi na kujivinjari.'

However, the study found that concept of observational learning was not explicitly applied in the campaign. Although the campaign used influencers, media personalities and public officials to provide COVID-19 related information, promote messages and engage the audiences on different platforms, it was not the same as demonstrating the actions or leveraging on role models to demonstrate the actions to the audiences.

4.2.6 Monitoring and Evaluation

Data gathered shows that there was monitoring and tracking carried out during and after campaign. For broadcast platforms, monitoring was carried out in two ways:

- Two-way communication strategy and message tracking where the audience was asked to give feedback on various messages that were broadcast. This was meant to establish how well the messages were understood. This feedback was communicated through daily monitoring of feedback to the studios and UNES. The information obtained during the daily feedbacks were used to review the subsequent messaging and to advise the presenters on the delivery of the information.
- Feedback session with presenters where 12 presenters, six of who participated in the running of the campaign were assembled for a feedback session. During the session, the presenters gave their understanding of the messages promoted in the campaign. They also presented the feedback relayed by their audiences, which was then captured to help improve subsequent messaging.

Tracking on social media was undertaken by a consultant in charge of marketing and social media campaigns. The study found that the target audience utilised and engaged more on Facebook in comparison to other social media platforms. Further, monitoring revealed that although majority of audience on Facebook received the social media campaign materials positively there was observed apathy from some audiences.

The study found that apathy was brought about mainly by three reasons. Firstly, political leaders were not following the laid down guidelines for COVID-19 protection hence some audience questioned why the common citizen was required to follow laid behaviour change

protocols while those in political leadership were not following the rules. Secondly, some residents of the coastal area were sceptical about the COVID-19 being real and thus did not practice the protective measures. Lastly, allegations of corruption of COVID-19 funds drove some audiences to believe that the COVID-19 pandemic was an exaggeration meant to create an opportunity for allocation of funds which would be later embezzled.

The printed IEC materials – posters and stickers were reported to have been received positively by majority of residents across the counties. The analysis found that the messaging, design and language were appreciated by residents. However, some residents noted that the prints were a waste of resources and some even requested for face masks and sanitizers instead. In Mombasa county, matatu operators rejected the stickers on grounds that COVID-19 was a hoax.

4.3 Conclusion

This study sought to analyze IEC materials and documentation from the MoH/ASCEND Behaviour Change Communication for COVID-19 Response Campaign with the goal of identifying the campaign activities, messaging including how the health messages were communicated and determine if the messaging applied health communication theories to motivate behaviour change among audiences.

Through a content analysis, this study gathered data that responded to all the research objectives. Narratively presented, the findings of the study not only answer the research questions but also highlight the campaign process from the start to the end. The analysis found that dissemination of the EIC materials was largely successful. However, successful dissemination does not translate or equal a successful campaign in the context of expected effect. The success of the campaign can only be determined or based on the campaign meeting its objectives and demonstrable results in terms of improved adherence of COVID-19 protection measures and ultimately reduced positive cases. This study has identified gaps in the roll out of the campaign which forms the basis of conclusions and recommendations for the next chapter.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Overview

This chapter concludes the entire study through four thematic areas: summary of the study, study findings, conclusions and recommendations.

5.2 Summary of the study

This study sought to analyze behavior change communication in response to COVID-19, focusing on a campaign carried out by the Kenya Ministry of Health (MoH) and the Accelerating Sustainable Control and Elimination Of Neglected Tropical Diseases (ASCEND) between June and October 2020 in the select coastal counties of Mombasa, Kilifi, Kwale, Lamu, Tana River and Taita Taveta.

The specific objectives of the study were:

1. To establish the communication activities undertaken in the MoH/ASCEND Behaviour Change Communication for COVID-19 Response Campaign
2. To analyze the campaign messages used to motivate behavior change
3. To determine the use or non-use of health communication theories (Health belief model, social cognitive theory) in the campaign

To achieve the objectives of the research, the study was guided by the following research questions:

1. Which communication activities were undertaken in the MoH/ASCEND Behaviour Change Communication For COVID-19 Response Campaign?
2. Which messaging and message types were used in the campaign and how were they used?
3. Did the campaign adhere to the health belief model and social cognitive theory health communication theories?

5.3 Study conclusions

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

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 use of the message types in the campaign influenced target public to a great extent to take up the desired behaviour.

The study found that as part of the BCC interventions, IEC materials were developed and packaged as TV informercials, 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, Schiavo and Lefebvre (2007) found that by integrating new media into health campaigns, success of results was enhanced. Therefore, the use of new media in the MoH/ASCEND Behaviour Change Communication for COVID-19 Response Campaign can be assumed to have contributed to more widespread reach and results.

Findings indicate that to a large extent the campaign applied concepts from communication theories namely the Health Belief Model and Social Cognitive Theory. For the Health Belief Model, the campaign outlined perceived susceptibility, severity, benefits and cues to action. Applying the Social Cognitive Theory, the campaign provided messages of expected outcome, behavioural capability and reinforced expected behavior.

According to both of the above-mentioned theoretical constructs, for an individual to make a behavior change, they must have self-efficacy. The Health Belief Model emphasizes that for individuals to have self-efficacy, they ought to receive cues to action including specific how-to information and verbal reinforcement (Champion & Skinner, 2008). This was achieved rather well in the MoH/ASCEND Behaviour Change Communication for COVID-19 Response Campaign and is evidenced for instance in one of the posters with graphical illustrations of the measures to follow and how to do it.

For the Social Cognitive Theory, one of the key variables is the concept of individuals learning from observing the actions of others (Bandura, 2001). This was not effectively applied in the MoH/ASCEND Behaviour Change Communication for COVID-19 Response Campaign. While influencers, media personalities and public officials from MoH participated in the campaign, they did not demonstrate the actions but just verbally told the audience what to do. If anything, one reason audiences cited that drove them to non-adherence was the conduct of politicians and leaders in regards to not adhering to COVID-19 measures themselves. This undermined the efforts of the campaign.

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 receives, for instance the presenters and listeners in the case of radio activations. Feedback collated was used to informed any adjustments needed for subsequent messaging. Overall, monitoring showed that the campaign had been well received by the residents of the target counties.

While this study cannot ascertain the result of the campaign at outcome or impact level the study finds that the MoH/ASCEND Behaviour Change Communication for COVID-19 Response Campaign put in considerable effort to have an engaging, consistent,

comprehensible and theory-based campaign. The analysis concludes that the MoH/ASCEND Behaviour Change Communication for COVID-19 Response Campaign roll out and dissemination of IEC materials was successful. However, this study cannot make further generalized conclusions about the outcome or impact of the campaign because only a content analysis was performed on the campaign materials and strategies undertaken before and during the campaign's implementation. A better understanding of whether the campaign caused 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 behavior and improved adherence of COVID-19 protective measures in the target counties.

5.3 Recommendations

5.3.1 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/ASCEND Behaviour Change Communication for COVID-19 Response Campaign which was to among others raise awareness about COVID-19 and empower the residents of the target counties have knowledge of, and 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 has not been done. It is important to determine if indeed there was any behaviour change outcomes in the target populations or communities as a result of the campaign. This will help stakeholders to understand the impact of such a project and inform the potentiality of program replication as well as influence the course of future actions.

5.3.2 Bottom-top approach

The study recommends a bottom-top approach where the target population participates in the development and roll-out of the BCC campaign. 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.

5.3.3 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 was sentiments from some residents who felt that the printed materials were a waste of money. Further, some in the communities requested for sanitizers and face masks 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.

5.3.4 Accessibility for all

Lastly, the study recommends ensuring the campaign materials are accessible to all in the community including persons with different disabilities. Each and every member of the community is susceptible to COVID-19 and as such the MoH/ASCEND Behaviour Change Communication for COVID-19 Response Campaign targeted everyone in the target counties. However, the IEC materials were not designed to cater for the those with for instance 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 main stream channels.

5.4. Recommendations for further research

Based on the findings of this study, the researcher recommends further studies on among other areas: impact of BCC COVID-19 response campaigns in Kenya, the use of social media in COVID-19 response, effective BCC approaches to COVID-19 response and finally a study looking at the relation knowledge and individual initiative to change.

REFERENCES

Abroms, L. C., Schiavo, R., & Lefebvre, C. (2008). New media cases in cases in public health communication & marketing: The promise and potential. Cases in Public Health Communication & Marketing, 2, 3-9.

Adhikari, S.P., Meng, S., Wu, Y.J, et al. (2020). Epidemiology, causes, clinical manifestation and diagnosis, preventionand control of coronavirus disease (COVID-19) during the early outbreak period: A scoping review. https://doi.org/10.1186/s40249-020-00646-x PMID: 32183901

Abdullahi L., Onyango J.J., Mukiira C., Wamicwe J., Githiomi R., Kariuki D., et al. (2020) Community interventions in Low—And Middle- Income Countries to inform COVID-19 control implementation decisions in Kenya: A rapid systematic review. PLoS ONE 15(12): e0242403.https://doi.org/10.1371/journal.pone.0242403

Ajzen, I. (1991). The theory of planned behavior. Organizational Behavior and Human Decision Processes, 50(2), 179–211. doi: 10.1016/0749-5978(91)90020-T.CrossRefGoogle Scholar

Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In J. Kuhl & J. Beckman (Eds.), Action-control: From cognition to behavior (pp. 11–39). Heidelberg: Springer. Google Scholar

Ajzen, I., & Fishbein, M. (1980). Understanding attitudes and predicting social behavior. Englewood-Cliffs: Prentice-Hall. Google Scholar

Andreasen, A. R. (1997). Challenges for the science and practice of social marketing. In M. E. Goldberg, M. Fishbein & S. E. Middlestadt (Eds.), Social marketing: Theoretical and practical perspectives (pp. 3-19). Mahwah, NJ: Lawrence Erlbaum Associates.

Atkin, C. (2001). Impact of public service advertising: Research evidence and effective strategies. Oregon State.

Atkin, C. K., & Rice, R. E. (2013). Theory and principles of public communication campaigns. In Public Communication Campaigns (4th ed., pp. 3-20). Thousand Oaks, CA: SAGE Publications.

Bandura, A. (2001). Social Cognitive Theory: An Agentic Perspective. Annu. Rev. Psychol, 1, 26.

Bandura, A. (1989). Perceived self-efficacy in the exercise of control over AIDS infection. In V.M. Mayes, G.W. Albee and S.F. Schneider (Eds.), Primary Prevention of AIDS: Psychological Approaches (pp. 128-141). London: Sage Publications.

Bandura, A. (1977). Social learning theory. Englewood Cliffs, N.J: Prentice Hall.

Billah, M.A., Miah, M.M., & Khan, M.N. (2020 November 11). Reproductive number of coronavirus: A systematic review and meta-analysis based on global level evidence. PLOS ONE. https://doi.org/10.1371/journal.pone.0242128

Bowen, G. A. (2009). Document analysis as a qualitative research method.

Centers for Disease Control and Prevention (2021, May). Ebola (Ebola Virus Disease): 2021 Democratic Republic of the Congo, North Kivu Province. Last reviewed June 2021: https://www.cdc.gov/vhf/ebola/index.html

Centers for Disease Control and Prevention. (2020, April 3). How Coronavirus Spreads. Retrieved from: https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/how-covid-spreads.html

Champion , V. L., & Skinner , C. S. (2008). The Health Belief Model. In Health behavior and health education (4th ed., pp. 45-64). San Francisco, CA: Jossey-Bass.

Chen, S., Prettner, K., Kuhn, M. et al. (2021). Climate and the spread of COVID-19. Sci Rep 11, 9042. https://doi.org/10.1038/s41598-021-87692-z

Creswell, J.W. (2014). Research Design: Qualitative, Quantitative and Mixed Methods Approaches (4th Ed.). CA: Sage

Cytonn Report. (2020). Ministry of Health Has Spent Ksh3.77 Billion on Covid-19 Campaigns. Retrieved from: https://research.cytonn.com/news/ministry-of-health-has-spent-ksh3-77-billion-on-covid-19-campaigns

Dearing, J. W., & Cox, J. G. (2018). Diffusion of Innovations Theory, Principles, and Practice | Health Affairs. Retrieved from: https://www.healthaffairs.org/doi/abs/10.1377/hlthaff.2017.1104?journalCode=hlthaff

Dobson, A.P. & Carper, E.R. (1996). Infectious diseases and human population history: throughout history the establishment of disease has been a side effect of the growth of civilization. Bioscience 46 115–126. [Google Scholar]

Eisner, E. W. (1991). The enlightened eye: Qualitative inquiry and the enhancement of educational practice. Toronto: Collier Macmillan Canada.

FHI & USAID (2002). Behaviour Change Communication (BCC) for HIV/AIDS a Strategic Framework.

Heydari, S.T., Zarei, L., Sadati, A.K. et al. (2021). The effect of risk communication on preventive and protective Behaviours during the COVID-19 outbreak: mediating role of risk perception. BMC Public Health **21,** 54. https://doi.org/10.1186/s12889-020-10125-5

Iezadi, S., Azami-Aghdash, S., Ghiasi, A., et al. (2020). Effectiveness of the non-pharmaceutical public health interventions against COVID-19; a protocol of a systematic review and realist review. PLoS One.15(9): e0239554. Crossref, Medline, Google Scholar

ILO, FAO, IFAD & WHO (2020). Impact of COVID-19 on people's livelihoods, their health and our food systems. Joint Statement. Retrieved from: https://www.who.int/news/item/13-10-2020-impact-of-covid-19-on-people's-livelihoods-their-health-and-our-food-systems

Kamran, A., & Naeim, M. (2020, October 20). Behavioural change theories: a necessity for managing COVID-19. Public Health. 2020;S0033-3506(20)30452-2. doi:10.1016/j.puhe.2020.10.010

Kenya Ministry of Health, Kenya Medical Research Institute, and African Institute for Development Policy. (2020). An Assessment of Knowledge, Attitudes, Perception and Practice (KAPP) about COVID-19 among the Kenyan Population. Nairobi – Kenya

Kothari, C. R. (2004). Research Methodology: Methods and Techniques (2nd Ed.). New Delhi: New Age International limited.

Lee, J.K., Bullen, C., Amor, Y.B., Bush, S.R., Colombo, F., et al. (The Lancet COVID-19 Commission Task Force for Public Health Measures to Suppress the Pandemic). (2021). Institutional and behaviour-change interventions to support COVID-19 public health measures: a review by the Lancet Commission Task Force on public health measures to suppress the pandemic, International Health, ihab022: https://doi.org/10.1093/inthealth/ihab022

Madhav, N., Oppenheim, B., Gallivan, M., Mulembakani, P., Rubin, E., & Wolfe, N. (2017). Pandemics: Risks, Impacts, and Mitigation. In D. T. Jamison, H. Gelband, S. Horton, P. Jha, R. Laxminarayan, C. N. Mock, & R. Nugent (Eds.), Disease Control Priorities: Improving Health and Reducing Poverty (3rd ed.). The International Bank for

Reconstruction and Development / The World Bank. http://www.ncbi.nlm.nih.gov/books/NBK525302/

Michie, S., & West, R. (2021). Sustained behavior change is key to preventing and tackling future pandemics. Nat Med **27,** 749–752. https://doi.org/10.1038/s41591-021-01345-2

Michie, S., Rubin, G.J., & Amlôt, R. (2020). Behavioural science must be at the heart of the public health response to covid-19. BMJ Opin. https://blogs.bmj.com/bmj/2020/02/28/behavioural-science-must-be-at-the-heart-of-the-public-health-response-to-covid-19/.

Moore, S., Hill, E.M., Tildesley, M.J., Dyson, L., & Keeling, M.J. (2021, March 2021). Vaccination and non-pharmaceutical interventions for COVID-19: a mathematical modelling study. Open Access. DOI: https://doi.org/10.1016/S1473-3099(21)00143-2

Park, T., Ju, I., & Ohs, J.E., & Hinsley, A. (2020, June). Optimistic bias and preventive behavioural engagement in the context of COVID-19. Res Soc Adm Pharm.

Prochaska, J. O., DiClemente, C. C., & Norcross, J. C. (1992). In search of how people change: Applications to addictive behaviors. American Psychologist, 47, 1102-1114.

Qiu, Y., Chen, X., & Shi, W. (2020). Impacts of Social and Economic Factors on the Transmission of Coronavirus Disease 2019 (COVID-19) in China (Working Paper 494 [pre.]). GLO Discussion Paper. https://www.econstor.eu/handle/10419/215739

Rimal, R.N., & Lapinski, M.K. (2009, April). Why health communication is important in public health. Bull World Health Organ. 87(4):247-247a. doi: 10.2471/blt.08.056713. PMID: 19551226; PMCID: PMC2672574.

Rosenstock, I., Strecher, V., & Becker, M. (1994). The Health Belief Model and HIV risk behavior change. In R.J. DiClemente, and J.L. Peterson (Eds.), Preventing AIDS: Theories and Methods of Behavioral Interventions (pp. 5-24). New York : Plenum Press.

Rudd, R. E. (2016). Science | Definition, Disciplines, & Facts | Britannic: diffusion of innovations. Retrieved from: https://www.britannica.com/science/science

Stake, R. (1995). The art of case study research. Thousand Oaks, CA: Sage.

Schmälzle, R., Renner, B., & Schupp, H.T. (2017). Health risk perception and risk communication. Policy Insights from Behav Brain Sci. 163–9.

Shingler-Nace A. (2020, June). COVID-19: When Leadership Calls. Nurse Lead. doi: 10.1016/j.mnl.2020.03.017

Taylor-Powell, E. and Renner, M. (2003). Analyzing Qualitative Data.

United Nations (2020). The Impact of COVID-19 on Food Security and Nutrition. Policy Brief. Retrieved from: https://www.un.org/sites/un2.un.org/files/sg_policy_brief_on_covid_impact_on_food_security.pdf

University of Twente (2017). Health Belief Model: Explaining Health Behaviors.

USAID. (2011). Leadership During a Pandemic: What Your Municipality Can Do.

Verroe, N.S., Gutteling, J.M., & De Vries, P.W. (2013). Enhancing self-protective behavior: efficacy beliefs and peer feedback in risk communication. Risk Anal. 33:1252–64.

World Health Organization. (2021). Coronavirus (COVID-19) Dashboard. Retrieved from: https://covid19.who.int/?gclid=CjwKCAjw6fCCBhBNEiwAem5SO2RbsH09OwdxohHhjgAlpc2VBqMhcClHEUFJM6vPiJ7aYZM7xm3jBBoC_HMQAvD_BwE

World Health Organization. (2021). Coronavirus (COVID-19) Dashboard - Kenya. Retrieved from: https://covid19.who.int/region/afro/country/ke

World Health Organization. (2020, December 29). Coronavirus disease (COVID-19) advice for the public. December 29, 2020. Retrieved from: https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public.

World Health Organization. (2020, March) Responding to community spread of COVID-19. Retrieved from: https://www.who.int/publications/i/item/responding-to-community-spread-of-covid-19

World Health Organization. (2009). Communicating risk in public health emergencies: A WHO guideline for emergency risk communication (ERC) policy and practice. Retrieved from: https://www.who.int/publications/i/item/9789241550208

Yin, R. K. (2009). Case study research: Design and methods (4th ed.). Thousand Oaks, CA: Sage.

APPENDICES

Appendix A: Data Collection Guide

Research Objective	Source of information	Method of data collection	Preliminary codes	Final codes	Themes presented	Additional comments
To establish the communication activities undertaken in the MoH/ASCEND Behaviour Change Communication for COVID-19 Response Campaign	Campaign report IEC materials	Content analysis	Communication materials	Developing materials	Communication activities	
			Strategies and interventions	Campaign preparation		
	Campaign report IEC materials	Content analysis	Reaching the public	Channels	Campaign dissemination	
			Campaign audience	Participation		
	Campaign report IEC materials	Content analysis	N/A	Audience engagement	Monitoring and evaluation	
				Feedback		
				Adherence		
To analyze the campaign messages used to motivate behavior change	IEC materials	Content analysis	COVID-19 reduction messages	Types of messages	Campaign messaging	Uses coding sheet B
			Framing	Messaging tactics		

To determine the use or non-use of health communication theories (Health belief model, social cognitive theory) in the campaign	IEC materials	Content analysis	Communication theories	Communicati on theories	Adherence to health belief model and social cognitive theory	Uses coding sheets C and D

Appendix B: Types Of Messages (Coding Sheet 2)

Messages of Awareness	Health Topic has been defined	Audience is told what to do	Audience is told how to do it

Messages of instruction	Action to be taken is stated	When	How	where

Messages of Persuasion	Messenger is credible	Demonstrates desired behaviour	Desired behaviour is reinforced verbally

Message content	Specific target audience is defined	Lamguage	Theme line and symbols are present

Appendix C: Health Belief Model (Coding Sheet 3)

Perceived Susceptibility	Population at risk has been defined	The risk level given

Perceived Severity	Seriousness of the risk is given	Consequences of risk are given

Perceived Benefits	Belief in doing the action	Advantages of the desired behaviour are given

Perceived Barriers	The cost of doing or performing desired behaviour is given	Assurance/incentives are present

Cues to Action	Reminders are provided	

Self-efficacy	Ability to perform the action	Guidance in performing the action

Appendix D: Social Cognitive Theory (Coding Sheet 3)

Message of expected outcome is given	
Messages of behavioral capability are given	
Provides social support from friends, family or colleagues	
Observational learning can be seen	
Expected behaviour is reinforced	

Appendix E: Radio and TV Activation Package

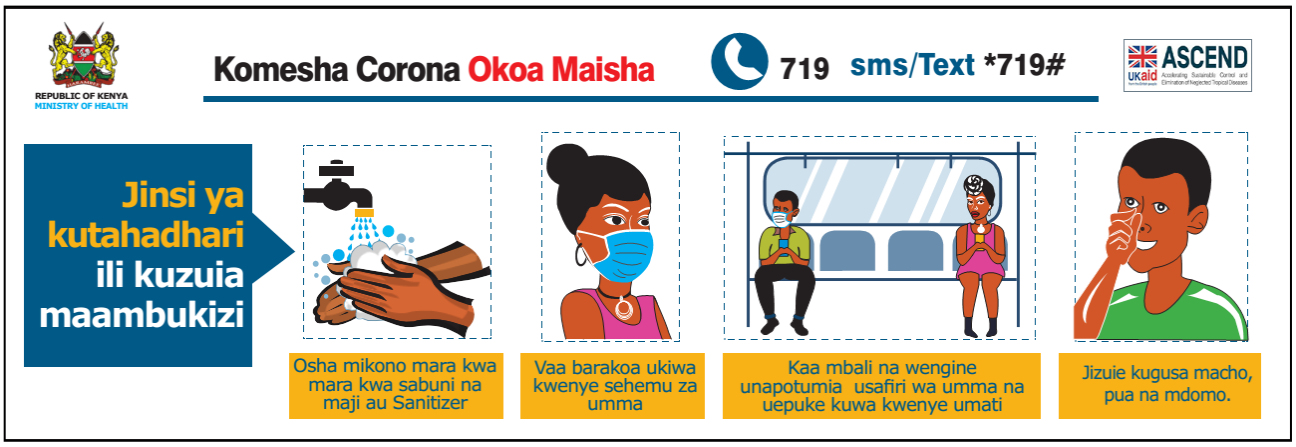
Package item	Description and goal
Live interactive interviews	• One-hour program carried out at the end of every activation period • Involved MoH officials as guest speakers • Meant to sensitise the public about COVID-19 • Guest speakers from MoH officials were involved in live interviews • The interviews also had segments where radio listeners interacted with MoH official on air and managed to respond to their questions
Commercial spots	• 1-2 minutes recorded adverts aiming to inform the public about COVID -19, aired 2-3 times a day • The commercial spots covered topics such as social gathering, stigma, safe travel, keeping distance and home-based care guidelines in relation to COVID-19
Activations	• Live campaigns on air which ran for 2-4 minutes and were aired 2-4 times per day
Presenter mentions	• Written scripts which the presenters mentioned live on air about a COVID-19 BCC measures • Lasted about 1-3 minutes and were aired 2-3 times per day
Promos	• 30 Second recorded scripts to promote the program or event in the course of the week. • Aired 3 times per day to hype the campaign

ANNEXES

IEC materials designed and approved for social media use and county distribution

Stickers English Version

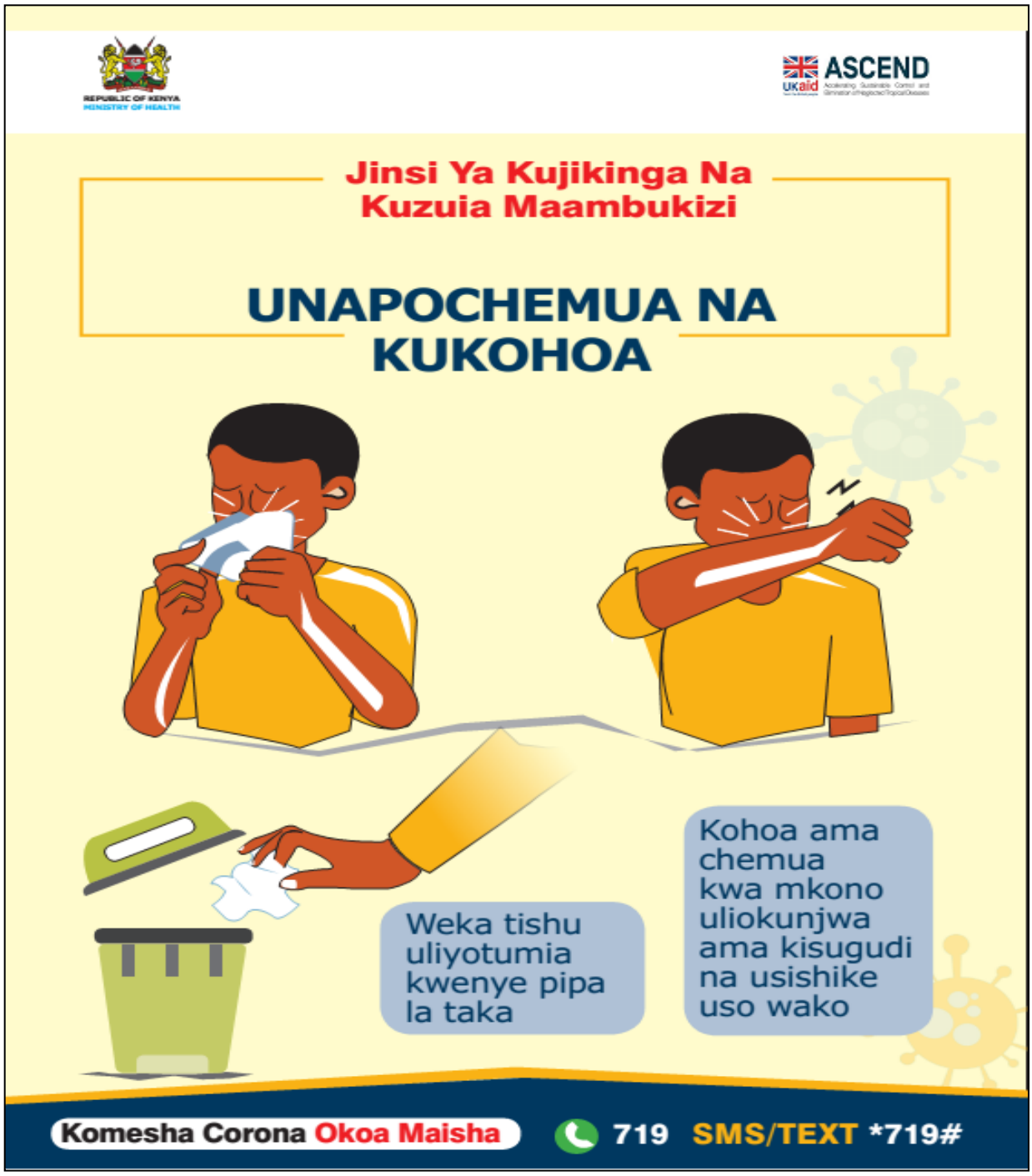
Stickers Swahili Versions



Market Place Poster (Swahili)

General Protection Poster (Swahili)

How to Sneeze Poster in Swahili



Reducing Travel Poster