



Communicating COVID-19 prevention Health Messages: A case study of South Africa

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Abstract

Abstract:

Health messages are indispensable in public health; they are the connection between health experts, researchers and communities. The purpose of this case study is to assess the current health messages used to curb COVID-19 transmission in South Africa. The study also compared the SA health messages to best practices in communicating health messages. The author reviewed the available literature and compared this to the active and real-time management provided by the Department of Health, South Africa, as a response to the COVID-19 pandemic. Despite the effort made by the government in massive screening and testing, contact tracing, quarantine and isolation, the number of infections continued to increase rapidly. This is made worse, considering that the population of SA is among the lowest among these top ten countries. This study found gaps in the health messaging techniques adopted by the Department of Health, South Africa. Messages passed to the audience were prescriptive on how to prevent COVID-19. The messages lacked innovativeness, creativity and strategy. Community engagement was not satisfactory; the Department of Health, South Africa rarely communicated supporting evidence from studies on the benefits of COVID-19 preventive measures, and support for behaviour change. The use of real-life experiences of patients and opinion leaders who are survivors of COVID-19 was poor. Enough consideration was not given to diversities in communities, improving community health literacy, and access to technology, print and social media by the Department of Health, South Africa; these are possible ways of improving adherence. This study recommends innovative ways to improve community engagement at the district level and determine the knowledge, fears, concerns and needs of communities. Forum to promote and empower communities to participate in developing their own health messages are essential, so they can take social responsibility and ownership. Considering restrictions brought about by social distancing, this study recommends the use of technology to bridge the gap between communities and government through the use of SMS messages,

community radios and social media. In addition, epidemiologists with experience in health messaging in epidemics are necessary to guide communities in creating a tailored approach and messages based on their lived-realities and experiences. Â Â Â

Introduction

Health messages are probably the most important tool used by public health practitioners and government, to promote and preserve health, life and livelihood. The importance of health messages in the context of COVID-19 is even more obvious, with quarantine and isolation being encouraged by governments and public health experts all over the world to contain the COVID-19. The number of COVID-19 cases in the world has surpassed 25million, and deaths above 850 thousand with average case fatality (CF) of 3.3%. South Africa (SA) is the sixth country in the world by the number of confirmed cases, despite a total population (TP) of 59million (WHO, 2020). South Africa has recorded above 625 thousand confirmed cases, and fourteen thousand deaths, and a case fatality rate of 2.2% (World meters, 2020). Apart from the high COVID-19 infection numbers, SA also has a high Attack Ratio (AR) of 1% (World meters, 2020). Â The way a health message is conveyed matters; the uptake of such messages by the audience is dependent on how innovative the message is the medium of communication and the social system. Social systems are complex and peculiar, and their peculiarities determine the type of messages that will convince the audience to change their behaviour.

Health messages are an integral part of Public Health Medicine and have emerged as an invaluable tool in the fight against COVID-19 in SA. The ways messages are formulated and communicated to a population is important to ensure adherence and uptake. The high infection numbers and attack ratio in SA suggests that there is a low uptake of COVID-19 preventive messages. The type of message, the medium of delivery, the content and the messengers all act as determinants of audience adherence, behaviour change, and buy-in of communities and individuals to health messages. This study will focus on the impact of COVID-19 messaging styles and patterns, and the effect of such messages on the

uptake of COVID preventive measure, and ultimately infections, using SA as a case study.

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Case Report(s)

Background:

SA has the sixth-highest number of COVID infections with only the US, Brazil, Russia, and India above it. A breakdown of the statistics for the top six countries in descending order, at the end of August 2020 shows: The United States (TP= 313million, AR= 1.9%, CF=3.0%), Brazil (TP = 213 million, AR= 1.8%, CF=3.1%), India (TP= 1.4 billion, AR= 0.27 %, CF=1.7%), Russia (TP=146 million, AR= 0.7%, CF=1.7%), Peru(TP=31M, AR= 2.1%, CF= 4.2%) and South Africa (TP= 59million, AR= 1 %, CF=2.2%). The number of infection in SA is worrying when we compare its population to the top four countries. The reason for the low case fatality of 2.2% of the confirmed cases in SA is not clear, but this may be an indication that government intervention and the health care systems are good and effective. However, the high infection seen in SA is a cause for concern; as this may be an indication of how South Africans view the preventive measures put out by the DOHSA. It may also be an indication of how messages are disseminated.Â

The World Health Organization (WHO, 2020) has emphasised the various ways of preventing and reducing the transmission of COVID-19, with measures like the use of face mask, sanitisation with use of 70% alcohol, social distancing and frequent washing of hands with soap for at least 20 seconds. Others include,Â [avoid touching eyes, nose, ears and mouth](#)Â to reduce the access of the virus to mucous membranes that act as portals for COVID infection. Also, avoid touching of fomite, tables, door handles, surfaces and desktops. However, the WHO did not consider the context and peculiarities of different countries; it rightly left the implementation to individual countries to determine how best COVID messages are communicated to their populace.Â

The above notwithstanding, the Department of Health, SA followed suit by putting up the same prevention tips the WHO emphasised, without considering the peculiarities of its population or without coming with innovative, strategic and creative ways to convey these prevention tips to its different communities. For example, the preventive messages put out by the Department of Health, SA in its website from the beginning of this pandemic has remained the same:

"wash your hands regularly with soap or an alcohol-based hand sanitiser; avoid touching your eyes, nose, and mouth with unwashed hands; avoid close contact with people who are sick; cover your cough or sneeze with a flexed elbow or a tissue; then throw the tissue in the bin; clean and disinfect frequently touched objects and surface" (DOHSA, 2020).Â Â

Health messages are an invaluable tool in the fight against COVID-19. It is a tool available to governments, businesses, public health practitioners and physician to promote health, disseminate health information, and drive behavioural and social change during the COVID pandemic. It is, therefore, essential to put the right message out to achieve the behaviour change the message set out to achieve. In the current pandemic, in SA, the messaging has been monotonous, bordering on autocratic and near-dictatorial. The messages have concentrated on what the audience must do to prevent COVID-19, without telling them why and how the change will be beneficial. Community engagement in developing health messages intended for them can avoid the problems of leaving out the needs and concerns of the community, and missing resources the community already have and can utilise. Messages produced with the communities, and not for the communities, can improve access, adoption, enforcement and ownership of these messages by the communities.Â

Health messages framed correctly can influence the audience behavioural change. Creative and innovative health messages tend to stick in our minds for a longer time and are more likely to bring about behaviour change (Krisberg, 2014). Communicating impediments, providing facts, emphasising benefits of behaviour change, speaking and advertising honestly about available evidence helps improve audience uptake of messages (Krisberg, 2014). From the onset of the COVID pandemic, Government, NPOs and FBOs have maintained the same style, type and method of messaging, without much consideration of the peculiarities of the SA audience, and its communities- which sometimes differ remarkably in their lived experiences.Â Â

Messages in the streets, news media, SMS and government and private institution advertisement have been used to disseminate COVID-19 messages; however, there is little effort by government and civil society to ascertain the effectiveness of such messages. It is unclear if these messages have achieved the goal they set out to reach: Change in behaviour and uptake of preventive measures for COVID-19. What is known is that SA has risen to

firmly occupy the fifth position among countries with the highest number of COVID-19 infections on the WHO dashboard. The WHO dashboard also demonstrates that SA has a high attack ratio; this spread of infection raises questions as to how successful the COVID prevention campaign messages have been in SA?

Health Messages are more effective when lived-experiences of the audience are considered in formulating the messages. A balanced message that addresses personal responsibility, and societal values on the one hand, and oppositions to such message, on the other hand, are more likely to succeed (Krisberg, 2014). Therefore, just like policy changes should not be effected without in-depth research and consultation with experts; health messages should not be put out without understanding, engaging and empowering the community.

The medium of instruction is also essential. There has been extensive use of technology in transmitting messages, including SMS, Whatapps, and e-mails. These methods of communicating health messages are essential and have shown remarkable success. SMS can encourage patients' adherence with treatment and provide support and encouragement to those already infected or live with an infected person ([National Academies Press 2015](#)).

Since the COVID-19 pandemic, the government has engaged with civil society, business and the nation at large, but the outcome of such engagement is often unknown. In some instances, there is a lack of real community participation and contribution, especially in rural and impoverished communities. Further, how far the input of these communities helps in developing messages is unknown. Instead, we see a downward flow of information from government to communities without saying how the concerns, inputs and recommendations of various communities were considered. How did this input improve government messages to enhance behavioural change?

Further, these engagements have been mainly with civil society and pressure groups; this engagement has hardly involved the rural communities. This begs the question: how do COVID-19 messages reach the rural areas, and what type of messages are transmitted to them? With most in these areas having no access to television, print media, billboards and the Internet. Worse still, most of these audiences in the rural communities are unable to read or write (Krisberg, 2014).

Using SA as a case study, the author explores the positives and negatives of COVID-19 health messages

in South Africa. Has the government, faith-based organisations (FBOs), not for profit organisations (NPOs) and other private institutions prevention messages been commensurate with best practice in communicating health messages and are they evidence-based? The researcher also assesses if the public health messaging principles used to curb COVID-19 have been appropriate for the health and social systems in South Africa. It will also explore alternative strategies for improving and communicating COVID-19 health messages to South African. Further, Are the current health messages making a difference given the peculiarities of the South African society of high inequality, unemployment rate, and poverty? Has there been a synergy between the messengers, message and the audience community context? Have government effort and messaging been appropriate for the population in question?

Problem statement: The problem statements of this case study are

1. What problems and gaps exist in the COVID- 19 messages put out by the DOHSA?
2. How can the COVID-19 health messages be improved to reduce the number of infection and attack ratio in SA?

Purpose:

1. This case study will identify gaps in health messages used to fight COVID-19.
2. Suggest ways of improving uptake and adherence to COVID-19 preventive health messages.

Theoretical framework:

A theory is a true justifiable belief that guides or act as a template to explain a phenomenon under scrutiny. Theories guide researchers in exploring the aspects of a problem under investigation and provide a map that will assist in answering the research questions and address the purpose of the study. Several theories are relevant to this case study like the social support theory (SST), and health belief model (HBM). SST involves a relationship between perceived supports (emotional), received support (informational or material) and integrated support (Lakey & Drew, 1997). The HBM addresses the importance of how the audience believes in a particular intervention can bring about change. However, the purpose of this study is to ascertain the gaps and the weaknesses of prevention messages for COVID-19; the theoretical framework most suited will be the theory of diffusion of innovation.

The theory of Diffusion of Innovation or new ideas is a phenomenon that suggests that information obtained

through research, planning, implementation and evaluation processes are applied to a target audience to influence their knowledge, attitude and practice positively (Dorsch and Landwirth, 1993). Health messages are essential in the fight against COVID-19 in South Africa; however, how these health messages are communicated to the audience matters, and determine uptake and adherence to such preventive measures. Over the years, technology has increased, making several avenues for communicating health messages possible, including the Internet, electronic and mobile devices. The theory and principles of diffusion of innovation are applied to this case study to understand major factors underpinning effective diffusion of the novel COVID-19 health messages. The components of the theory of diffusion of innovation or idea are the innovation, communication channels, the social system and time.

An innovation: This is an idea that a group or target audience considers novel, unique or explorative of new frontiers. An idea, practice, or object that is perceived innovative is more likely to be adopted than one that has nothing new to offer. The social system considers an idea innovative if it is direct and makes a scientific and true statement about a health problem, which the recipient did not know. COVID-19 is a new disease that requires people to change how they live, work, eat, socialise and approach symptoms of upper respiratory tract infection, and emerging new symptoms coming to fore regularly. COVID-19 is a new infectious disease that requires a quick and collaborative exchange of information with countries and communities, and by applying the theory of diffusion of innovation, preventative messages uptake will improve (Rogers & Scott, 1997).

This theory suggests that when communicating new ideas to a community, the community needs to be informed, educated and sometimes coached on the new concept. Messages that are simple, clear and understood are easier adopted by communities. Messages need to be less authoritarian and dictatorial, but fact-based and context-driven. The more relevant and advantageous messages are to the target audience, the quicker it is adopted. People of different age, gender, socio-economic class and risk factors for acquiring COVID-19 need to be part of the process and empowered before putting out such messages. The more consistent and realistic the messages are to the needs, values, and experiences of the target audience, the quicker it is adopted. Factors like the ability of the audience to learn, feel and see changes, can improve the uptake messages?

Communication Channels: The second major aspect

of the diffusion of ideas is the communication between the messenger and the audience. Communication channels like print media, news media, and electronic media can help in the dissemination of ideas, but may not convince someone to take up a plan. One to one contact is preferable; most audience uptake an idea, not just based on scientific research by experts, but by the subjective evaluations of a near-peer who adopted the message (Rogers & Scott, 1997).

Persons of authority close to the audience, like chiefs, traditional heads, councillors, celebrities and close relatives impacted by the disease need to share their stories, speak about the disease via community media, virtual community engagement, what apps, twitter, social media, zoom and Facebook. Interpersonal channels are more effective in forming and changing attitudes toward new problems, but the nature of COVID-19 has made that less likely. In the case of COVID-19, Although, Victimization, stigmatisation and discrimination are possible deterrents to speaking out, a deliberate and concerted effort needs to be made by the government, mass media, FBO, NGO and citizens to address myths around COVID-19; this will encourage survivors to speak and give a human face to the problem.

Time: Time is an important factor in the diffusion of new ideas (Rogers & Scott, 1997). The decision-making process is a mental process, starting from conception of the idea to the adoption of the concept. The rate of Adoption of COVID-19 messages can be enhanced by better understanding and education about the virus and reasons for specific preventive measures. The adoption of interventions can improve if they are aligned with the community needs, impediments, and concerns. The adoption of the idea is also influenced by how well an Innovation is presented to the community. How quickly COVID-19 messages are adopted can be improved by increasing the intensity, repetitiveness and multi-media coverage of the idea.

The Social System: The system is an interaction of all the stakeholders that bring about change. Researchers have predicted that the behaviour of systems or groups can influence the existing social structures and change (Jackson, 1996). Positive psychosocial interaction with people is more likely to improve the uptake of new ideas by building trust between the messenger and the community. In rural communities, there is room for education and outreaches to teach primary preventive measures of COVID-19, with care taken to prevent circumstances that increase infection. Community, opinion leaders, and survivors in such communities could also help in

this process.

Discussion: The purpose of this case study is to identify gaps in health messages used to encourage adherence to preventative measures in COVID-19. The study will also suggest ways to improve the uptake and adherence to COVID-19 health messages. From an analysis of the WHO dashboard, it was evident that SA has the sixth-highest absolute numbers of COVID infections in the world, high attack rate and the low case fatality. The task here is to briefly elucidate the health messaging techniques used by SA during this pandemic and determine how effective these have been.

The benefits of the current COVID-19 preventive health messages by the DOHSA have not been quantified. It is unclear how much the health message for COVID-19 impact the behaviour of South Africans positively or negatively in adhering to COVID-19 prevention messages. For example, messages like SA have a youthful population (average age is 28 years) which contributes to a low case fatality seen in the country was common, although this is a fact, but the use of this fact in this context becomes counterproductive. The message gives the impression that the youth are not susceptible to COVID-19. Also, the message: Always use a facemask in a public place to prevent COVID-19 infection (DOHSA, 2020), could be modified as: Face mask can provide up to 90% protection from the Coronavirus (Bowen, 2010).

It is essential to frame health messages properly to influence the audience to make behavioural changes. Creative and innovative health messages tend to stick in our minds for a longer time and are more likely to bring about behaviour change (Krisberg, 2014). The case fatality of SA is relatively low at 2.2%, while the average case fatality across the world is 5-6%, and for those older than 80, it is 13% (WHO, 2020). In addition, the WHO dashboard demonstrates that SA has a high attack rate; this rapid spread of COVID-19 raises questions as to how successful the COVID preventive messages has been in SA in making people change their behaviour. There is also a need to ascertain if the health messaging techniques used for COVID-19 are in keeping with public health message best practices.

SA has risen to the fifth position among countries with the highest number of COVID-19 infections on the WHO dashboard but has a low case fatality. A concerted effort should be made to ensure that the right messages are put out, with the audience in mind.

However, SA has a low case fatality, partly, due to the pro-active response of the government to the outbreak, and strategic planning for a sudden surge in the number of cases. The case fatality is around 2.2%, which is at least a half of the average 5-6% seen world over. The other reason is the relatively youthful population without co-morbidities and availability of health care facilities, including high and intensive care facilities with adequate PPE supplies. Protocols to keep infection low were sent out to hospitals and hospices timeously. Webinars and updates as research information became available were also available. Also, South Africa was quick in adapting treatments like the use of Anticoagulants, dexamethasone, Vitamins, selenium, Zinc and nebulisation with budesonide, but their impact on deaths due to COVID-19 is not clear.

The impact of the several one-for-all messages on social media, print media, billboards and television has not been quantified, but the number of persons infected keeps increasing, and SA is currently the sixth in the number of infections confirmed for a country in the world. The number of confirmed infection must be interpreted in the context of SA, having a low population of about 59 million when compared to the top ten countries on the WHO dashboard (World meter, 2020) raising the question whether these health messages around COVID-19 have been effective? Therefore, just like policy changes cannot be effected without in-depth research and consultation with experts; health messages should not be put out without understanding, engaging and empowering the audience. It is unclear if epidemiologist with experience in formulating health messages were consulted because what we have seen is a flow of information in a top to the down manner, without engaging opinion leaders in the communities.

Engagement done in SA around COVID-19 has been mostly with civil society and pressure groups, leaving out the rural communities; this begs the question: how do COVID messages reach the rural areas? Also, in SA, most adverts for preventive measures for COVID-19 are found mostly in the urban and sub-urban areas and less among rural communities. There is a disparity in the access and distribution of information between urban and rural South Africa; with most adverts concentrated in the metropolitan area. People in rural communities are also less likely to have electricity, Whatapps, e-mails print media, billboards, Internet and cell phones. Worse still, most of the audiences in rural communities are unable to read or write (Krisberg, 2014). The extensive use of technology in transmitting messages in the fight

Recommendation:

The purpose of this case study is to evaluate the current public health preventive messages around COVID-19 in SA, and ascertain if it meets the current best practices in disseminating health messages, and recommend measures to improve COVID-19 preventive messages. Public health messages are framed to reflect the contexts, concerns and lived experiences of its audience, using the most appropriate medium. Available data can be used to underscore the benefit of change. A health message must be factually correct, recognise the context of the problem, and consider the level of health literacy and belief systems of its audience. This case study recommends the following measures to improve the uptake of COVID-19 preventive measures in South Africa.

1. In SA, the disparities in access and distribution of media coverage between urban and rural areas are vast; with most adverts concentrated in the urban areas. Some rural communities lack the necessary access to news media or technology. Availability of trained healthcare workers in rural communities can enhance education using community radios to engage and improve the audience understanding of the problems and prevention of COVID-19.

2. Community and individual needs and concern are not the same. The government and FBO need to do more for impoverished communities, rural communities and people with co-morbidities. Factors like literacy level, Housing, overcrowding, poverty, unemployment and inequality can impact recommended preventive messages for COVID-19. These factors make it difficult for citizens to access information and interventions they need. Tailored messages can be developed by engaging affected communities, taking into consideration their needs, concerns and lived experiences.

3. Community leaders, opinion leaders, traditional leaders, traditional doctors and role models who live in communities should be trained on preventive measures to bring the message closer to the people. Also, in doing this, we prevent the problem of heterophony; where communication occurs between two or more individual with different realities (Rogers, 1995).

4. Unsatisfactory messaging techniques are significant factors impacting the uptake of health messages. For example, instead of messages like a use face mask, sanitise and wash hand with soap, the benefits of these actions could be communicated in clear terms, so the audience makes up their mind; for example,

wearing facemask reduces death from COVID-19 (Bai, 2020).

5. Further, the messaging around co-morbidities is an example of where research outcome could influence messaging. In SA obesity, diabetes mellitus, HIV, Tuberculosis and chronic obstructive airway diseases are common and impact the outcome of COVID-19 infection. Emphasising the risk co-morbidities pose through messages like more than 50% of COVID deaths had associated co-morbidity (Mitchley, 2020)- visit your doctor to ensure your chronic condition is controlled. Instead, what made headlines on social media were: Do not worry, you are young, you have no co-morbidity, so even if you get infected, you will not die.

6. Communicating the benefits of behaviour change, honesty with available evidence improve uptake. On the other hand, autocratic, dictatorial and complex messages are unlikely to succeed. Knowing the levels of change (knowledge, attitudes, and practices) required by a particular community is important for planning, implementation, and evaluation of uptake by target audience (Rogers, 1995). Health Messages need to educate communities on how and why prescribed preventive measures are important. For example, a 2015 study in the American Journal of Infectious disease Control, found that people touch their face more than 20 times an hour, and about 44% of the time it involves contact with a mucous membrane. Pathogens picked up by the hands are likely to end up in the face (Zia, 2020). Here a simple message that says "do not touch your face" will be less acceptable than one that says: "touching your face increase possibility of COVID-19 by 44%"

7. The flow model of mass communication suggests that information flow from sources to opinion leaders, who in turn pass them on to followers (Rogers, 1995). The goal of messaging is to affect the knowledge, attitudes, and practices of the target audience. In the fight against COVID-19, opinion leaders' resident in affected communities could be used to spread messages of adherence, and deal with misinformation and myths that compromise the effort of government and stakeholders. For example, a Ugandan musician released a song amid the COVID pandemic with the catchphrase "Sensitise to sanitise". This song

