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From top scientist to science media star during COVID-19 – South Africa's Salim Abdool Karim

Around the world, the COVID-19 pandemic has turned a handful of leading scientists into highly visible public figures. Anthony Fauci is the media star in the USA; Roberto Burioni in Italy; and in Sweden, it is Anders Tegnell. In Germany, Christian Drosten has become a household name, while Hugo Lopez-Gatell is highly visible in Mexico.

In South Africa, we witnessed a remarkable surge in the public prominence of Professor Salim Abdool Karim following his appointment, in mid-April 2020, to lead a Ministerial Advisory Committee advising government on combating COVID-19. Data from Pear Africa, a South African media monitoring company, show that Abdool Karim featured in 545 print, broadcast and online media items during April 2020, compared with 20 in April 2019.

Tracing Abdool Karim's journey towards becoming a trusted public voice of science on COVID-19 reveals meaningful insights into the relationships between scientists, policymakers and the South African public. It also illustrates how Abdool Karim follows an international cultural trend whereby charismatic scientists approach celebrity status under certain conditions, giving them unique power in shaping public trust in science.[1]

For this case study, I explored the characteristics of Abdool Karim's engagement with the South African public during the COVID-19 pandemic in the light of two key dimensions of quality in science communication, namely 'visibility' (including accessibility) and 'credibility' (encompassing expertise, trust and relevance). Both are needed for people to make decisions about costs, risks, benefits and ethics.[2] Furthermore, I considered the effect of his communication skill (efficacy) and his willingness to engage (attitude).

Public visibility in science

To become visible in academic circles, researchers must publish highly cited work in scholarly journals. In contrast, visibility in the public sphere depends on a high media profile.[3] Media prominence amplifies scientists' views and stimulates public interest, to the point that some become influential thought leaders and even iconic celebrities.[4,5]

A signal of public visibility that approaches celebrity status is when the media starts to take an interest in a scientist's personal life.[3] Furthermore, public visibility in the media is sustained by controversy.[6,7] Both these factors are illustrated in the case of Abdool Karim.

Public visibility in science: The case of South Africa's Salim Abdool Karim

Abdool Karim has long been recognised as one of the most visible scientists in South Africa.[8] He knows that his public visibility results from his media profile and he pays attention to his media appearances:

> *I am not surprised that I'm seen as publicly visible. In 2016, I appeared in about 455 articles and news items and I was on eTV about 20 times and SABC 16 times. Our communication department keeps track of all my media appearances and, given the amount of time it takes, it is extremely useful to have those statistics.*[9]

For him, engaging with the media (and the public) is an integral part of his role as a scientist:

> *Our job is to do good science and to communicate it. It is part and parcel of the job.*[9]

With a long track record of science advocacy, he is acutely aware of the power of the media to drive policy change. Around 2000, Abdool Karim was one of the scientists who spoke out when then South African President, Thabo Mbeki, questioned the science of HIV/Aids. He describes this period as a turning point:

> *I could not stay quiet. I knew that we had to convey the scientific viewpoint in a way that people could understand – clearly and succinctly. If we did not challenge Mbeki's views, how would people be able to make sound judgements? We had to fight back with the help of the media.*[9]

Those who publicly disagreed with the government's Aids denialism were branded as enemies of the state. Abdool Karim was chastised for his views during the 2000 International Aids Conference in Durban when Mbeki's health minister, Manto Tshabalala-Msimang, accused him and colleague Hoosen Coovadia of being 'disloyal' and 'traitors'.[10]

Twenty years later, facing the COVID-19 pandemic, the South African government turned to scientists for advice on how to handle the crisis, with Abdool Karim taking the lead. The contrast with his previous experience is clear:

> *The minister has been contacting us, he wants to involve us, he is seeking the opposite of what Mbeki and Tshabalala-Msimang wanted.*[10]

The South African media generally welcomed the establishment of a committee of leading scientists as a signal that government 'has chosen to respond to the Coronavirus armed with the best available information and evidence'[11]. On 13 April 2020, Abdool Karim participated in a two-hour (live) televised public briefing. Resulting media headlines referred to him as a 'world-class scientist'[12] and 'a great mind at work'[13]. Journalists praised the way he explained the scientific basis for the government's response to COVID-19:

> *He had millions of South Africans glued to their screens, collectively eating out of the palm of his hand. After the presentation … there was a palpable shift in the public's understanding of what informed some of governments' decisions around its response.*[14]

> *In a calm and reasoned two-hour-long knowledge explosion, Prof Salim Abdool Karim became our Dr Fauci by helping us, at last, to make sense of our corona fears.*[15]

Some South Africans took to social media to thank him and #ProfKarim trended briefly on Twitter:

> *#ProfKarim South Africa's COVID-19 Hero!*[16]

> *The amount of info that he gave is priceless. Everyone in South Africa should watch this. Thank you #ProfKarim.*[17]

> *#ProfKarim is our very own Dr Anthony Fauci. This man gives SA peace in his explanations. What a great resource to SA at this time!*[18]

Over the following weeks, journalists lined up to interview him and Abdool Karim participated in many media briefings and webinars.

The face of COVID-19 science in South Africa, Professor Salim Abdool Karim (photo: Madelene Cronjé, Bhekisisa Centre for Health Journalism).

Indicative of his new level of fame, journalists wanted to know more about the man behind the scientist. Several articles focused on his childhood, his life story and his family, with some journalists highlighting his friendly demeanour and charisma.[15,19]

Public credibility in science

Public credibility in science is complex and nuanced. Definitions of what makes scientists credible tend to focus on their productivity, leadership, and the requirement to limit their public communication to peer-reviewed evidence within their own field of expertise.[20] Peters[21] defines public credibility in science as consisting of 'expertness' (the ability of the source to provide accurate information) and 'trustworthiness' (the readiness of a source to convey information clearly and completely). Expertise (i.e. the knowledge and ability to be accurate) is associated with the communicators' credentials, such as institutional affiliations, leadership positions and academic recognition. Importantly, expertise on its own may earn audiences' respect, but not necessarily their trust. Audiences decide whom to trust based on the perceived intent (truthfulness) of the communicator and whether the communicator is deemed to be sincere and friendly, thereby demonstrating concern for the audience (warmth). Therefore, people will decide whom to trust based on perceived competence and warmth, suggesting that 'scientific communication can be more effective by drawing on both dimensions of communicator credibility'.[22]

During a time of crisis, there are several 'warmth'-related factors that will contribute to or detract from the credibility of scientists as public communicators. These factors include ongoing interaction with the public, and communication characterised as inclusive, transparent, frank, truthful, succinct, consistent and compassionate, as well as the acknowledgment of uncertainty and ambiguity that are often inherent to a crisis.[23-25] Credibility is undermined when communicators avoid expressing their own feelings of concern, because they may be perceived by the public as cold and uncaring.

The following examples show how Abdool Karim achieves public credibility in science, based on the criteria outlined above.

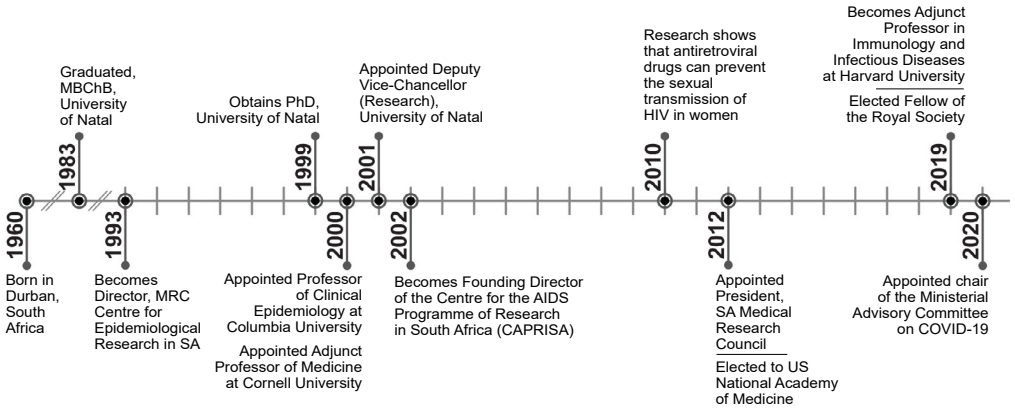
He has the academic credentials

When journalists introduce Abdool Karim, they often refer to his imposing academic track record that positions him as a credible expert:

> *Karim's CV spans four universities and several institutions. He is a Fellow of the Royal Society. His most recent posting is that of director of the Centre for the Aids Programme of Research in South Africa (Caprisa), based in Durban. His other titles include*

Salim Abdool Karim was born on 29 July 1960 in Durban, South Africa.
Now, close to his 60th birthday, his 62-page CV consists of impressive lists of academic achievements, appointments at leading research organisations and scholarly prizes and awards.

A few highlights are reflected in the timeline below:



> *Adjunct Professor of Immunology and Infectious Diseases at Harvard University and Adjunct Professor of Medicine at Cornell University.*[12]
>
> *Some of his awards include The World Academy of Sciences Prize in Medical Sciences, the African Academy of Science's Olusegun Obasanjo Prize for Scientific Discovery and Technological Innovation and the Kwame Nkrumah Continental Scientific Award, the most prestigious scientific award in Africa.*[13]

He stays in his lane and sticks to the evidence

Abdool Karim is adamant about sticking to his role as advisor to the government, and formulating advice based on scientific evidence:

> *I think there is confusion; I am not leading anything. I'm just the person giving the advice. I don't work for the government. I make no decisions. I simply provide information, that's all, and I'm very happy to do so.*[14]
>
> *Is BCG helping us? I would love that to be the case but I'm really sceptical that it has any influence. I will wait for the data to make up my mind firmly one way or the other.*[26]

He speaks clearly

Jargon is a barrier when it comes to public understanding of science.[27] Abdool Karim is clearly aware of the need to package his science messages simply and clearly:

> *As scientists, we have our own language and terminology, which make it very hard to explain some things to the public. We must learn to get away from our scientific terminology and talk clearly and simply – that is the most important thing.*[9]
>
> *We find that people often just need that little clarity. That little clarity changes the amount of stress they are under or the way in which they are looking at the problem. With a clearer understanding they are able to function better and relax. In some small way, we are happy to make that contribution.*[28]

He uses metaphors and analogies effectively to help people grasp key messages:

> *When the virus enters a community, it spreads like wildfire. … You need people on the ground that are looking for fires. If we see one, we can prevent it. If we get there too late, then we have to put out a raging fire.*[29]
>
> *We have not escaped this bullet, we have only postponed its impact.*[30]

He stands up for science

As during the earlier period of Aids denialism, Abdool Karim believes that scientists can combat fake news by speaking out publicly:

> *So, we do quite a lot of Q&As because we believe that if you empower people with facts, then the fake news will just fade into the background. And ignorance and over reaction become less of an issue.*[28]

He delivers unpopular messages with compassion

While scientific evidence is not always reassuring or what people want to hear, Abdool Karim delivers 'hard' messages with empathy:

> *Our job sometimes is to look at all the bad options and give the least bad one, saying: Of all the bad options we have, this one is probably the one we should go with. Here is the scientific evidence for it.*[14]
>
> *What we hope for is that the number of new cases will steadily decline and the new cases will decrease. But I am sorry to tell you that that is very unlikely.*[31]

He emphasises uncertainty

He acknowledges the challenges when scientists are called on to give policy input and public advice during this pandemic:

> *Whether we're right or wrong, time will tell. History will judge us. I don't claim that we are not making mistakes. If you don't make mistakes in tackling a disease of this nature that means you're not being sufficiently proactive.*[30]
>
> *As South Africa braces for an expected surge of cases over the coming weeks, I describe the national COVID-19 response as 'sailing a ship while building it'.*[32]

He is competent, but not cold

When addressing the public, Abdool Karim mostly speaks in the first person (showing personal concern) and connects with people on an emotional level:

> *Once we end the lockdown, and we must remember that none of us have immunity against this virus, we are all at risk.*[29]
>
> *I am sorry to say that life is not going to be what it was like before. … We are going to have to learn to live in a way where we will lose that soft touch that comes from being close to those we love, those we care about, because in order to protect them we are going to have to keep some distance.*[33]

Going public is not risk free

A high public profile goes hand-in-hand with some level of reputational risk that could result from media scrutiny, disdain from peers and controversies.[4,34] Notably, scientists with a high standing in academic circles are better able to weather the storms that could result from publicity.[4,9,35]

In the case of Abdool Karim, *Business Day* columnist Steven Friedman[36] took issue with his insistence that South Africa could not avoid a severe COVID-19 epidemic, accusing him of political double-speak. Also, Abdool Karim's research funding came under scrutiny with claims on social media that he received ZAR944 million in funding from the Bill and Melinda Gates Foundation. He dismissed these claims as 'fake news' and 'nonsense'.[37]

Conclusion

These examples of how Abdool Karim has engaged with the South African public about COVID-19, mostly via the mass media, illustrate the criteria that have been suggested as measures of effective public communication of science. They show that journalists and the public respond positively to simple and compelling messages that are delivered clearly and with empathy. In order to achieve this result, scientists need to have credibility and advanced communication skills, but they must also be willing to invest time in working with the media and engaging with the public.

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