GLOBAL

Study reveals more about ‘pandem-icons’ during COVID

Alicia James  16 February 2023

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A global study into the characteristics of celebrity or visible scientists during the first year of the COVID-19 pandemic has revealed that “visibility is related to scientists’ media skills and willingness to engage, as well as their ability to respond to criticism and cope with controversy”.

The study was undertaken by a team of 29 researchers, including Dr Marina Joubert and Professor Lars Gusheiber of the Centre for Research on Evaluation, Science and Technology at Stellenbosch University, South Africa, as the first and second authors, as well as Professor Massimiano Bucchi of the University of Trento, Italy, and Professor Martin W Bauer of the London School of Economics, United Kingdom. The research included 16 countries.

The article, titled “Pandem-icons – Exploring the characteristics of highly visible scientists during the COVID-19 pandemic”, was published in the Journal of Science Communication earlier in 2023.

The researchers refer to the work of other scholars who indicate that, because of their prominence, visible scientists can shape public discussions and influence public opinion, making science accessible to the public. They point out that, until their analysis, studies of visible or celebrity scientists focused on single countries.

“Very little research has explored the concepts of visibility and celebrity in science across different national and cultural contexts through the lens of the characteristics of these scientists.”

However, the COVID-19 pandemic created a situation that afforded them the opportunity to consider scientists’ public visibility and the characteristics that make them visible (or even turn some into celebrities) across a range of countries during the same time period.

Scientists with the highest visibility

For each of the 16 countries covered in their study, they selected one scientist who was considered to have reached the highest level of public visibility between January and December 2020.

The researchers used 12 socio-cultural criteria and characteristics for visible scientists from the existing science communication literature. The characteristics include: age, gender, scientific credibility and reputation, public image, media visibility, understanding the needs of the media, communication styles, blurring of personal and professional lives in mass media, commenting outside areas of expertise, controversy, handling criticism and tradable commodities.

Visible scientists identified in the study
<table>
<thead>
<tr>
<th>Country</th>
<th>Name</th>
<th>Gender</th>
<th>Age (as of 1st January 2020)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Peter Doherty</td>
<td>Male</td>
<td>79</td>
</tr>
<tr>
<td>Brazil</td>
<td>Attila Iamarino</td>
<td>Male</td>
<td>37</td>
</tr>
<tr>
<td>Canada</td>
<td>Horacio Arruda</td>
<td>Male</td>
<td>60</td>
</tr>
<tr>
<td>China</td>
<td>Wenhong Zhang</td>
<td>Male</td>
<td>50</td>
</tr>
<tr>
<td>Denmark</td>
<td>Lone Simonsen</td>
<td>Female</td>
<td>61</td>
</tr>
<tr>
<td>Germany</td>
<td>Christian Drosten</td>
<td>Male</td>
<td>47</td>
</tr>
<tr>
<td>India</td>
<td>Soumya Swaminathan</td>
<td>Female</td>
<td>68</td>
</tr>
<tr>
<td>Israel</td>
<td>Ronni Gamzu</td>
<td>Male</td>
<td>54</td>
</tr>
<tr>
<td>Italy</td>
<td>Roberto Burioni</td>
<td>Male</td>
<td>57</td>
</tr>
<tr>
<td>Kenya</td>
<td>Patrick Amoth</td>
<td>Male</td>
<td>54</td>
</tr>
<tr>
<td>Russia</td>
<td>Alexander Ginsburg</td>
<td>Male</td>
<td>69</td>
</tr>
<tr>
<td>South Africa</td>
<td>Salim Abdool Karim</td>
<td>Male</td>
<td>59</td>
</tr>
<tr>
<td>Spain</td>
<td>Fernando Simón</td>
<td>Male</td>
<td>56</td>
</tr>
<tr>
<td>Sweden</td>
<td>Agnes Wold</td>
<td>Female</td>
<td>64</td>
</tr>
<tr>
<td>U.K.</td>
<td>Neil Ferguson</td>
<td>Male</td>
<td>52</td>
</tr>
<tr>
<td>U.S.</td>
<td>Anthony Fauci</td>
<td>Male</td>
<td>79</td>
</tr>
</tbody>
</table>

Source: Joubert, et al 2023

They found that all 16 visible scientists to some extent shared some of the characteristics in terms of how they communicated, but there were key differences, based on the roles they played within their countries, "the ways that they became visible during the pandemic, and the differing cultural contexts in which they were operating".

In terms of age, most visible scientists were older than 50. "The average age of the 16 visible scientists in our study was 59 years (as of 1 January 2020). Ages ranged between 37 and 79, with a median age of 58, and 25% of scientists 65 or older."

Only one scientist, Iamarino from Brazil, was younger than 40, and one, Drosten of Germany, was younger than 50. The rest (14 of the 16 scientists) were 50 or older. At the time of the study, Fauci (United States) and Doherty (Australia) were the oldest scientists in the study.

"This finding corresponds with reports in the literature that older, and more senior scientists are more in demand as media sources and more confident and able to engage with journalists."

In terms of gender, most scientists who become COVID-19 media stars were men. "Consistent with earlier research, we found that the visible scientists in this study were mostly male (13 men, compared to three women), ie only 19% (one-fifth) were women. These findings echo recent research about the notable under-representation of female expertise in the media during the pandemic."

Credible, charismatic leaders

Most scientists were recognised as credible leaders. "Our findings on the scientific credibility and academic reputations of the selected scientists are based on our assessment of their leadership roles, and the awards and prizes bestowed upon them. "They found that most of the 16 scientists were recognised as leaders in their field, highly acclaimed for their achievements, and enjoying an exceptional standing within the science arena."

Being directly accountable for public healthcare, these researchers were well placed to reach even higher levels of public visibility during the pandemic. In terms of recognition through scientific awards and prizes, Doherty (Australia) was one of the most highly recognised: he received the Nobel Prize for Medicine in 1996, among other awards.

Fauci stood out as another recipient of numerous prestigious awards, including the Presidential Medal of Freedom, while Karim (South Africa) has also won several awards, including the Kwame Nkrumah Continental Scientific Award from the African Union. Some scientists in the study were recognised earlier for their work during previous epidemics, said the researchers.

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Most scientists were charismatic and likeable. "Most of the visible scientists were reported as trustworthy, direct and confident."

"For example, South Africa’s Abdool Karim was perceived to have a strong warm, and confidient presence, and to be professional, honest, and maintaining his composure even when faced with public misinformation and paranoia," explain the researchers.

Through studying media appearances and the demeanour of the 16 selected scientists, the academics found that most of them came across as "publicly relatable, warm and friendly, with a genuinely caring attitude towards issues of public health".

Another characteristic that a number of visible scientists (for example, China, Denmark, Germany, Spain, and the US) appeared to possess was the ability to be (or at least appear to be) humble.

**Interaction with the news media**

In terms of media visibility, scientists gained a high media profile during the pandemic. All the visible scientists in this study had at least some media exposure before the pandemic. However, only six (from Australia, Brazil, India, Italy, Sweden and the US) had a high media profile.

Several scientists had emerging media profiles, and most were well known to the scientific world, but were not yet public ‘household’ names.

Karim (South Africa) was well known internationally in public health and epidemiological circles prior to the pandemic, but only became known to ordinary South Africans after his appointment to the Ministerial Advisory Committee early in 2020, “which triggered multiple media appearances”, according to the study.

Most scientists knew how to use the media, the study found. “We found that most visible scientists made use of media and social media during the pandemic, making themselves visible and accessible to journalists.”

A case in point was in February 2021, Simonsen (Denmark) reported spending 20 hours each week on media contact. A few scientists, like Drosten (Germany), were asked to participate in media channels — in his case, regular podcasts — to deal with the number of requests they were receiving from journalists.

However, not all visible scientists were so accessible to media. Canada’s Arruda kept his distance from the media. Italy’s Burioni decided what types of media engagement he was willing to do.

Most of the visible scientists demonstrated confidence in communicating with the public. “They used narrative, anecdotes or emotions in their communication efforts, while some used humour, analogies, or metaphors,” explained the researchers.

With their new levels of visibility, journalists wanted to know more about the men and women ‘behind’ the scientists, which resulted in feature stories that often blurred the professional with the personal.

"We found some evidence that visible scientists may have been willing to ’play along’ with this blurring of their public and private lives."

**‘Evidence’ and controversies**

Almost all the scientists in the study adhered to using evidence in their communication. However, the researchers assert that there was larger variation when considering whether these scientists adhered to, or moved outside their own areas of scientific expertise.

“While most of the visible scientists appeared to adhere to their area of scientific expertise when communicating, some did not. Scientists from Brazil, Germany, Israel, Spain and Australia spoke about findings from a variety of COVID-19 science-related topics.” Doherty from Australia on the other hand, made it clear when he was stepping acknowledging its clear stewardship role in protecting the environment and biodiversity.

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outside of his expertise.

Most scientists were involved in and responded to controversy. According to the study, “Almost all of the scientists ... were involved in some sort of public controversy, demonstrating the inherent risks of a high public profile”.

Many controversies related to governmental management of the pandemic and some of the regulations overall; they implicated Fauci (US), Ferguson (UK), Karim (South Africa), Amoth (Kenya), and Simón (Spain).

Fauci exemplifies how a scientist’s image was commodified during the pandemic, with his image displayed on bottle-openers, coffee cups, adult colouring books, good-luck socks, bobbleheads, and bumper-stickers, note the researchers.

“By the time our study was concluded, four of the scientists — Doherty (Australia), Iamarino (Brazil), Simonsen (Denmark), and Burioni (Italy) — wrote books associated with the pandemic,” said the researchers.

The study concludes that, while highly visible scientists play a key social role during a time of crisis, their findings indicate that high public visibility is coupled with intense public scrutiny and controversy. This implies that these scientists may be personally vulnerable.

While visible scientists have historically faced peer and public criticism, “we do not have evidence that they experienced the kind of threats and aggression that were targeted at some of the visible scientists during COVID-19”, said the researchers.

They added that COVID-19 brought with it a major public demand for scientific explanation and the scientists may have felt obligated and motivated to engage with public audiences at greater intensities than before.

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