About half of media stories fail to label 'preprint' COVID-19 research: study

January 6 2021

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A new SFU-led study finds that about half of media stories in early 2020 featuring COVID-19 "preprint" research—research that has not yet been peer-reviewed—accurately framed the studies as being preprints or

unverified research.

SFU Ph.D. student Alice Fleerackers, a [researcher](#) in the Scholarly Communications Lab, and publishing program professor Juan Pablo Alperin collaborated with an international team of researchers to analyze more than 500 mentions in over 450 stories from digital news outlets covering [preprint](#) COVID-19 research. The study was published this week in *Health Communication*.

Their analysis is based on 100 COVID-19 preprints posted on top-ranked preprint servers medRxiv and bioRxiv from January 1 to April 30, 2020.

"We found that it wasn't just newer, less 'traditional' [media outlets](#), like Medium or Yahoo! News that did not accurately identify the research as preprint or preliminary," Fleerackers says. "Even established publications like *The New York Times* and *The Guardian* did not consistently describe the preprints they covered as unreviewed."

The media's coverage of COVID-19 preprints may in part be a reflection of larger pressures facing the scientific community. "The urgency of the pandemic required researchers and journalists to sacrifice the assurances of peer review for more rapid publication," Alperin explains. "Just as researchers are adjusting to the new way of rapidly communicating among each other, so too are journalists figuring out how that greater uncertainty needs to be conveyed to the public."

Fleerackers notes that coverage of preprint research can be helpful to the public. For example, sharing findings about promising prevention strategies as early as possible can save lives. But it can also undermine the public's trust in the media if a preprint is mischaracterized as widely accepted science but the findings are later discredited.

"We saw this with a couple of high profile preprints published at the beginning of the pandemic, for example, which linked tobacco to COVID-19 prevention," she explains. "These studies were highly flawed, but they got a ton of media coverage—sparking unnecessary panic and even encouraging some people to pick up smoking."

The early months of the pandemic offered few examples of best practices to turn to and the science continued to evolve, rapidly changing what was known about the virus and how the public could best protect themselves from becoming infected. Fleerackers adds that reporters covering coronavirus often had little or no expertise in health and science.

"Journalists have not had an easy year. All things considered, I'm impressed with what they've been able to accomplish despite the odds," she says. "And overall, audiences seem to be responding well. Many countries saw a boost in news consumption during the early stages of the pandemic, and trust in journalism has been high."

More information: Alice Fleerackers et al, Communicating Scientific Uncertainty in an Age of COVID-19: An Investigation into the Use of Preprints by Digital Media Outlets, *Health Communication* (2021). DOI: 10.1080/10410236.2020.1864892

Provided by Simon Fraser University