Study identifies urgent need for improved research on how to respond to misleading health information

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A study by researchers at the Brown University School of Public Health on ways to mitigate the impacts of misleading COVID-19 information

found that variations in the designs of prior studies have complicated efforts at drawing strong conclusions about what worked and what did not.

The study, published in *Health Affairs* on Wednesday, Nov. 15, shows where existing research is lacking and how it can be improved. For example, when studies tested the impact of COVID-19 misinformation interventions, they used significantly different examples of misinformation, assessed 47 outcomes yet rarely measured public health outcomes such as intent to vaccinate.

The authors recommend that the research community makes evidence comparable and actionable, and includes public health experts in the design and delivery of health misinformation interventions.

"Public health practitioners, journalists, community organizations and other trusted messengers are tasked with responding to health misinformation every day," said co-author Stefanie Friedhoff, an associate professor of the practice at Brown's School of Public Health and co-director of the Information Futures Lab.

"While this is a complex area of study, we have a responsibility toward those on the frontlines to generate evidence that is meaningful and as actionable as possible. Our review can move the needle by identifying what is missing and where the research community needs to go next."

Misinformation is "information that is false, inaccurate or misleading according to the best available evidence at the time," according to the Office of the U.S. Surgeon General. Government agencies, public health authorities and social media platforms have employed various measures to counter misinformation that emerged during the COVID-19 pandemic.

The researchers' evidence review covered 50 papers published between Jan. 1, 2020, and Feb. 24, 2023, that in total investigated the efficacy of 119 misinformation interventions.

The research team categorized and explored different types of COVID-19 misinformation examples used in the studies, such as "vaccines are not safe" or "garlic water can cure COVID-19." The team also analyzed the ways in which study participants were exposed to such content—whether through video, text, images, audio or combinations of these.

While they found some evidence supporting interventions such as accuracy prompts, debunks and media literacy tips in mitigating either the spread of or belief in COVID-19 misinformation, the review revealed major challenges with the current approach to studying health misinformation more broadly.

"Examining misinformation and its impact with greater granularity allowed us to more clearly discern if an intervention worked on a specific kind of misinformation, and in what context," said co-author Rory Smith, research and investigation manager at the Information Futures Lab. "That is important because not all misinformation is the same, and details such as the delivery mechanisms and messengers matter, as other studies have also shown."

The researchers found that most studies measured outcomes such as the likelihood to share misinformation or perceived accuracy of misinformation, while only 18% of studies measured any public health-related outcomes, such as intent to vaccinate or self-reported mask wearing.

To more clearly discern the impact of various interventions and make evidence actionable for public health, the field urgently needs to include

more public health experts in intervention design and implementation, the authors concluded.

An increased focus on misinformation research emerged after concerns about the role of misinformation in elections, so many of the key researchers come from political science, explained co-author Claire Wardle, a professor of the practice at Brown's School of Public Health and co-director of the Information Futures Lab.

"As we have seen misinformation impact a number of different topics and issues, it is time researchers from different disciplines investigating misinformation, including public health, to come together to connect the dots," Wardle said.

  More information: Rory Smith et al, A Systematic Review Of COVID-19 Misinformation Interventions: Lessons Learned, *Health Affairs* (2023). DOI: 10.1377/hlthaff.2023.00717

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