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April 24, 2020

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**Conservative and social media usage associated  
with misinformation about COVID-19**

*People relying on mainstream TV and print news better informed*

PHILADELPHIA – People who relied on conservative media or social media in the early days of the COVID-19 outbreak were more likely to be misinformed about how to prevent the virus and believe conspiracy theories about it, a study of media use and public knowledge has found.

Based on an Annenberg Science Knowledge survey fielded in early March with over a thousand adults, the study was conducted by researchers at the [Annenberg Public Policy Center](#) of the University of Pennsylvania and the University of Illinois at Urbana-Champaign.

[The study](#), published this week in the Harvard Kennedy School Misinformation Review, found that there were notable differences in views about the coronavirus that correlated with people’s media consumption.

**Media usage and COVID-19 misinformation**

Conservative media usage (such as Fox News and Rush Limbaugh) correlated with higher levels of misinformation and belief in conspiracies about the SARS-CoV-2 pandemic, including:

- The belief that the Chinese government created the virus as a bioweapon ([scientists say](#) the virus likely originated with animals and there is “strong evidence” it is “not the product of [purposeful manipulation](#)”);
- The belief that some in the U.S. Centers for Disease Control and Prevention (CDC) were exaggerating the danger posed by the coronavirus in order to damage Donald Trump’s presidency;
- The belief that taking vitamin C can prevent a person from being infected with the coronavirus (which is [unsupported by evidence](#)).

Social media and web aggregator usage was associated with lower levels of information and higher levels of misinformation:

- People who used social media (such as Facebook, Twitter, YouTube) were more likely to believe that taking vitamin C can prevent infection with the coronavirus; that some in the CDC were exaggerating the threat to harm the president; and that the virus was created by the U.S. government;
- People who used web aggregators (such as Google News, Yahoo News) were less likely to believe in the effectiveness of hand washing and avoidance of symptomatic individuals

as ways to prevent transmission of the virus (in early March, asymptomatic transmission was less clear).

Mainstream broadcast and print media usage correlated with higher levels of correct information and lower levels of misinformation:

- People who reported using broadcast news (such as ABC News, CBS News, NBC News) were more likely to say, correctly, that the novel coronavirus is more lethal than the seasonal flu.
- People who consume mainstream print news (such as The New York Times, Wall Street Journal) were more likely to hold accurate beliefs about the virus. They were more likely to report that they believe that regular hand washing and avoiding contact with symptomatic people are ways to prevent infection with the coronavirus; and less likely to believe that vitamin C can prevent infection, that some in the CDC were exaggerating the threat in order to undermine the president, and that the Chinese government created the virus as a bioweapon.

“Because both information and misinformation can affect behavior, we all ought be doing our part not only to increase essential knowledge about SARS-CoV-2, but also to interdict the spread of deceptions about its origins, prevention, and effects,” said Kathleen Hall Jamieson, director of the Annenberg Public Policy Center (APPC), who co-authored the paper with Dolores Albarracín of the University of Illinois at Urbana-Champaign, an APPC distinguished research fellow. “Additionally, all forms of media should ask, Are our audiences better prepared to deal with this coronavirus as a result of our work or is their trust in us endangering them and their communities?”

Jamieson said that people seeking to verify information can go to government health sites such as the [CDC website](#) or to APPC’s fact-checking project, [FactCheck.org](#).

## **Annenberg Science Knowledge survey findings**

The study is the first in a series on COVID-19 by APPC, which conducted similar research in 2016 on the [Zika virus](#) and in 2019 on vaccination during the [measles outbreak](#). “Like the earlier studies, the current effort will track the success of the media in presenting accurate information and of health communicators in getting the message out,” Jamieson said.

The Annenberg Science Knowledge (ASK) survey on COVID-19 was conducted March 3-8, 2020, among a nationally representative sample of 1,008 U.S. adults. The survey, conducted for APPC by [SSRS](#), an independent research company, has a margin of error of  $\pm 3.57\%$ .

The survey found that 87% correctly said regular hand washing and avoiding people with virus symptoms were preventative measures against COVID-19, a success in public health messaging. But it also found troubling gaps in public knowledge and worrisome belief in conspiracy theories:

- More than 1 in 5 respondents (23%) thought it was probably or definitely true that the Chinese had created the virus as a bioweapon (there is no evidence of this);
- More than 1 in 5 (21%) thought taking vitamin C can probably or definitely prevent infection by the coronavirus (it does not);

- Nearly 1 in 5 (19%) said it was probably or definitely true that some in the CDC were exaggerating the danger posed by the virus in order to damage the Trump presidency;
- And 1 in 10 (10%) said it was probably or definitely true that the U.S. government had created the virus (there is no evidence of this).

“The findings from this ASK survey contribute to the scholarship on health and science communication while also providing insights on what to do as the U.S. resolves this pandemic,” Albarracín said. “The next step will be to test the efficacy of the recommendations suggested by this research.”

## **Five recommendations to improve public understanding of COVID-19**

The researchers offered five recommendations to improve public understanding of the virus:

- 1) **The need for proactive communication about prevention:** While a high portion of the public (87%) knew that hand washing and avoiding symptomatic people were preventative measures, gaps in public knowledge “should alert public health officials to the ongoing need for effective communication of needed information long before a crisis.”
- 2) **Find out what information to debunk:** In order to focus fact-checkers most effectively, the researchers proposed prioritizing corrections for misinformation held by at least 10% of the population. Here, for instance, the conspiracy theory that the virus was developed by the Chinese as a bioweapon (held by 23%) and that some in the CDC exaggerated the threat to harm the president (19%) should be prioritized by fact-checkers.
- 3) **A baseline for monitoring social media interventions:** By offering an early window on misinformation in the pandemic, the study provides a way to assess the social media platforms’ efforts to blunt the effects of misinformation.
- 4) **Proposed interventions in conservative media:** The study should motivate public health officials to place public service announcements, encourage hyperlinks to CDC web pages, and seek interviews on news outlets whose audiences are less knowledgeable, more misinformed, or more accepting of conspiracy theories. The researchers noted that Dr. Anthony Fauci, director of the National Institute of Allergy and Infectious Diseases, did that on March 11 by going on Sean Hannity’s Fox News show, where Fauci explained that coronavirus is much more lethal than the seasonal flu.
- 5) **Newspapers should take down paywalls on coronavirus coverage:** The finding that reading mainstream print publications is associated with greater knowledge of the virus should encourage print media to follow the lead of publications such as the New York Times, Washington Post, Philadelphia Inquirer, and others to make their virus coverage free to all readers. Readers who appreciate the public health coverage may respond by subscribing – or with donations.

“The Relation Between Media Consumption and Misinformation at the Outset of the SARS-CoV-2 Pandemic in the US” is published in the Harvard Kennedy School Misinformation Review’s April 2020 issue. [Read it here.](#)

The study was funded by the Science of Science Communication Endowment of the Annenberg Public Policy Center of the University of Pennsylvania. Some of the work was facilitated by National Institutes of Health grants.

The [Annenberg Public Policy Center](#) was established in 1993 to educate the public and policy makers about communication's role in advancing public understanding of political, health, and science issues at the local, state and federal levels. Follow APPC on [Twitter](#) and [Facebook](#).