

# Education, interest in alternative medicine associated with believing misinformation

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While many people believe misinformation on Facebook and Twitter from time to time, people with lower education or health literacy levels, a tendency to use alternative medicine or a distrust of the health care

system are more likely to believe inaccurate medical postings than others, according to research published by the American Psychological Association.

"Inaccurate information is a barrier to [good health care](#) because it can discourage people from taking preventive measures to head off illness and make them hesitant to seek care when they get sick," said lead author Laura D. Scherer, Ph.D., with the University of Colorado School of Medicine. "Identifying who is most susceptible to [misinformation](#) might lend considerable insight into how such information spreads and provide us with new avenues for intervention."

In the study, published in the journal *Health Psychology*, researchers surveyed 1,020 people in the U.S. between the ages of 40 and 80 about the accuracy of 24 recent Facebook and Twitter postings on HPV vaccines, statin medications and cancer treatment. Researchers shared with participants an equal number of true and false postings for all three medical issues. False claims included asserting that [red yeast rice](#) is more effective at lowering cholesterol than statins, that marijuana, ginger and dandelion roots can cure cancer and that HPV vaccines are dangerous.

Participants were asked to evaluate whether the postings were completely false, mostly false, mostly true or completely true. Researchers asked follow-up questions, including participants' education level, interest in alternative treatments, understanding of health care issues, income and age.

Participants with lower education and health literacy levels were more likely to believe the misinformation, the researchers found. Those with a distrust for the health care system or who had positive attitudes toward [alternative medicine](#) also tended to believe the misinformation on the three health topics more often than others in the study. Also, participants who fell for misinformation on one health issue tended to be more

susceptible to misinformation on the other two health topics.

The findings could help public health officials develop more targeted messaging and outreach for a range of health care issues, according to the researchers.

"People who were susceptible to misinformation tended to be susceptible to all three types we showed them, about a vaccine, statin medications and [cancer treatment](#)," Scherer said. "One possible implication is that these individuals are susceptible to many different types of health misinformation, making these findings potentially relevant to other health care issues beyond the ones we studied here. This information could have implications for other public information efforts, such as those currently underway to address COVID-19."

Still, more research needs to be done to fully understand how to interrupt misinformation cycles, Scherer said.

"We hope that researchers can build on these findings and develop novel and evidence-based interventions to reduce the influence and spread of [health](#) misinformation online. Such steps could save countless lives," she said.

**More information:** "Who is Susceptible to Online Health Misinformation? A Test of Four Psychosocial Hypotheses," by Laura D. Scherer, PhD, University of Colorado School of Medicine; Allison Kempe, MD, Larry A. Allen, MD, Christopher E. Knoepke, PhD, Channing E. Tate, MPH, and Daniel D. Matlock, MD, University of Colorado School of Medicine; Gordon Pennycook, PhD, University of Regina and Massachusetts Institute of Technology; and Jon McPhetres, PhD, University of Regina. *Health Psychology*, published online Feb. 25, 2021.

Provided by American Psychological Association

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