Most vaccine-related posts on Pinterest are anti-vaccine, reveals research

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75% of the vaccine-related posts on Pinterest are negative towards vaccination, according to research published in *Vaccine*. The authors of the study, from Virginia Commonwealth University in the US, are calling for better communication about vaccination.

In a response to the paper, also published in *Vaccine*, researchers from Drexel University Dornsife School of Public Health say it's time to take more concrete action: scientists need to speak out more effectively in favor of vaccines, and institutions need to support and encourage advocacy.

People are communicating more and more on visual social media platforms, such as Pinterest and Instagram. Although they're still slightly behind social media giants like Facebook (with 1.4 billion users), the visual platforms are growing quickly; Pinterest now has around 74 million users. What's more, visuals are playing an increasingly important role on platforms like Facebook and Twitter.

Despite this, relatively little is known about what people are saying about big issues like vaccination on visual platforms. Jeanine Guidry, lead author of the Pinterest study and PhD student at Virginia Commonwealth University, explained: "With the academic publishing process being slow compared to the speed of social media, we tend to be a few years behind when platforms become popular."

Guidry is an avid Pinterest user, so decided to search for topics she was
interested in, like vaccines and depression. She found there were subgroups of people talking about vaccines. "To my surprise, there are a lot of health discussions happening under the radar," she commented.

Guidry and her colleagues collected 800 "pins" - messages people have posted on Pinterest - and analyzed them to determine whether they are pro- or anti-vaccination. The sample was collected manually, as there is not yet a code to help collect pins using a hashtag or keyword.

The results revealed that 75% of all vaccine-related pins were negative. Messages ranged from simple posts questioning the safety of vaccines to more radical claims that vaccines are being created to kill people. 20% of the posts talked about conspiracy theories, such as pharmaceutical companies out to make money at the expense of children and governments trying to harm children for the purposes of population control.

"These are real fears that people have - from a public health perspective, we need to talk to people about their fears," said Guidry. "But first we need to know what's happening. Up to this point we didn't even know these conversations were taking place on Pinterest."

The results show a significant shift from earlier studies: in the mid-2000s, analyses of content on MySpace and YouTube revealed that vaccine-related posts were negative just 25% of the time.

According to Dr. Neal Goldstein and his colleagues, who responded to the study with a letter published in *Vaccine*, the ongoing calls for better communication about vaccines aren't having the desired effect.

"This isn't a new topic - it's been going on for some time now," said Dr. Goldstein from Drexel University Dornsife School of Public Health. "It's worthwhile to make the statement we need to do more, but we're doing
quite a bit; maybe people can't hear the message because they're being bombarded with scientific data. The question is how do we do better? How do we become better advocates for science in the public?"

According to Dr. Goldstein, it's a systemic issue in which institutions play a vital role. Most public health programs don't provide training on how to be an effective public health advocate or how to communicate well with a lay audience. Scientists are trained to write papers, present at conferences and get grants; the academic structure incentivizes that rather than advocacy. When institutions evaluate researchers for tenure or promotion, they favor publications rather than science-based advocacy in the press. This, says Dr. Goldstein, needs to change:

"Some groups, such as parent-led advocacy groups and science writers who publish in the popular press, as well as a few notable physicians, are doing a great job of speaking out in favor of vaccines. But there's not much going on in the pure research community - that's what we want to change. For that to happen, institutions need to change their approach to advocacy too."


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