Who falls for fake news? New study challenges what we thought

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Who is most vulnerable to online misinformation and why? A new study offers a revealing look at how different demographic and psychological factors – such as age, education, political identity, and analytical thinking – shape individuals' ability to assess the accuracy of news.

Researchers at the Max Planck Institute for Human Development analyzed data from 31 experiments conducted in the United States between 2006 and 2023.

Surprisingly, the findings do not align with many long-held assumptions about who is more likely to be duped by fake news.

Demographics, psychological factors, and fake news

The study was led by Mubashir Sultan, a doctoral candidate at the [Max Planck Institute for Human Development](#)'s Center for Adaptive Rationality.

Sultan and his colleagues performed an individual participant data meta-analysis, often considered the gold standard because it compiles and re-examines raw data from multiple studies rather than simply aggregating previously reported effect sizes.

This approach allowed the team to analyze 256,337 individual decisions made by 11,561 participants, whose ages ranged from 18 to 88 years.

Participants were asked to judge whether headlines covering politics, health, and other topics were true or false.

The researchers then connected participants' responses to four

demographic factors (age, gender, education, and political identity) and four psychological factors (analytical thinking, partisan bias, motivated reflection, and familiarity with the news).

Common assumptions about education

Education emerged as one of the most surprising factors. Higher education is often presumed to protect against misinformation – under the assumption that college and advanced degrees teach critical thinking.

However, the meta-analysis found no significant difference in susceptibility between those with higher and lower educational attainment.

In other words, a four-year degree or postgraduate study did not predict better performance in distinguishing real from fake headlines. This finding runs counter to the conventional wisdom that more education automatically translates into greater immunity to misinformation.

Misconceptions about age and fake news

Age also challenged expectations. Previous studies often blame older adults for being more prone to sharing or believing misinformation.

In contrast, the new analysis showed that older adults were actually better than younger adults at discerning true headlines from false ones. They tended to label more headlines as false, indicating a greater degree of skepticism.

However, these findings exist alongside the well-documented observation that older adults do share more fake content online – suggesting a complex interplay between careful headline scrutiny and actual sharing behavior.

Political identity and partisan bias

Political identity proved to be another influential factor. The meta-analysis confirmed that Republicans, on average, are more likely to accept news headlines as true, resulting in lower overall accuracy when distinguishing real from false stories.

Democrats, for their part, were more skeptical, labeling more headlines as

false. Sultan and his colleagues link these findings to partisan bias, in which people are more willing to believe stories that align with their political affiliations and to reject those that conflict with them.

That said, analytical thinking – the ability to logically evaluate information and solve problems systematically – generally predicted better performance in detecting misinformation.

However, a twist emerged in the form of motivated reflection: individuals who scored higher in analytical thinking were actually more susceptible to partisan bias.

In other words, rather than using their critical skills to transcend personal beliefs, these analytical thinkers often deployed their reasoning faculties to defend their existing political identities.

This paradox highlights the fact that reasoning can sometimes serve entrenched worldviews instead of open-minded evaluation.

Familiarity as a powerful persuader

One of the strongest indicators of misinformation susceptibility turned out to be familiarity with the news. If participants recognized a headline from having seen it before, they were significantly more likely to accept it as true.

This result highlights the perils of repeated exposure, especially on social media platforms where the same headlines (whether accurate or false) can circulate extensively.

Over time, familiarity can breed acceptance, making misinformation more persuasive simply by virtue of being encountered multiple times.

The findings come at a time of growing concern over how misinformation shapes public opinion and election outcomes.

According to co-author Ralf Kurvers, a senior research scientist at the Max Planck Institute, the study's relevance is heightened by the rise of right-wing populism and the dire warnings from the World Economic Forum's Global Risks Report 2024. This report identifies

misinformation as one of the world's greatest short-term threats.

Kurvers advocates for targeted media literacy efforts, particularly for younger adults, who, despite being "digital natives," were less able to differentiate between genuine and fake news in the study.

Addressing the challenges of misinformation

Moving forward, the researchers recommend that interventions account for how political bias and repeated exposure can reinforce incorrect beliefs.

They point to the need for fostering respectful conversations across political divides and designing social media tools that reduce the repeated circulation of false content.

As part of a broader initiative on online environments at the Max Planck Institute, the team aims to develop strategies for addressing these challenges, including methods that help people become more reflective about the information they encounter.

Ultimately, the study underscores the complexity of combating misinformation. Simply improving education levels does not appear to be a magic bullet, nor does encouraging more analytical thought if that thinking is subverted by partisan motives.

Instead, the research suggests that a multi-pronged approach – combining critical reflection, awareness of bias, and caution about familiar-seeming claims – is needed to help individuals navigate the vast sea of online information.

The study is published in the *Proceedings of the National Academy of Sciences*.

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