



**AMERICAN
PSYCHOLOGICAL
ASSOCIATION**

Using Psychological Science to Understand and Fight Health Misinformation

AN APA CONSENSUS STATEMENT

Executive Summary

Misinformation spreads rapidly across social media and other online platforms, posing risks to individual health and societal wellbeing. Research on the psychology of misinformation has proliferated in recent years, yet many questions remain about how and why misinformation spreads, how it affects behavior, and how best to counter it. Answering these questions well depends in part on how misinformation is defined; it can include inaccurate news, conspiracy theories, disinformation campaigns, propaganda, and slanted reporting. In this report, we define misinformation as “any information that is demonstrably false or otherwise misleading, regardless of its source or intention.”

Misinformation has been described as a global harm, but the amount of misinformation encountered by people is difficult to determine. Estimates indicate that it accounts for 0.2% to 29% of overall news consumption, but the proportion may be higher for specific groups or for topics such as health. The problem with current estimates is that they tend to be platform-specific, constrained to text-based information (vs. images or videos), based on limited public data, and insensitive to the fact that some groups are disproportionately targeted. Further insight requires large-scale studies in real-world settings across different social media platforms.

This report describes the best available psychological science on misinformation, particularly as it relates to health. It offers eight specific recommendations to help scientists, policymakers, and health professionals respond to the ongoing threats posed by misinformation. Our analysis centers on three crucial questions:

1. What are the psychological factors that make people susceptible to believe and act on misinformation?
2. How and why does misinformation spread?
3. What interventions can be used to counter misinformation effectively?

WHAT ARE THE PSYCHOLOGICAL FACTORS THAT MAKE PEOPLE SUSCEPTIBLE TO BELIEVE AND ACT ON MISINFORMATION?

Research suggests that detecting false information is difficult. When we encounter new information, we tend to focus on understanding it and deciding what to do next, rather than evaluating it for accuracy. It takes effort to compare new information with what we already know; when new information is false but plausible, we can learn it as fact. Several factors may increase our susceptibility to misinformation. People are more likely to believe misinformation if it comes from in-group sources rather than out-group ones, or if they judge the source as credible. The emotional content of misinformation plays a role as well: People are more likely to believe false statements that appeal to emotions such as fear and outrage. They are also more likely to believe misinformation that paints opponents in a negative light than they are to believe misinformation that is negative about their own in-group. Finally, people are more likely to believe repeated information, even when it contradicts their prior knowledge. These findings suggest that it is important to stop misinformation early.

Susceptibility to misinformation shows individual differences based on experience. For example, educational attainment, analytical reasoning, and numeracy skills can increase resistance to misinformation, while anxiety increases a person's likelihood of believing it. Older adults may be better at identifying misinformation than younger adults, yet older adults are also more likely to see and share false information on social media.

Many of these effects are modest, and a key conclusion from the existing literature is that belief in misinformation does not always lead to changes in a person's attitudes, intentions, or behaviors. In other words, what we believe does not always translate into what we do. Many of these studies were conducted in laboratory and other controlled settings, so more research is needed in real-world contexts to determine the full impact of misinformation on behavior and health.

HOW AND WHY DOES MISINFORMATION SPREAD?

According to behavioral models, exposure to misinformation increases the odds that people will believe it, which in turn increases the odds that they will spread it. At the same time, people do not necessarily need to believe misinformation in order to spread it; people may share information they know is false to signal their political affiliation, disparage perceived opponents, or accrue social rewards. Psychological factors contribute significantly to this process: People

are more likely to share misinformation when it aligns with personal identity or social norms, when it is novel, and when it elicits strong emotions.

Misinformation spreads differently on social media than on legacy media such as television, radio, and newspapers. Mainstream news outlets tend to have robust safeguards in place to prevent and correct false claims, but several unique features of social media encourage viral content with low oversight. Rapid publication and peer-to-peer sharing allow ordinary users to distribute information quickly to large audiences, so misinformation can be policed only after the fact (if at all). "Echo chambers" bind and isolate online communities with similar views, which aids the spread of falsehoods and impedes the spread of factual corrections. This problem disproportionately affects individuals who consume content from conservative political sources.

Algorithms that track user engagement to prioritize what is shown tend to favor content that spurs negative emotions like anger and outrage. Overall, most online misinformation originates from a small minority of "superspreaders," but social media amplifies their reach and influence.

WHAT INTERVENTIONS CAN BE USED TO COUNTER MISINFORMATION EFFECTIVELY?

Researchers have proposed two broad categories of interventions to curb the growth and spread of misinformation: system-level approaches like legislation and technology standards focus on broad systemic changes, while individual-level approaches focus on changing individual behaviors. System-level interventions may be more effective than individual-level ones in reducing the spread of misinformation, but individual-level interventions generally have fewer ramifications for freedom of expression; they also rely less on cooperation from technology companies. We discuss four common individual-level interventions in terms of their ability to counter misinformation: debunking, prebunking, literacy training, and nudging.

Debunking, or fact-checking, is the correction of misinformation. It is used after people are exposed to misinformation, and it is most successful when it includes a detailed explanation that refutes incorrect information and replaces it with facts. Research indicates that debunking is effective in laboratory and real-world settings, as well as across cultures—particularly in the short term. However, fact-checking is very time-consuming and may not fully reverse the effects of misinformation; it also fades over time in ways that may require repeated correction. In real-world use, debunking efforts have not always reached

their intended targets, partly because people who are predisposed to believe misinformation tend to avoid correction. Debunking interventions may work best in specific situations or individuals, so further research is required.

Prebunking, or pre-emptive debunking, seeks to prevent people from falling for misinformation in the first place. The most common method of prebunking is psychological inoculation, in which exposure to a weak version of a falsehood builds resistance to future persuasion: A forewarning about an impending attack on a belief (e.g., “Warning: People may try to manipulate you by saying . . .”) is followed by a statement that pre-emptively refutes the claim (e.g., “this is not true, because . . .”). Prebunking interventions can reduce susceptibility to specific falsehoods and to the larger techniques used to manipulate information; they may be more effective than debunking, and brief reminders (or “boosters”) can extend their effects over time. Recent evidence also suggests that prebunking is feasible in mass real-world settings like social media. However, people must actively choose to take part—say, by watching a video, reading a message, or playing a game. It remains to be seen if prebunking works under all conditions and across cultures, but it has strong potential to forestall misinformation at scale.

Health, media, and digital literacy interventions help people improve at judging the quality and accuracy of information or performing online tasks. Often included in formal education or community outreach, these interventions are difficult to evaluate because they vary widely in terms of content, duration, and outcomes. More research is needed to determine which literacy interventions are most effective against misinformation, but they may be most effective when paired with other counter-misinformation tools such as debunking.

Nudges are small environmental changes meant to alter behavior in predictable and positive ways. Researchers have used several types of nudges to try to dissuade people from sharing misinformation: Accuracy nudges ask people to consider the veracity of information before sharing it, social norms nudges highlight community standards of behavior about reporting information, and motivational nudges reward people for being as accurate as possible. The efficacy of nudges in preventing the spread of false information is somewhat mixed, though multiple nudges in a row may be more effective than just one. Nudges may not work for very

long and they may not work as well for some audiences, but their efficacy can be enhanced by combining them with other approaches such as inoculation.

Overall, psychological research on misinformation has identified several promising ways to fight it, but further study is needed to better understand these interventions in real-world settings, across countries and cultures, over time, and in combination.

RECOMMENDATIONS

Although significant questions remain, the available psychological science yields important conclusions about the origins and spread of misinformation and how to counter it effectively. Based on these findings, we present eight specific recommendations for scientists, policymakers, media, and the public to meet the ongoing risk of misinformation to health, wellbeing, and civic life:

1. Avoid repeating misinformation without including a correction.
2. Collaborate with social media companies to understand and reduce the spread of harmful misinformation.
3. Use misinformation correction strategies with tools already proven to promote healthy behaviors (e.g., counseling, skills training, incentives, social norms).
4. Leverage trusted sources to counter misinformation and provide accurate health information.
5. Debunk misinformation often and repeatedly using evidence-based methods.
6. Prebunk misinformation to inoculate susceptible audiences by building skills and resilience from an early age.
7. Demand data access and transparency from social media companies for scientific research on misinformation.
8. Fund basic and translational research into the psychology of health misinformation, including effective ways to counter it.

Recommendations

RECOMMENDATION 1

Avoid repeating misinformation without including a correction.

The repetition of false claims increases belief in those claims, a phenomenon known as the illusory truth effect. People of all ages are susceptible to illusory truth, even when they already have relevant prior knowledge about the topic. When media sources, political elites, or celebrities repeat misinformation, their influence and repetition can perpetuate false beliefs. Repeating misinformation is necessary only when actively correcting a falsehood. In these cases, the falsehood should be repeated briefly, with the correction featured more prominently than the falsehood itself.

RECOMMENDATION 2

Collaborate with social media companies to understand and reduce the spread of harmful misinformation.

Most misinformation on social media is shared by very few users, even during public health emergencies. These “super-spreaders” can play an outsized role in distributing misinformation. Social media “echo chambers” bind and isolate communities with similar beliefs, which aids the spread of falsehoods and impedes the spread of factual corrections. On social media, sensational, moral-emotional, and derogatory content about the “other side” can spread faster than neutral or positive content. Scientists, policymakers, and public health professionals should work with online platforms to understand and harness the incentive structures of social media to reduce the spread of dangerous misinformation.

RECOMMENDATION 3

Use misinformation correction strategies with tools already proven to promote healthy behaviors.

Psychological science research shows that the link between knowledge and behavior is imperfect. There is strong evidence that curbing misperceptions can change underlying health-related beliefs and attitudes, but it may not be sufficient to change real-world behavior and decision-making. Correcting misinformation with accurate health guidance is vital, but it must happen in concert with evidence-based strategies that promote healthy behaviors (e.g., counseling, skills training, incentives, social norms).

RECOMMENDATION 4

Leverage trusted sources to counter misinformation and provide accurate health information.

People believe and spread misinformation for many reasons: They may find it consistent with their social or political identity, they may fail to consider its accuracy, or they may find it entertaining or rewarding. These motivations are complex and often interrelated. Attempts to correct misinformation and reduce its spread are most successful when the information comes from trusted sources and representatives, including religious, political, and community leaders.

RECOMMENDATION 5

Debunk misinformation often and repeatedly using evidence-based methods.

Research shows that debunking misinformation is generally effective across ages and cultures. However, debunking doesn’t always eliminate misperceptions completely. Corrections should feature prominently with the misinformation so that accurate information is properly stored and retrieved from memory. Debunking is most effective when it comes from trusted sources, provides sufficient detail about why the claim is false, and offers guidance on what is true instead. Because the effectiveness of debunking fades over time, it should be repeated through trusted channels and evidence-based methods.

RECOMMENDATION 6

Prebunk misinformation to inoculate susceptible audiences by building skills and resilience from an early age.

Instead of correcting misinformation after the fact, “prebunking” should be the first line of defense to build public resilience to misinformation in advance. Studies show that psychological inoculation interventions can help people identify individual examples of misinformation or the overarching techniques commonly used in misinformation campaigns. Prebunking can be scaled to reach millions on social media with short videos or messages, or it can be administered in the form of interactive tools involving games or quizzes. However, the effects of prebunking fade over time; regular “boosters” may be necessary to maintain resilience to misinformation, along with media and digital literacy training.

RECOMMENDATION 7

Demand data access and transparency from social media companies for scientific research on misinformation.

Efforts to quantify and understand misinformation on social media are hampered by lack of access to user data from social media companies. Misinformation interventions are rarely tested in real-world settings due to a similar lack of industry cooperation. Publicly available data offer a limited snapshot of exposure, but they cannot explain population and network effects. Researchers need access to the full inventory of social media posts across platforms, along with data revealing how algorithms shape what individual users see. Responsible data sharing could use frameworks currently in use to manage sensitive medical data. Policymakers and health authorities should encourage research partnerships and demand greater oversight and transparency from social media companies to curb the spread of misinformation.

RECOMMENDATION 8

Fund basic and translational research into the psychology of health misinformation, including effective ways to counter it.

Several interventions have been developed to counter health misinformation, but researchers have yet to compare their outcomes, either alone or in combination. There is a need to understand which interventions are effective for specific types of information: What works for one issue may not translate to others. Ideally, these questions would be answered by large-scale trials with representative target audiences in real-world settings. Increased funding opportunities for psychological science research are needed to address these important questions about digital life.