



Minireview

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Sick and Seeking: Vulnerability in the Age of Misinformation

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Abstract

Health information has become an increasingly serious concern for public health, particularly in times of widespread uncertainty. This analysis explores how such information shapes health outcomes in two distinct but related ways. On the one hand, it influences choices about treatment and prevention by circulating claims that lack scientific support. On the other, engagement with alternative health content can open pathways to broader networks of misleading and politically charged information. Drawing on recent research, the paper shows how experiences of illness, anxiety, and crisis heighten susceptibility to these dynamics and limit the reach of adequate responses. The Viewpoint calls for public health policies that are attentive to context, responsive to vulnerability, and designed to support those most at risk.

Keywords: Health misinformation, Alternative health, Misinformation spillover, Repurposed engagement, Public health policies

Mini Review

"I know it when I see it" – this was Supreme Court Justice Potter Stewart's concurring opinion in the famous *Jacobellis v. Ohio* [1], a case in which the Court struggled to articulate a consistent definition of obscenity. Similarly, social scientists today grapple with defining a phenomenon that many consider self-evident: fake news and propaganda. Yet the scientific effort to understand misinformation is far from trivial, driven by considerations that go beyond intellectual curiosity. Accelerating global crises, from pandemics and armed conflict to climate-related disasters, have intensified public uncertainty and institutional strain. To highlight these complexities and, consequently, the need for continued scholarly and policy attention, this paper will focus on one of the

most insidious forms of misinformation: health misinformation. It argues that the contemporary online environment readily creates optimal conditions for health misinformation to spread, scale, and spill over into political manipulation. Addressing this convergence is urgent for safeguarding public health and democratic resilience alike.

Both among the general public and within the social sciences, misinformation is primarily examined in the context of political content, often linked to electoral processes, political attitude, voting behavior, and social segregation [2]. This political focus is especially evident in experimental studies that train participants to resist misinformation by exposing them to news texts about

political events and public figures. For example, in the Roozenbeek and van der Linden's Fake News Game [3], participants work with texts about immigration and the European refugee crisis. The active inoculation exercises present news stories that foreground political controversies and political actors, mirroring the structure and rhetorical cues of political news through prompts such as "Is something being swept under the rug?", "What does the EU do?", or "Experts: the situation is hopeless." Such encounters with misinformation are typical of political news, reflected in both how it is presented and what it conveys.

Yet political content is only one setting in which misinformation thrives. Another way misinformation appears is through its framing as reliable knowledge when science seems unable to deliver fast or straightforward solutions. Upholding intellectual humility, science operates within its self-stated limits, such as ensuring falsifiability, replicability, and accepting margins of error. It is precisely these conditions that misinformation often exploits, particularly in situations requiring expertise and patience before solutions can be reached. While science resorts to probabilistic claims that may feel unsatisfying in moments of uncertainty, misinformation often gains traction by offering clarity, certainty, and actionable guidance. In this sense, what it ultimately offers is not just information, but a product: seemingly simple solutions to complex problems.

Such commercially driven dynamics become especially salient in the domain of health misinformation, whose topics are as varied as the medical field itself. Systematic literature reviews identify recurring themes that are particularly effective at mobilizing feelings of worry, uncertainty, or fear [4]. Vaccination and infectious diseases feature most prominently, with the human papillomavirus vaccine among the most frequently targeted. Misinformation surrounding vaccines commonly advances narratives of health risk and immune system overload, while promoting false associations with chronic illness, autism, or infertility. Nutrition, diet, and lifestyle content, ranging from fad diets to non-evidence-based supplements and extreme dietary regimes, constitute another highly viral category on social media, often promoting alternative treatments that delay or displace effective medical care. Similar dynamics are observed in more severe medical contexts, including oncology, cardiometabolic disease, and other conditions requiring timely intervention, where postponing appropriate treatment can have life-threatening consequences.

However, commercially motivated health misinformation and politically driven fake news are by no means mutually exclusive. Research by Stephanie Alice Baker demonstrates how wellness culture has been weaponized to promote conspiracy theories and far-right extremism [5]. As their analysis shows, the convergence of lifestyle discourse and political rhetoric among alternative health influencers is rarely subtle. The COVID-19 pandemic represented a critical moment for this convergence, with misinformation peaking through viral productions such as Plandemic (2020),

which brought anti-vaccine narratives and far-right rhetoric into mainstream circulation. Alternative health is not inherently linked to countercultural political movements; however, both often rest on a shared distrust of institutional authority. Pharmaceutical companies and government institutions are framed as malicious, indifferent to individual well-being, and oriented toward obedience and surveillance. When directed at the sick and the worried, misinformation compounds the fear associated with illness by mobilizing anxieties about additional losses such as constraints on freedom, agency, dignity, social belonging, care, and support.

This alignment between self-care and resistance has historical roots. Self-care as a means of promoting freedom and community empowerment animated the wellness movement that emerged in California in the 1960s and 1970s [5]. Rooted in positive thinking and anecdotal evidence, the movement addressed needs that were neglected or insufficiently articulated by the medical system. In doing so, it also created epistemic spaces in which personal truths and narratives of self-transformation could override expert knowledge, leaving room for misinformation and conspiracy theories to circulate.

These dynamics persist in the contemporary digital environment. In 2025, investigative journalism in Europe revealed how seemingly neutral social media pages were repurposed during national elections to disseminate propaganda or sponsored political content [6]. Techniques such as repurposed engagement farming, page hijacking, reactivation of dormant accounts ("zombie pages"), and astroturfing enable political actors to redirect existing audiences toward ideological goals. Individuals already receptive to health misinformation and alternative health narratives thus become especially valuable targets, as they are more likely to accept other forms of misinformation, including political propaganda [7,8]. Through social media infrastructures, the internet provides the logistical means to identify, cluster, and repeatedly target vulnerable populations using familiar narrative frames.

Facing or fearing illness—one's own or that of a loved one—is among the most demanding and unavoidable challenges in life. Such moments are characterized by heightened vulnerability, in which the need for answers and actionable guidance often outweighs concern for abstract principles such as scientific validity. In these conditions, individuals who might otherwise resist misinformation can become more receptive to a wide range of claims. As misinformation researcher Nadia Brashier argues, effectively countering misinformation requires cognitive and emotional resources, including sustained attention and discernment [9]. Interventions should therefore be evaluated not only for their theoretical effectiveness, but for whether they reach and resonate with those most in need. From this perspective, selective prevention may be more appropriate than universal approaches, provided that high-risk groups are identified with care and accuracy. Traditional training in misinformation resistance is not always well suited to

health contexts. For individuals already confronting illness, such efforts may appear dismissive, unrealistic, or even cynical.

Health misinformation operates along two intertwined pathways. First, it does what its name suggests: it disseminates inaccurate or low-quality information that distorts medical decision-making, shaping attitudes toward treatment, prevention, and health-related behaviours. Second, health misinformation frequently serves as an entry point into broader misinformation ecosystems, where individuals drawn to pseudoscientific or alternative health content are gradually exposed to and targeted with political misinformation and propaganda.

Beyond its immediate medical consequences, health misinformation thus weakens collective capacity to respond to public health emergencies and crisis situations. When uncertainty is high and institutional trust is fragile, misinformation functions less as a communication failure than as an infrastructure for destabilization. Addressing this dual dynamic requires moving beyond universal misinformation literacy approaches toward context-sensitive, empathetic public health interventions that recognize vulnerability as a structural condition rather than an individual shortcoming. Failing to do so risks leaving those most in need of protection exposed at precisely the moments when accurate information and institutional trust matter most.

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