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How Misinformation Research Can Mask Relationship Gaps that Undermine Public Health Response

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Public health journals such as the *American Journal of Health Promotion* have spotlighted health misinformation in recent years as a cause for concern.^{1,2} Researchers have noted the diffusion of health misinformation as well as its tendency to complicate decision making by patients and their families. Although undoubtedly the availability of misinformation is notable and unlikely to be helpful, some of our academic focus on misinformation may also distract us from relationship dynamics that pose significant challenges for public health prevention efforts. Just tracking what falsehoods appear in public settings, in other words, may not tell us all we need to know about who is listening to whom and whether health care organizations enjoy trusted relationships with local community members.

Themes in Recent Health Misinformation Research

Amidst the abundance of recent health misinformation research, we can find ample descriptions of various types of misinformation, the diffusion of misinformation online, and evidence on the potential to correct misperceptions.^{1,3-8} Roughly 2 decades ago, Veronin and Ramirez⁴ offered an example of misinformation classification of the sort that some articles still present today. They analyzed claims related to the herb *Opuntia* online and found the majority appeared without any link to peer-reviewed literature. More recently, researchers have looked at Pinterest content related to influenza vaccination and false claims in media coverage of sugar-sweetened beverage tax debates.^{1,3} Work on misinformation correction tends to consider possibilities for overturning misperceptions stemming from

exposure to inaccurate claims and which settings are opportune for debunking misinformation.⁹

Some research has described potential demographic differences in health misinformation acceptance and tendency to share health misinformation. For example, Burel et al¹⁰ assessed whether user gender identity affected health misinformation sharing and also looked for differences between individual vs institutional accounts in misinformation sharing. In a different example, Pan et al¹¹ analyzed health misinformation acceptance with a survey and explored whether sex, age, education level, or income predicted acceptance of health misinformation.

Much health misinformation research tracks online content, likely in part because of the availability of such material for content analysis or to serve as study stimuli. Relatively little of this work, however, assesses the nature of interpersonal relationships in which misinformation (as well as accurate information) is shared. Similarly, available work on misinformation tends to not formally consider patient perceptions of healthcare providers and organizations as a mitigating or amplifying factor accounting for misinformation acceptance, per se. There is a robust literature on trust in patient and provider relationships,

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but the potential intersection of that work with misinformation research warrants more attention than it has received historically.

Roles for Trust in Mitigating Misinformation

We can see the importance of trust in the context of vaccine development involving Native American populations, especially with efforts to enroll members of the Navajo Nation (spanning Arizona, New Mexico, and Utah) in early clinical trials of the COVID-19 vaccine.¹² Although the Navajo Nation Human Research Review Board approved a randomized clinical trial with Pfizer-BioNTech, some tribal members expressed concerns about the pace at which the study was being implemented without extensive in-person consultation with community members, likely necessitated by community-wide lockdowns across the reservation. To promote the trial and answer questions about COVID-19 response efforts, the Navajo Nation held a townhall on Facebook Live with Dr. Anthony Fauci, one of the primary leaders for the country's response to the pandemic. Calac et al.¹³ examined engagement with this event by capturing comments from Facebook users accessing the live stream; comments included at least some misinformation specific to Native American research engagement and lifestyles. The effort to contextualize comments in this case is useful. Research regarding vaccine acceptance in this context could have solely tracked the diffusion of vaccine myths online in that region but any such research that also overlooked generational differences in medical mistrust and tribal member relationships with trial sponsors (eg, Indian Health Service, academic partners) or even community leaders (eg, tribal government) would miss an important component of the situation. In resource-limited settings, such as a Native American reservation, investment in local networks and local resources – rather than simply tracking myths appearing online – can be useful. Community health workers can increase local capacity to address misinformation during times of crisis and continue to promote positive health behavior change in community-based settings.^{14,15}

Importantly, orienting our conceptual understanding of prevention behavior to account for information source considerations and interpersonal relationships might help us avoid stereotyping patient perspectives as somehow being inherently in conflict with preventive medicine. An investigation of vaccine hesitancy found that acceptance of alternative medicine generally did not displace acceptance of vaccines to nearly the same extent as *distrust* of conventional Western medicine did.¹⁶ Their results suggest that institutional relationships likely matter in some cases as much as a particular ideology or mindset regarding medical practice. An often-overlooked consideration is the influence of researcher positionality in cross-cultural and public health literature—the personal views, values, and beliefs of the researcher and the relationship (or lack thereof) that the researcher has with their research participants.¹⁷ Research in community-based settings should be linked to community priorities, not just those of a funder, institution, or even the researcher. We can see this in the work of Indigenous researchers who have proposed several frameworks and mechanisms for the responsible conduct of research with Indigenous communities.^{18,19}

Healthcare professionals and public health workers who are concerned about the prevalence of misinformation in the digital era and seek ways to address the situation could consider on-the-ground trust-building efforts as a path forward. Insofar as improved patient-provider communication and trust helps steer patients away from misinformation they might encounter when not talking with a provider,

efforts to maintain and bolster trust offer a potential remedy to the dilemma of misinformation that we face.²⁰ These efforts may be expedited by increasing patient-provider racial concordance or partnering with a diverse array of messengers. A review on patient-provider communication found that while differences in cultural values can matter problems of miscommunication often stem from racism, biases, linguistic barriers, or different relationship expectations between patients and providers.²¹ When considering that attitudes and beliefs about vaccines and vaccination are influenced by political, cultural, and social influences, this should especially motivate efforts to train providers from groups underrepresented in healthcare.^{9,22}

Conclusion

Our burgeoning literature on health misinformation documents an important facet of our current information environment. The tendency of that literature to focus on what false claims are circulating and who accepts and shares those claims, however, poses a potential distraction from questions about existing and potential relationships between patients, healthcare professionals, and healthcare organizations. Insofar as building and rebuilding trust between patients and healthcare professionals may help patients avoid the pitfalls of health misinformation, we should seek to better integrate thinking about trust and organizational relationships into the emerging scholarship on misinformation as a public health threat.

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Fight Like a Nerdy Girl: The Dear Pandemic Playbook for Combating Health Misinformation

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Raging alongside the COVID-19 pandemic, a parallel “infodemic” – an overwhelming swirl of information, both good and bad – has seriously compromised pandemic response.¹ Medical falsehood is not a new problem; in the words of medical sociologist Nikolas Christakis, “everywhere you see the spread of germs, for the last few thousand years, you see right behind it the spread of lies.”² But its ability to scale thanks to modern digital platforms represents a new and greatly intensified threat. Indeed, the impact of harmful information during the pandemic has been so profound that premier scientific leaders including the Director-General of the World Health Organization and the U.S. Surgeon General have issued urgent calls for the health sector workforce to proactively fight back.^{3,4} Like many other scientists, our all-woman team of “Nerdy Girls” took seriously this call. In March 2020 we launched a public education campaign on social media to do our part to fight the infodemic. Over 18 months and more than two thousand Facebook posts later, we have refined a set of core communication principles and named them with the mnemonic LET’S LEARN. We anticipate that these principles will feel

intuitively familiar to health promotion professionals. Formalizing them into a framework provides shared language with which we can

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