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Public Health

Supplementary appendix

This appendix formed part of the original submission and has been peer reviewed.
We post it as supplied by the authors.

Supplement to: Ishizumi A, Kolis J, Abad N, et al. Beyond misinformation: developing a public health prevention framework for managing information ecosystems. *Lancet Public Health* 2024; published online April 19. [https://doi.org/10.1016/S2468-2667\(24\)00031-8](https://doi.org/10.1016/S2468-2667(24)00031-8).

Supplementary Table: Documents Included in the Narrative Review of Infodemic Management Interventions and Reasons for Inclusion

Level of Prevention	Title	Author(s)	Year(s) Published	Type of Document	Reason(s) for Inclusion
Primordial	Acceptance and Adoption of Protective Measures During the COVID-19 Pandemic: The Role of Trust in Politics and Trust in Science	Dohle S, Wingen T, Schreiber M.	2020	Journal article	Describes a study that identified trust in politics and science as a predictor of adoption of protective measures, with implications for building and maintaining trust
Primordial	Trust in Science, Perceived Vulnerability to Disease, and Adherence to Pharmacological and Non-pharmacological COVID-19 Recommendations	Hromatko I, Tonković M, Vranic A.	2021	Journal article	Describes a study that identified trust in science as a predictor of intent to adhere to COVID-19 recommendations, with implications for building and maintaining trust
Primordial	Beliefs in Conspiracy Theories and Misinformation About COVID-19: Comparative Perspectives on the Role of Anxiety, Depression and Exposure to and Trust in Information Sources	De Coninck D, Frissen T, Matthijs K, <i>et al.</i>	2021	Journal article	Describes a study that examined how trust in COVID-19 information sources affects misinformation and conspiracy beliefs, with implications for building and maintaining trust
Primordial	Mitigating infodemics: The relationship	Melki J, Tamim H, Hadid D, Makki	2021	Journal article	Describes a study that examined the relationship between trust in COVID-19

	between news exposure and trust and belief in COVID-19 fake news and social media spreading	M, El Amine J, Hitti E.			information sources and belief in myths and misinformation, with implications for building and maintaining trust
Primordial	Public trust, information sources and vaccine willingness related to the COVID-19 pandemic in Trinidad and Tobago: an online cross-sectional survey	De Freitas L, Basdeo D, Wang H-I.	2021	Journal article	Describes a study that found that higher levels of trust in the medical sector are associated with lower levels of belief in misinformation, with implications for building and maintaining trust
Primordial	Communicating risk in public health emergencies: a WHO guideline for emergency risk communication (ERC) policy and practice	WHO	2018	Guideline	Introduces communication practices relevant to building or maintaining trust
Primordial	Trusted messengers and trusted messages: The role for community-based organizations in promoting COVID-19 and routine immunizations	Shen AK, Browne S, Srivastava T, Kornides ML, Tan ASL.	2023	Journal article	Describes a study that explored how community-based organizations build trust in their communities
Primordial	Community health workers' efforts to build health system trust in marginalised communities: a	Watkins JA, Griffiths F, Goudge J.	2021	Journal article	Describes a study that explored how community health workers build interpersonal trust with their patients

	qualitative study from South Africa				
Primordial	What matters to us: Bridging research and accurate information through dialogue (BRAID) to build community trust and cultivate vaccine confidence	Stephenson-Hunter C, Yusuf Y, Larson R, Campanella J, Gutnick DN.	2023	Journal article	Describes an intervention designed to build trust between healthcare systems and community members, and to address community-level information needs
Primordial	Intervening on Trust in Science to Reduce Belief in COVID-19 Misinformation and Increase COVID-19 Preventive Behavioral Intentions: Randomized Controlled Trial	Agley J, Xiao Y, Thompson EE, Chen X, Golzarri-Arroyo L.	2021	Journal article	Describes a study that examined whether an intervention using an infographic can increase trust in science and thereby reduce belief in misinformation
Primordial	WHO policy brief: COVID-19: infodemic management	WHO	2022	Policy brief	Provides an overview of key actions public health authorities can take to establish an infodemic management workforce
Primordial	Establishing Infodemic Management in Germany: A Framework for Social Listening and Integrated Analysis to Report Infodemic Insights at the National Public Health Institute	Boender TS, Schneider PH, Houareau C, <i>et al.</i>	2023	Journal article	Describes a process for establishing a workflow for reporting infodemic insights within a public health authority

Primordial	Training health professionals in infodemic management to mitigate the harm caused by infodemics	Purnat T, Bertrand-Ferrandis C, Yau B, <i>et al.</i>	2022	Journal article (conference abstract)	Describes a training program designed to build infodemic management capacity for health professionals
Primordial	E-learning: How to address online vaccination misinformation	European Centre for Disease Prevention and Control	2022	Online course	E-learning course designed to build capacity of public health practitioners in addressing online vaccine misinformation
Primordial	Community-oriented Motivational Interviewing (MI): A novel framework extending MI to address COVID-19 vaccine misinformation in online social media platforms	Scales D, Gorman JM, DiCaprio P, <i>et al.</i>	2023	Journal article	Describes an intervention that involved training of infodemiologists in areas such as motivational interviewing to address online misinformation
Primordial	Reducing Health Misinformation in Science: A Call to Arms	Swire-Thompson B, Lazer D.	2022	Journal article	Describes potential interventions for promoting generation of accurate scientific information
Primordial	WHO Policy on Open Access	WHO	n.d.	Webpage	Describes an example of interventions to promote generation of accessible scientific information at an organizational level
Primordial	Post retraction citations in context: a case study.	Bar-Ilan J, Halevi G.	2017	Journal article	Describes a study that examined the nature of citations to retracted articles, with implications for generation of more reliable scientific knowledge

Primordial	FAQs: DSA data access for researchers - European Commission.	Joint Research Centre	2023	Webpage	Describes an example of regulatory interventions that can facilitate the creation of robust scientific evidence
Primary	Research progress on digital health literacy of older adults: A scoping review	Wang X, Luan W.	2022	Journal article	Reviews multiple digital health literacy interventions for older adults
Primary	Lateral reading: College students learn to critically evaluate internet sources in an online course	Breakstone J, Smith M, Connors P, Ortega T, Kerr D, Wineburg S.	2021	Journal article	Describes a study that tested whether a digital literacy intervention can improve college students' ability to evaluate online sources
Primary	COVID-19 infodemic and digital health literacy in vulnerable populations: A scoping review	Choukou M-A, Sanchez-Ramirez DC, Pol M, Uddin M, Monnin C, Syed-Abdul S.	2022	Journal article	Reviews multiple interventions designed to support digital health literacy in marginalized populations
Primary	Evaluating a theory-based intervention for improving eHealth literacy in older adults: a single group, pretest–posttest design	Chang SJ, Lee K, Yang E, Ryu H.	2022	Journal article	Describes a study that evaluated an eHealth information education intervention designed for older adults
Primary	A digital media literacy intervention for older adults improves resilience to fake news	Moore RC, Hancock JT.	2022	Journal article	Describes a study that examined the effect of a digital literacy training intervention for older adults
Primary	Digital Health Literacy	National Network of Libraries of Medicine	2022	Training curriculum	Materials for those interested in providing digital health training

Primary	Countering Misinformation and Fake News Through Inoculation and Prebunking	Lewandowsky S, van der Linden S.	2021	Journal article	Reviews different prebunking and psychological inoculation techniques
Primary	Psychological inoculation improves resilience against misinformation on social media	Roozenbeek J, van der Linden S, Goldberg B, Rathje S, Lewandowsky S.	2022	Journal article	Describes a series of studies that examined the effect of a video-based prebunking intervention
Primary	The relative efficacy of various types of prior belief-defense in producing immunity against persuasion	McGuire WJ, Papageorgis D.	1961	Journal article	Introduces psychological inoculation theory
Primary	Towards psychological herd immunity: Cross-cultural evidence for two prebunking interventions against COVID-19 misinformation	Basol M, Roozenbeek J, Berriche M, Uenal F, McClanahan WP, Linden S van der.	2021	Journal article	Describes studies that examined the effects of game- and infographic-based prebunking interventions
Secondary	Infodemic Signal Detection During the COVID-19 Pandemic: Development of a Methodology for Identifying Potential Information Voids in Online Conversations	Purnat TD, Vacca P, Czerniak C, <i>et al.</i>	2021	Journal article	Describes a social and community listening intervention designed to identify narratives in public online conversations
Secondary	Different disease similar story? How global trends identified	Internews	2022	Report	Example of an intervention to produce infodemic insights through social and community listening

	in the COVID-19 rumor landscape influence conversations around the Monkeypox outbreak				
Secondary	COVID-19 State of Vaccine Confidence Insights Report	US CDC	2021-2023	Report	Example of an intervention to produce infodemic insights through social and community listening
Secondary	Using Machine Learning Technology (Early Artificial Intelligence–Supported Response With Social Listening Platform) to Enhance Digital Social Understanding for the COVID-19 Infodemic: Development and Implementation Study	White BK, Gombert A, Nguyen T, <i>et al.</i>	2023	Journal article	Describes the use of artificial intelligence to enhance a social and community listening activity
Secondary	How to build an infodemic insights report in six steps	WHO, UNICEF	2023	Manual	Provides an overview of steps required to develop an infodemic insights report
Secondary	WHO launches pilot of AI-powered public-access social listening tool	WHO	2021	News story	Provides a brief overview of how information voids can be filled
Secondary	Combating Misinformation as a Core Function of Public Health	Knudsen J, Perlman-Gabel M, Uccelli IG, Jeavons J, Chokshi DA.	2023	Journal article	Describes an intervention designed to proactively fill information voids

Secondary	Singing Sensitization: Delivering accurate health information to vulnerable and hard-to-reach communities using live music performances	WHO, Doctors for Madagascar	2022	Case study	Describes an intervention designed to proactively fill information voids
Secondary	Infodemic Management in the Twenty-First Century. In: Managing Infodemics in the 21st Century: Addressing New Public Health Challenges in the Information Ecosystem	Purnat TD, Purnat TD, Nguyen T, Briand S, editors.	2023	Book chapter	Discusses potential ways to address information voids arising from scientific uncertainty
Secondary	Leveraging infodemiologists to counteract online misinformation: Experience with COVID-19 vaccines	Gorman JM, Scales DA.	2022	Journal article (commentary)	Discusses potential ways to address information voids arising from scientific uncertainty
Secondary	Prebunking messaging to inoculate against COVID-19 vaccine misinformation: an effective strategy for public health	Vivion M, Anassour Laouan Sidi E, Betsch C, <i>et al.</i>	2022	Journal article	Describes a study that assessed the effectiveness of prebunking communication strategies
Tertiary	Correction as a Solution for Health Misinformation on Social Media	Vraga EK, Bode L.	2020	Journal article (commentary)	Provides an overview of best practices in debunking with an intervention example in the context of COVID-19

Tertiary	Healthcare professionals' acts of correcting health misinformation on social media	Bautista JR, Zhang Y, Gwizdka J.	2021	Journal article	Describes a study that explored how healthcare professionals correct health misinformation on social media
Tertiary	COVID-19 Vaccine Fact-Checking Posts on Facebook: Observational Study	Xue H, Gong X, Stevens H.	2022	Journal article	Describes a study that analyzed trends and effects of fact-checking interventions on social media
Tertiary	The differential effects of a governmental debunking campaign concerning COVID-19 vaccination misinformation	Helfers A, Ebersbach M.	2023	Journal article	Describes a study that evaluated the effectiveness of a debunking campaign in decreasing misinformation belief and vaccine hesitancy
Tertiary	Risk communication and community engagement strategies for COVID-19 in 13 African countries	Adebisi YA, Rabe A, Lucero-Prisno Iii DE.	2021	Journal article	Reviews public communications and community engagement interventions implemented in various countries
Tertiary	Concrete Recommendations for Cutting Through Misinformation During the COVID-19 Pandemic	Donovan J.	2020	Journal article (commentary)	Provides a brief overview of search engine optimization strategies that health authorities can adopt
Tertiary	Tennessee COVID-19 Health Disparity Task Force Builds Trust to Battle Misinformation	US CDC	2022	Case study	Describes a public communications and community engagement intervention that employed trusted messengers
Tertiary	A Multifaceted Campaign to Combat COVID-19	Silesky MD, Panchal D, Fields M, <i>et al.</i>	2022	Journal article	Describes an adaptive public communications and community engagement intervention

	Misinformation in the Hispanic Community				
Tertiary	Measuring the effect of Facebook's downranking interventions against groups and websites that repeatedly share misinformation	Vincent EM, Théro H, Shabayek S.	2022	Journal article	Describes a study that evaluated the implementation and effects of a content moderation intervention on social media
Tertiary	The spread of COVID-19 conspiracy theories on social media and the effect of content moderation	Papakyriakopoulos O, Serrano JCM, Hegelich S.	2020	Journal article	Describes a study that evaluated the effectiveness of content moderation interventions on social media
Tertiary	WHO and digital agencies: how to effectively tackle COVID-19 misinformation online	Germani F, Pattison AB, Reinfelde M.	2022	Journal article (commentary)	Discusses an example of how health authorities can potentially contribute to content moderation interventions on social media
Tertiary	Fighting COVID-19 misinformation on social media: Experimental evidence for a scalable accuracy-nudge intervention	Pennycook G, McPhetres J, Zhang Y, Lu JG, Rand DG.	2020	Journal article	Describes a study that examined whether an accuracy nudge intervention can improve participants' choices about what they share on social media
Tertiary	Developing an accuracy-prompt toolkit to reduce COVID-19 misinformation online	Epstein Z, Berinsky AJ, Cole R, Gully A, Pennycook G, Rand DG.	2021	Journal article	Describes an experiment that examined participants' intentions to share true and false news headlines, with implications for accuracy nudge interventions

Tertiary	Shifting attention to accuracy can reduce misinformation online	Pennycook G, Epstein Z, Mosleh M, Arechar AA, Eckles D, Rand DG.	2021	Journal article	Describes a series of studies that examined how shifting attention to accuracy can affect the quality of news that participants share
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