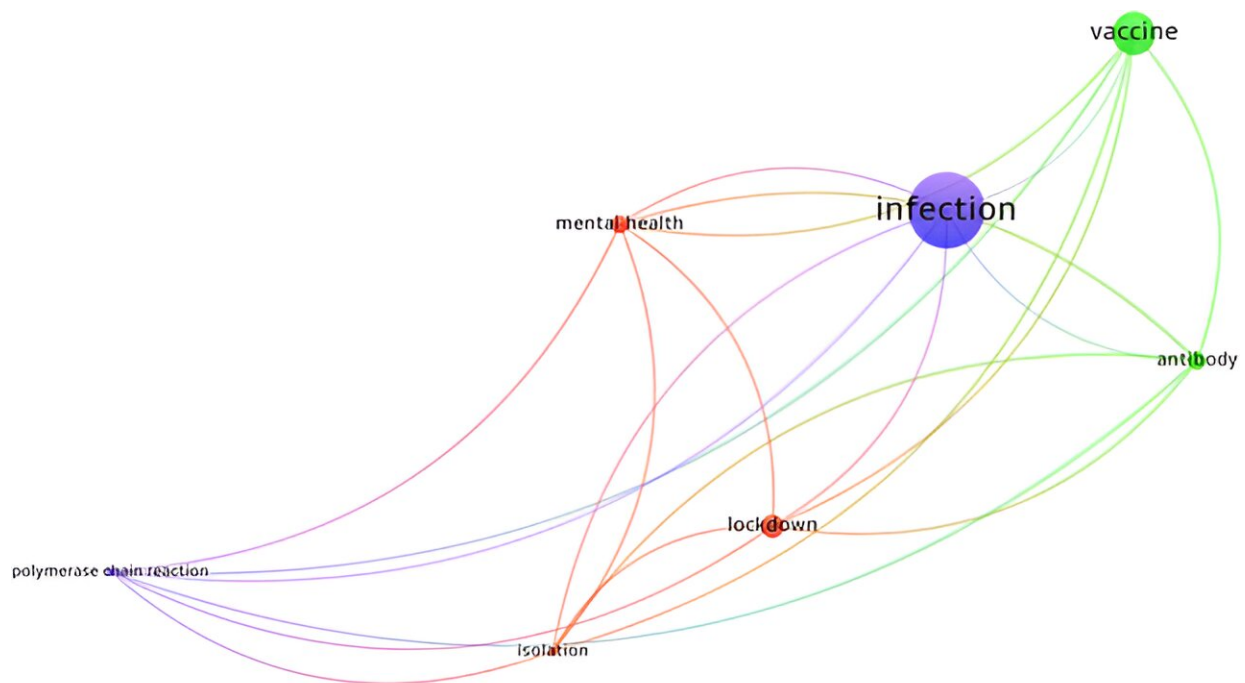# Do scientists respond faster than Google trends in discussing COVID-19 issues? A new approach to textual big data

March 29 2024

Network diagram of the GT keywords. Credit: *Health Data Science* (2024). DOI: 10.34133/hds.0116

A [study](link) in *Health Data Science* introduces an advanced research framework to dissect the vast textual landscape surrounding COVID-19. This methodology leverages keywords from Google Trends alongside research abstracts from the WHO COVID-19 database, offering a nuanced understanding of the pandemic's discourse dynamics.

Throughout the pandemic, research has underpinned effective policy-making, yet tools like Google Trends (GT) often miss critical nuances captured in scholarly investigations. This study juxtaposes GT data with academic research, illuminating the breadth and depth of scientific engagement with COVID-19 issues compared to public inquiries.

Benson Shu Yan Lam, Associate Professor at The Hang Seng University of Hong Kong, highlights the endeavor to scrutinize the timeliness and interconnectivity of these data repositories, assessing whether GT can reliably signal emerging [public concerns](link) or if academic discourses provide earlier, more substantive insights.

A significant finding, as outlined by Amanda Man Ying Chu, Assistant Professor at The Education University of Hong Kong, is the academic community's precedence in addressing COVID-19 topics. Research abstracts not only broached these subjects before they surfaced in GT searches but also delved deeper, offering a richer, more detailed perspective beneficial for policy formulation.

The study also introduces the Coherent Topic Clustering (CTC) method, an innovative text-mining approach that effectively organizes key phrases from voluminous research abstracts, outperforming BERTopic, a contemporary deep learning-based model, in extracting pertinent themes.

Looking ahead, Mike Ka Pui So, Professor at The Hong Kong

University of Science and Technology, envisions broadening this framework's utility beyond health science, particularly into financial news analysis. This expansion underscores the framework's capacity to meld qualitative and quantitative insights, a crucial frontier in contemporary financial scrutiny.

Reflecting on the implications, Professor So elucidates the prospective integration of diverse data types, marrying textual analysis with traditional numerical datasets to enrich financial analytics, demonstrating the research's interdisciplinary potential.

More information: Benson Shu Yan Lam et al, Do Scholars Respond Faster Than Google Trends in Discussing COVID-19 Issues? An Approach to Textual Big Data, *Health Data Science* (2024). DOI: 10.34133/hds.0116

Provided by Health Data Science