


Systematic review

Social media is a source of health-related misinformation

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Implications for practice and research

- ▶ When nurses and midwives encounter misinformation on social media, they should provide or direct individuals to sources of accurate information.
- ▶ Cross-disciplinary research to understand factors that influence the uptake of health-related (mis)information is required.

Context

Over the past 25 years, the Internet and social media have rapidly become ubiquitous in daily life, and despite improved access to information there are increasing concerns that these social channels are also spreading health-related false information or misinformation.^{1,2}

Methods

The aim of this systematic review¹ was to investigate health-related misinformation content on social media and how this was disseminated online including (1) identification of the main health-related topics and descriptive features, (2) exploration of existing theories and (3) undertaking co-citation analysis to assess if cross-disciplinary sharing of ideas has been undertaken. Studies published between January 2012 and November 2018 across four databases (PubMed, Cochrane, Web of Science and Scopus) were identified using a combination of keywords or related words for misinformation, social media, spread and health.

Findings

Of the 57 papers identified, the largest category of subjects linked to miscommunication was communicable diseases (n=30) followed by a mixed group (n=10), non-communicable diseases (n=6), risk factors (n=6) and general health (n=5). Studies examining vaccine-related misinformation (n=8) were the most common individual topic. The most frequent research methods used were observational or exploratory designs incorporating content analysis (n=38). Social network analysis or modelling were also used to understand the dynamics or spread; only seven experimental studies were undertaken.

Co-citation analysis revealed four distinct interdisciplinary clusters including infectious disease/vaccine and public health (largest cluster), social psychology and communications, general science and medicine,

and medical internet and biomedical science. While there were fewer misleading posts than accurate ones, the former were more influential because they were frequently shared across smaller networks. Conspiracy theories and heightened emotions played a significant role in the propagation of misinformation across groups, with peers or close social connections playing an important role in supporting or hindering the spread of misinformation. In addition, where individuals lacked analytical thinking skills, they were more likely to 'believe' and spread misinformation.

Commentary

This systematic review¹ revealed that a considerable amount of misinformation has been disseminated on social media in a relatively short time, creating significant potential for adverse health outcomes, especially in relation to vaccine-preventable diseases.²

Health literacy is the ability of an individual to effectively evaluate and apply health-related information, while eHealth literacy extends this to include the use of online media to access information and health services.³ Individuals who are exposed to this false information and have limited health literacy and poor analytical skills may be unable to effectively evaluate the accuracy of online information.^{2,4} Coupled with a belief that some health behaviours are not supported by their social group,⁵ these individuals may not make desirable decisions resulting in poorer health outcomes.³

This is a significant concern for nurses and midwives because it impacts directly on their core roles of healthcare providers and patient educators, especially in relation to primary healthcare. Central to this role is assisting individuals to make more informed health-related decisions by evaluating and improving their health literacy. The effectiveness of any patient education is likely to be limited because they are not incorporating either a health literacy evaluation³ or addressing social group norms within these programmes. This study highlights the necessity of a multilevel approach that includes facilitating (through reminders and removing barriers) and incentivising desired health behaviours, as well as countering the misinformation via local social networks.⁵

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