

## EDITORIAL

## Enhancing literature search transparency and quality in systematic reviews

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As the volume of research literature continues to grow, keeping up with the latest findings has become a daunting task. This is where the role of systematic reviews becomes crucial. They offer a broad perspective on a given topic, while also evaluating the quality of the articles they examine, making them a valuable resource in the scientific community.

Transparency and quality are crucial factors not only when it comes to reporting primary research but also in the development of systematic reviews. One of the critical steps is the search strategy, which affects the retrieval of studies to be included in the review (Franco et al., 2018). In the early 2000s, experts advocated for improved transparency and quality by comprehensively reporting systematic review search methods. However, there was no clear consensus on the optimum strategy (Sampson et al., 2008), and search strategies were not consistently transparently reported or adequate. In a study by Sampson and McGowan (2006), 90.5% of MEDLINE searches from reviews in the Cochrane Library published in 2002 contained errors; some other searches could not be evaluated due to incomplete reporting. These errors ranged from spelling mistakes and missed spelling variants to truncation errors, logical operator errors, and various errors involving the use of MeSH terms. In response to these findings, the authors called on the research community to incorporate additional peer review steps to ensure the quality and accuracy of search strategies (Sampson & McGowan, 2006). Their efforts led to the development of the PRESS (Peer Review of Electronic Search Strategies) 2015 Guideline Statement (McGowan et al., 2016). Nonetheless, other studies published at that time identified deficiencies in literature searches. For example, Franco et al. (2018) analyzed search strategy designs in a random sample of 70 new Cochrane systematic reviews of interventions published in 2015 and found errors in 73% of the cases.

Considering the ongoing issues with the quality of literature searches in systematic reviews, one might naturally question if the scientific community has been proactive enough in addressing this problem, aside from the seemingly isolated efforts made by the mentioned groups of experts.

Over time, to improve the overall transparency and quality of research reporting, a range of reporting guidelines have been established. These guidelines offer direction on what reporting items should be included in a paper for it to be published. These guidelines can be accessed through various organizations, one of which is an international initiative known as The EQUATOR (Enhancing the QUALity and Transparency Of health Research) Network. This network houses a library of over 600 reporting guidelines, including those for systematic reviews. The use of these guidelines is now anticipated by many editors of scientific journals, including the Central European Journal of Nursing and Midwifery.

The EQUATOR Network library is a dynamic resource, with the number of available guidelines continually growing. Furthermore, existing guidelines are regularly updated and refined to keep up with technological advancements and innovations, and to improve the quality and transparency of research reporting. In terms of literature search strategies in systematic reviews, the updated PRISMA (Preferred Reporting Items for Systematic reviews and Meta-Analyses) 2020 statement now recommends the use of full search strategies for all databases, including any filters and limits (Page et al., 2021). This is a change from the past practice of reporting strategies for just one database. This shift has already been reflected in recent studies (e.g., Ait Hssain et al., 2024; León-Figueroa et al., 2024), and it is expected to enhance the transparency of reporting.

Additionally, the PRISMA 2020 expanded checklist, available alongside the PRISMA 2020 checklist, offers elements that provide more detailed guidance

for the individual PRISMA 2020 checklist items. Concerning search strategy reporting, it provides eight elements, one of which recommends reporting the peer-reviewed search strategy and specifying any tool used, such as the Peer Review of Electronic Search Strategies (PRESS) checklist.

A recent study of 200 rapid reviews from the Canadian Agency for Drugs and Technologies in Health found that peer reviews of literature search strategies significantly assisted in retrieving pertinent publications (Spry & Mierzewski-Urban, 2018). Encouragingly, there is an emerging trend of nurse-authored publications that incorporate peer-reviewed literature searches (e.g., Ho et al., 2024).

Nurses must keep abreast of new trends and develop or enhance collaboration with librarians and other academic search professionals to produce systematic reviews of the highest quality. At the same time, their workplaces must provide educational opportunities that are relevant and that align with advances in information technology. These strategies can improve the quality and transparency of systematic reviews and their reporting, and ultimately also their reproducibility.

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