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## **Title registration for a systematic review: Effectiveness of librarians and information specialists in improving search strategies for systematic reviews in child welfare: a methods review**

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Crime and Justice

Education

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Knowledge Translation and  
Implementation

Business and Management

Other:

*Plans to co-register:*

No

Yes  Cochrane  Other

Maybe

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## **Title of the review**

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Effectiveness of librarians and information specialists in improving search strategies for systematic reviews in child welfare: a methods review

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## **Background**

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Systematic reviews exhaustively search for, identify, and summarise available evidence that addresses focused questions. Unlike traditional narrative reviews, systematic reviews aim to minimize bias in locating, selecting, coding, and aggregating individual studies. High quality and professional searching for studies therefore, is a critical part of conducting systematic reviews, as errors in the search process potentially result in biased or incomplete evidence (McGowan & Sampson, 2005). Their quality heavily relies on quality search strategies that enable retrieval of available research evidence in a field of study.

A high-quality search strategy is considered an essential component of systematic reviews but many do not contain reproducible search strategies. For a comprehensive search, multiple databases, at least three (Higgins, J. P.T & Green, S. Eds., 2008) should be searched, including sources of grey literature, directly contacting authors, and screening reference lists of included studies. As such, librarians and information specialists play an integral part during the process of identifying available relevant evidence, because searching is their expertise. It has been suggested that their involvement as co-authors or acknowledging them in final publications (Desmeules et al, 2016) was likely to improve their effectiveness as well as the quality of reporting the information retrieval process, subsequently improving the quality of the resultant reviews. It has also been suggested that information specialists construct better searches than even expert searcher clinicians when answering clinical questions (McKibbon et al, 1990). Search strategies, therefore, must be thought through with care and consideration of the research question to be well answered.

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## **Policy relevance**

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While systematic reviews are steadily becoming popular, involvement of librarians / information specialists in the systematic review process has not yet been widely embraced. A number of systematic reviews lack quality search strategies because they are not developed by information specialists (Rethlefsen, 2014). Systematic reviewers inherently lack the capacity to develop high quality search strategies that exhaustively retrieve relevant studies, yet they rarely involve the experts in searching for evidence. Research also repeatedly shows that systematic reviews searches are either not reported, or not reported well enough to enable reproducibility, or contain errors that impact precision and recall, thus impacting overall quality of the reviews (Moher, et al, 2007; Yoshii et al, 2009). While evidence shows slight improvements in search quality and reporting, it has also been reported that only 9% of search strategies are truly reproducible (Golder et al, 2013). Furthermore, the PRISMA

statement for reporting systematic reviews and meta analyses reports that the foundation of any systematic review is a comprehensive and systematic search that identifies all eligible studies on the topic and utilises specialised search tools and methods. Several prominent organizations have created guides on how to conduct and report effective searches. However, many published systematic reviews have been found to contain errors in the design and conduct of these searches that affect the quality (Eden, 2011).

Hence, this review seeks to synthesize evidence on the involvement of librarians and information scientists in improving quality of child welfare systematic review searches. Well conducted systematic reviews help in establishing this evidence. While most policy makers use evidence from systematic reviews, most of these reviews are inadequate in methodological rigor needed to generate high quality evidence. The most common cause of poor quality evidence in systematic reviews is article search. The current review will provide guidance on how to improve on the quality of evidence from reviews.

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## **Objectives**

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This review aims at examining the effectiveness of involving librarians and information specialists in the development of search strategies, and to assess their efficacy in improving the quality of systematic reviews assessing child welfare interventions.

We will aim at answering the following questions:

1. Does the involvement of librarians and information specialists in systematic review teams improve the quality of the information retrieval reporting?
2. What qualifications are required of librarians and information specialists to be included in systematic review teams?
3. What search techniques (databases chosen, search terms, use of Boolean operators, limits for the question to be answered) are used by the search strategy developers to retrieve relevant literature?

The participants for this review are the systematic reviews published in the Campbell and Cochrane Libraries assessing the effectiveness of child welfare interventions. The reviewers will focus on child welfare because the well-being of vulnerable children is one of the most important responsibilities of government. The support and protection given to them should therefore be based on the most reliable knowledge available. Indeed, interventions and policies in child welfare are increasingly expected to be based on evidence (Macdonald, 2001). Furthermore, Cochrane and Campbell reviews are numerous in this area, providing a sufficient number of relevant studies for this review. This will also allow the reviewers to focus on a single topic area instead of many different areas in one study.

The term child welfare refers to a range of services designed to ensure that children are safe and that families have the necessary support to care for their children successfully (Whittaker, 2003). Only studies on response systems for child abuse and neglect (Kessler et

al, 2005), and all services and interventions provided to children and families will be included in this review.

The primary outcome of this review is effective, exhaustive and reproducible search strategies that consequently lead to better methods reporting.

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## Existing reviews

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There are few systematic reviews on the topic, and most of them focused on the general roles of librarians / information scientists, not their roles in systematic reviews process. Some of the existing reviews on the topic are listed below:

Brettle A, Maden-Jenkins M, Anderson L, McNally R, Pratchett T, Tancock J, Thornton D, Webb A (2011). Evaluating clinical librarian services: a systematic review. *Health Info Libr J.*;28(1):3-22. doi: 10.1111/j.1471-1842.2010.00925.x. PMID: 21314890

Brettle A (2007). Evaluating information skills training in health libraries: a systematic review. *Health Info Libr J, Suppl 1*:18-37.

Cooper, I.D.; Crum, J.A. (2013). New activities and changing roles of health sciences librarians: a systematic review, 1990-2012. *Journal of the Medical Library Association*, 101 (4): 268-77. PMID: 24163598.

Kay Cimpl Wagner, Wegner Center and Gary D. Byrd (2004). Evaluating the effectiveness of clinical medical librarian programs: a systematic review of the literature. *J Med Libr Assoc.* 2004 Jan; 92(1): 14–33.

Swanberg, Stephanie M.; Dennison, Carolyn Ching; Farrell, Alison; Marton, Christine; O'Brien, Kelly K.; Pannabecker, Virginia; Thuna, Mindy and Holyoke, Assako Nitta (2016). Instructional methods used by health sciences librarians to teach evidence-based practice (EBP): a systematic review. *J Med Libr Assoc.*; 104(3):197208. doi: 10.3163/1536-5050.104.3.004. PMID: 27366120.

**Justification:** There are few reviews on this very important topic, and most of them focused on the general roles of librarians and information specialists, not their roles in the systematic reviews process. This means that the study is going to contribute to the body of knowledge by expanding the scope of existing studies on the assessment of the role of librarians and information specialists in improving the quality of searches in systematic reviews. To understand the research gap, we entered the search terms ("information scientists" OR "information specialists" OR librarians) AND ("search strategies" OR "search quality" OR reporting OR methodology) AND "Systematic reviews" in the Cochrane Library, the Campbell Library and in PubMed database, and retrieved only 6 relevant studies. This means that there are few studies published on the topic.

Furthermore, research has repeatedly shows that systematic review searches are either not reported or not reported well enough to enable reproducibility or contain errors that impact precision and recall, thus impacting the overall quality of the reviews (Moher, et al, 2007; Yoshii et al, 2009). Thus, need for this review to provide more insight regarding the value of librarians and information specialists to systematic reviews.

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## **Intervention**

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The intervention in this review will be use of librarians / information specialists in developing search strategies for systematic reviews. Search strategies where information scientists were not involved will be compared to those where information scientists were involved. A systematic review where the review team is not reported will not be eligible for inclusion in the current review.

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## **Population**

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The population for this review are the systematic reviews published in the Campbell and Cochrane Libraries assessing the effectiveness of child welfare interventions.

The term child welfare refers to a range of services designed to ensure that children are safe and that families have the necessary support to care for their children successfully (Whittaker, 2003). Only studies on response systems for child abuse and neglect (Kessler et al, 2005), and all services and interventions provided to children and families will be included in this review.

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## **Outcomes**

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The primary outcome of this review is effective, exhaustive and reproducible search strategies that consequently lead to better methods reporting.

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## **Study designs**

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The review is a methods review that will focus on systematic reviews assessing child welfare interventions in the Cochrane and Campbell Libraries.

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## **References**

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Desmeules, Robin; Campbell, Sandy; Dorgan, Marlene (2016). *Acknowledging Librarians' Contributions to Systematic Review Searching*. *Journal of the Canadian Health Libraries*

Association / Journal de l'Association des bibliothèques de la santé du Canada:  
<https://journals.library.ualberta.ca/jchla/index.php/jchla/article/view/26056/20681>. Doi:  
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Eden, J., Levit, L., Berg, A., & Morton, S. (2011). Committee on Standards for Systematic Reviews of Comparative Effectiveness Research; Institute of Medicine. *Finding What Works in Health Care: Standards for Systematic Reviews*.

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Whittaker, J. K. (2003). *The Child Welfare Challenge*. New York: Routledge.

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## Roles and responsibilities

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The review team will comprise of the following experts:

- Content: Alison Annet Kinengyere, Faith Akiteng, Richard Ssenono, Onan Mulumba, Nina Olivia, Eliz Nassali State
  - Systematic review methods: Ekwaro Obuku, Moses Ocan, Alison Kinengyere, Richard Ssenono
  - Statistical analysis: Moses Ocan
  - Information retrieval: Alison Annet Kinengyere, Faith Akiteng, Richard Ssenono, Onan Mulumba, Karianne Hammerstrom ,Eliz Nassali State, Nina Olivia
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## Funding

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We have not received any funding. However, we are planning to apply for Campbell funding.

The deliverable deadlines for the review will depend on the response regarding funding, as well as the reviewers.

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## Potential conflicts of interest

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No conflict of interest.

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## Preliminary timeframe

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DATE	ACTIVITY
10 August 2018	Submit the proposal/form to Campbell
15-20 August 2018	Developing search strategy; preliminary searching
20 August to 20 November 2018	Developing and registering the protocol
20 November to 20 December 2018	Screening of retrieved studies
2 January 2019 to 20 March 2019	Data coding
21 March to 20 May 2019	Descriptive and statistical data analysis and

	report writing
20 May to 20 July 2019	Report writing continues
21 July 2019	Submit draft review
20 August 2019	Submit final review