
The methodological and reporting characteristics of Campbell reviews: a methodological systematic review

Xiaoqin Wang, Vivian Welch, Liang Yao, Julia Littell, Huijuan Li, Meixuan Li, Nan Yang, Jianjian Wang, Larissa Shamseer, Yaolong Chen, Kehu Yang, Jeremy M. Grimshaw

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- Crime and Justice
- Education
- Disability
- International Development
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- Other:

Plans to co-register:

- No
- Yes Cochrane Other
- Maybe

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Background

Systematic reviews aim to ‘sum up the best available research on a specific question by synthesizing the results of several studies’ (Campbell Collaboration 2018). They use transparent procedures to find, evaluate and synthesize the results of relevant research whilst minimizing bias. They are increasingly popular across a wide range of sectors to inform policy and practice. Systematic reviews can support policy makers to develop evidence-informed policy and help practitioners to keep up-to-date with relevant content knowledge (IOM 2011, Oliver 2015). In addition, granting agencies increasingly require the use of systematic reviews to justify new research. The trustworthiness of a systematic review is dependent upon the extent to which the review authors conducted the review using robust methods and the quality of reporting of the methods of the review (Steffen 2010).

The Campbell Collaboration undertakes systematic reviews of the effect of social and economic policies to help policymakers, practitioners and the public to make well informed decisions about policy interventions (Welch 2018). It has established a number of policies and procedures to promote rigorous methodology and transparent reporting of Campbell reviews, for example the Methodological Expectations of Campbell Collaboration Intervention Reviews (MECCIR) were introduced in 2014 (MECCIR 2018). However, we know little about how Campbell reviews are conducted and reported. In the health field, Moher (2007) and Page (2016) have demonstrated poor conduct and highly variable reporting of systematic reviews. For example, only 7% of the included systematic reviews searched sources of unpublished data, the risk of publication bias was considered in less than half of systematic reviews, and the reporting quality was highly variable (Page 2016). In social science, the American Psychological Association (APA) released reporting standards for psychological qualitative research, which are also useful for a broad range of social sciences (Levitt 2018). In 2017, a study examined the reporting of the method section of quantitative systematic reviews in the field of industrial and organizational psychology and found the reporting quality on methods is insufficient (Schalken 2017). For example, time period covered by the search was only fully reported in 23.3% (28) reviews. To date, however, there has not been a comprehensive review of the methods and reporting of Campbell reviews.

Objectives

The review has three main objectives:

- 1) To assess the methodological quality of Campbell reviews.
- 2) To assess the reporting characteristics of Campbell reviews.
- 3) To compare the methodological and reporting characteristics of Campbell reviews published from 2011 Jan to 2014 Sep and 2014 Oct (when the MECCIR was adopted) to 2018 Jan.

The review will also compare the methodology and reporting characteristics of:

- 1) Campbell reviews with versus without co-registration in Cochrane Library.

Methodology

Eligibility criteria

Completed Campbell systematic reviews of the effects of interventions published between January 2011 to January 2018. We will only include the interventional reviews, while others like reviews about predictors will be excluded. We will exclude records where only the protocol not the final systematic review is published. We will include the most recent version of updated reviews.

To ensure the comparability, we assessed the number of eligible reviews to assess the feasibility of subgroup analyses, where there will be 97 eligible reviews in total: 45 published from 2011 Jan to 2014 Sep and 53 published from 2014 Oct to 2018 Jan; reviews are from each five coordinating groups including crime and justice (21), education (26), international development (28) and welfare (37), nutrition (1); 74 were registered on Campbell only and 23 were co-registered with Cochrane.

Search strategy

We will search the Campbell Library to identify all the completed intervention reviews published from January 2011 to January 2018.

Data extraction

Our abstraction form was developed based on: the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Moher 2009); the AMSTAR 2 instrument (A MeaSurement Tool to Assess systematic Reviews 2) (Shea 2017); mandatory reporting items for methods and results from the MECCIR reporting standards Version 1.1 (MECCIR 2018); and additional review characteristics identified in similar methodological studies of reporting quality (Page 2016).

The draft data abstraction form included 85 items. Following discussion within the review team we excluded 10 items to reduce repetition within the data abstraction form and to focus on higher level items resulting in the final data abstraction form of 75 items (Appendix 1).

The following data will be collected:

- 1) basic information, including publication year, number and institute of authors, update status, co-registration information, coordinating group, focus of the review, types of intervention, source of funding, and declaration of interest of authors;
- 2) methodological characteristics reported in the review, including protocol preparation, data sources and search strategies, selection of studies, data collection, data analysis, number of outcomes specified in the RESULTS, and assessment of the risk of bias;
- 3) results characteristics reported in the review, especially the results corresponding to the methods, including number of records retrieved and included, result of the analysis and assessment;
- 4) discussion characteristics reported in the review and conclusion, including subheadings used, limitations at the study level and review level, implication for practice and future research etc.

Data extraction will consider all documents relevant to the completed review including the protocol and full review. Data will be abstracted using a standardized extraction form in Microsoft Excel 2018.

All extractors will independently pilot-test the form. Reviewers will abstract two reviews and a third reviewer (XW) will check all the data and consult with a fourth reviewer (JMG) when necessary. We will conduct further rounds of pilot testing until acceptable levels of agreement are reached. Subsequently, data from each review will be independently extracted by two independent reviewers, and any discrepancies in the data extracted will be resolved via discussion or adjudication by a third reviewer (XW) if necessary.

Data synthesis

We will use descriptive statistics (frequencies and percentages) to describe reporting characteristics of systematic reviews.

AMSTAR-2

Individual AMSTAR 2 items will be categorized as yes, partial yes, no; for items concerning meta-analysis, we have added a “no meta-analysis conducted” response (Appendix 2). The overall rating of confidence in the results of each review will be clarified as high, moderate, low, critically low (Box 1) according to the seven critical domains: 1) protocol registered before commencement of the review (item 2), 2) adequacy of the literature search (item 4), 3) Justification for excluding individual studies (item 7), 4) Risk of bias from individual studies being included in the review (item 9), 5) Appropriateness of meta-analytical methods (item 11), f. Consideration of risk of bias when interpreting the results of the review (item 13), 6) Assessment of presence and likely impact of publication bias (item 15).

For both the methodology (AMSTAR-2 assessment) and the reporting of Campbell reviews (PRISMA and MECCIR reporting standards), we will use Stata version 12 to compare the quality of reviews: 1) published before MECCIR (before 2014 Sep) and after MECCIR (after 2014 Oct), 2) that were Campbell registered only vs. co-registered on Campbell and Cochrane. Associations will be quantified using the risk ratio, with 95% confidence intervals.

Box 1

High

No or one non-critical weakness: the systematic review provides an accurate and comprehensive summary of the results of the available studies that address the question of interest

Moderate

More than one non-critical weakness*: the systematic review has more than one weakness but no critical flaws. It may provide an accurate summary of the results of the available studies that were included in the review

Low

One critical flaw with or without non-critical weaknesses: the review has a critical flaw and may not provide an accurate and comprehensive summary of the available studies that address the question of interest

Critically low

More than one critical flaw with or without non-critical weaknesses: the review has more than one critical flaw and should not be relied on to provide an accurate and comprehensive summary of the available studies

As the first comprehensive analysis of the reporting and methodological quality of Campbell review, this study will help the Campbell Collaboration, Campbell Coordinating Groups, and authors to identify areas for improvement. It can also benefit the potential users of Campbell reviews by providing an up to date assessment of the quality of Campbell reviews.

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Review authors

Lead review author: The lead author is the person who develops and co-ordinates the review team, discusses and assigns roles for individual members of the review team, liaises with the editorial base and takes responsibility for the on-going updates of the review.

Name: Xiaoqin Wang

Title: PhD Candidate

Affiliation: Evidence-based Medicine Centre of Lanzhou university, Lanzhou, China; Centre of Implementation Research, Ottawa Hospital Research Institute, Ottawa, Canada

Address: No. 199, Donggang Xilu, Chenguan District

City, State, Province or County: Lanzhou, Gansu

Post code: 730000

Country: China

Phone: +86 15117097283

Email: wangxiaoqin0822@163.com

Co-author(s):

Name: Vivian Welch

Title: Director, Methods Centre

Affiliation: Bruyere Research Institute

Address: 85 Primrose Avenue

City, State, Province or County: Ottawa, Ontario

Post code: K1R 7G5

Country: Ottawa

Phone: 613-562-6262, ext. 2904

Email: vwelch@campbellcollaboration.org

Name: Liang Yao

Title: Research assistant

Affiliation: Clinical Division, School of Chinese Medicine, Hong Kong Baptist University

Address: No. 7 of Baptist Road, Kowloon Tong

City, State, Province or County: Hong Kong

Post code: 518000

Country: China

Phone: +86 13919194957

Email:	yaol08@126.com
Name:	Julia Littell
Title:	Professor
Affiliation:	Graduate School of Social Work and Social Research Bryn Mawr College, Bryn Mawr, PA, USA
Address:	300 Airdale Road, Bryn Mawr, PA 19010.
City, State, Province or County:	Bryn Mawr, Pennsylvania
Post code:	19010
Country:	USA
Phone:	610-520-2619
Email:	jlittell@brynmawr.edu
Name:	Yaolong Chen
Title:	Professor
Affiliation:	Evidence-based Medicine Centre of Lanzhou university, Lanzhou, China;
Address:	199 Donggang west street
City, State, Province or County:	Lanzhou, Gansu
Post code:	730000
Country:	China
Phone:	+86 13893104140
Email:	chenyaolong21@163.com
Name:	Huijuan Li
Title:	Master student
Affiliation:	Evidence-based Medicine Centre of Lanzhou university, Lanzhou, China;
Address:	199 Donggang west street
City, State, Province or County:	Lanzhou, Gansu
Post code:	730000
Country:	China
Phone:	+86 18693273540
Email:	1972307224@qq.com
Name:	Meixuan Li
Title:	Master student

Affiliation:	Evidence-based Medicine Centre of Lanzhou university, Lanzhou, China;
Address:	199 Donggang west street
City, State, Province or County:	Lanzhou, Gansu
Post code:	730000
Country:	China
Phone:	+86 18693273540
Email:	1972307224@qq.com
Name:	Jianjian Wang
Title:	Research assistant
Affiliation:	Evidence-based Medicine Centre of Lanzhou university, Lanzhou, China;
Address:	199 Donggang west street
City, State, Province or County:	Lanzhou, Gansu
Post code:	730000
Country:	China
Phone:	+86 18368914063
Email:	1754807090@qq.com
Name:	Larissa Shamseer
Title:	PhD Candidate
Affiliation:	Centre for Journalology, Clinical Epidemiology, Ottawa Hospital Research Institute, Ottawa, Canada & School of Pharmacy, University of Maryland, Baltimore, USA.
Address:	310 Main St
City, State, Province or County:	Ottawa, Ontario
Post code:	K1S1E1
Country:	Canada
Phone:	613-618-3558
Email:	lshamseer@rx.umaryland.edu
Name:	Kehu Yang
Title:	Professor
Affiliation:	Evidence-based Medicine Centre of Lanzhou university, Lanzhou, China;
Address:	199 Donggang west street
City, State, Province or County:	Lanzhou, Gansu
Post code:	730000

Country:	China
Phone:	+86 13893117077
Email:	kehuyangebm2006@126.com
Name:	Jeremy Grimshaw
Title:	Senior Scientist
Affiliation:	Centre of Implementation Research, Ottawa Hospital Research Institute
Address:	501 Smyth Rd
City, State, Province or County:	Ottawa, Ontario
Post code:	ON K1H 8L6
Country:	Canada
Phone:	613-737-8899, ext. 73810
Email:	jgrimshaw@ohri.ca

Roles and responsibilities

- Content: Xiaoqin Wang, Jeremy Grimshaw
 - Systematic review methods: Vivian Welch, Jeremy Grimshaw, Julia Littell, Kehu Yang, Larissa Shamseer
 - Statistical analysis: Xiaoqin Wang, Liang Yao, Yaolong Chen
 - Information retrieval: Xiaoqin Wang, Liang Yao, Jian Wang, Xiao Liu, Huijuan Li, Meixuan Li
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Declarations of interest

Vivian Welch is the editor in chief of the Campbell Collaboration, Jeremy Grimshaw is the Chair of the board of the Campbell Collaboration, Julia Littell is a member of the Technical Advisory Group of the Campbell Collaboration.

Preliminary timeframe

Approximate date for submission of the systematic review: April 2019

Plans for updating the review

Reviews should include in the protocol specifications for how the review, once completed, will be updated. This should include, at a minimum, information on who will be responsible and the frequency with which updates can be expected.

This is a comparison review of the epidemiology characteristics of Campbell review published pre- and after the MECCIR expectations came out. This review will be updated upon the update of the MECCIR standards.

AUTHOR DECLARATION

Authors' responsibilities

By completing this form, you accept responsibility for preparing, maintaining and updating the review in accordance with Campbell Collaboration policy. The Campbell Collaboration will provide as much support as possible to assist with the preparation of the review.

A draft review must be submitted to the relevant Coordinating Group within two years of protocol publication. If drafts are not submitted before the agreed deadlines, or if we are unable to contact you for an extended period, the relevant Coordinating Group has the right to de-register the title or transfer the title to alternative authors. The Coordinating Group also has the right to de-register or transfer the title if it does not meet the standards of the Coordinating Group and/or the Campbell Collaboration.

You accept responsibility for maintaining the review in light of new evidence, comments and criticisms, and other developments, and updating the review at least once every five years, or, if requested, transferring responsibility for maintaining the review to others as agreed with the Coordinating Group.

Publication in the Campbell Library

The support of the Coordinating Group in preparing your review is conditional upon your agreement to publish the protocol, finished review, and subsequent updates in the Campbell Library. The Campbell Collaboration places no restrictions on publication of the findings of a Campbell systematic review in a more abbreviated form as a journal article either before or after the publication of the monograph version in Campbell Systematic Reviews. Some journals, however, have restrictions that preclude publication of findings that have been, or will be, reported elsewhere and authors considering publication in such a journal should be aware of possible conflict with publication of the monograph version in Campbell Systematic Reviews. Publication in a journal after publication or in press status in Campbell Systematic Reviews should acknowledge the Campbell version and include a citation to it. Note that systematic reviews published in Campbell Systematic Reviews and co-registered with the Cochrane Collaboration may have additional requirements or restrictions for co-publication. Review authors accept responsibility for meeting any co-publication requirements.

I understand the commitment required to undertake a Campbell review, and agree to publish in the Campbell Library. Signed on behalf of the authors:

Form completed by: Xiaoqin Wang

Date: 11 January 2019