Systematic Approaches to a Successful Literature Review (3rd edn)

A literature review starter template

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Developed by Andrew Booth for the Sage textbook *Systematic Approaches to a Successful Literature Review* 3rd edn

*1School of Health and Related Research (ScHARR),*

*2University of Sheffield, UK*

A literature review starter template

**Purpose of this template**

This template aims to demonstrate the sections you will need to include within a successfully written review. You can download this template at the start of your project and fill in the different sections as you go, or you can download it when you are ready to write up your findings.

Step 1: Topic selection and refinement

## TITLE

|  |
| --- |
| Title |
| Identify the report as a specific review type (e.g. systematic review, qualitative evidence synthesis, scoping review, mapping review etc). |
|  |

## ABSTRACT

|  |
| --- |
| Abstract |
| See the [PRISMA 2020 for Abstracts](http://prisma-statement.org/Extensions/Abstracts) checklist |
| **TITLE –** Identify the report as a systematic review.  **BACKGROUND**   * Objectives   **METHODS**   * Eligibility criteria * Information sources * Risk of bias * Synthesis of results   **RESULTS**   * Included studies * Synthesis of results   **DISCUSSION**   * Limitations of evidence * Interpretation   **OTHER**   * Funding * Registration |

## INTRODUCTION

|  |
| --- |
| Rationale |
| Describe the rationale for the review in the context of existing knowledge. |
|  |

**<Narrative review: Importance of Review Topic>**

Step 2: Research question (See Chapter 4)

|  |  |  |
| --- | --- | --- |
| Objectives | | |
| Provide an explicit statement of the objective(s) or question(s) the review addresses (in free text). | | |
| See the following examples: | | |
| **Type** | **Example of the research question** | **Research** |
| **Intervention** | What is the effect of <Intervention A> or <Programme B> on <Outcomes X, Y and Z>? | quantitative |
| **Harm/Causation:** | What is the relationship between <Risk factor M> and <Outcome X? | quantitative |
| **Diagnosis/Assessment** | What is the extent to which <Tool or Instrument P> accurately identifies the presence of <Condition F>? | quantitative |
| **Economics** | How do <Intervention A> and <Intervention C> compare in relation to their relative cost for achievement of <Outcome X> | quantitative |
| **Meaning/Lived experience** | What is it like to experience <Process Q> or <Phenomenon R>? | qualitative |
| **Your Question:** | | |
|  | | |

Now articulate the same question using a question formulation framework:

#### Generic Question Formulation Framework

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Context** | | **Person** | | | **Phenomenon of Interest** | | | | **Evaluation** | | |
| Setting | Environment | Population | Perspective | | Interest | Interventions | Comparison(s) | Timing | Outcomes | | |
| **Qn+Ql** | **Ql** | **Qn+Ql** | **Primary** | **Secondary** | **Ql** | **Qn+Ql** | **Qn** | **Qn+Ql** | **Primary** | **Secondary** | **Findings/ Themes** |
| **Ql** | **Ql** | **Qn** | **Qn** | **Ql** |

#### Question structure for your PICO (quantitative) question

|  |  |  |  |
| --- | --- | --- | --- |
| **P**opulation | **I**ntervention | **C**omparison(s) | **O**utcomes |
| **P** | **I** | **C** | **O1 + O2** |
|  |  |  |  |

#### Question structure for a Qualitative (SPICE) question

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S**etting | **P**erspective | **I**nterest/**I**ntervention | **C**omparison(s) | **E**valuation |
| **S** | **P** | **I** | **C** | **E** |
|  |  |  |  |  |

#### Question structure for a Mixed Methods (PerSPE©TiF) Question

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Setting | Environment | **Per**spective | Phenomenon of Interest/  Interventions | **C**omparison(s) | **Ti**ming | **F**indings |
|  |  |  |  |  |  |  |

Step 3: Develop the Protocol (See Chapter 4)

Best practice in systematic reviews requires following the [PRISMA-P (Preferred Reporting Items for Systematic Reviews and Meta-Analyses – Protocol) checklist](http://www.prisma-statement.org/Extensions/Protocols).

|  |  |
| --- | --- |
| Registration and protocol | |
| Registration information for the review, including register name and registration number, or state that the review was not registered. | |
| [PROSPERO](https://www.crd.york.ac.uk/prospero/) Reg. No. |  |
| Indicate where the review protocol can be accessed, or state that a protocol was not prepared. | |
|  | |
| Describe and explain any amendments to the information provided at registration or in the protocol. | |
|  | |

Step 4: Develop Eligibility criteria (See Chapter 4)

## METHODS – Search (See Chapter 5)

|  |
| --- |
| Eligibility criteria |
| Specify the inclusion and exclusion criteria for the review and how studies were grouped for the syntheses. |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Study Characteristics | Eligibility criteria  *(Insert inclusion criteria for each characteristic as defined in the Protocol)* | | Eligibility criteria met? | | | Location in text or source *(pg & ¶/fig/table/other)* |
|  |  | | Yes | No | Unclear |  |
| Type of study | Randomised Controlled Trial | |  |  |  |  |
|  | Other Study Types | |  |  |  |  |
| Participants |  | |  |  |  |  |
| Types of intervention |  | |  |  |  |  |
| Types of comparison |  | |  |  |  |  |
| Types of outcome measures |  | |  |  |  |  |
| INCLUDE | | EXCLUDE | | | | |
| Reason for exclusion |  | | | | | |
| Notes: | | | | | | |

**DO NOT PROCEED IF THE STUDY EXCLUDED FROM REVIEW**

**<Narrative synthesis: Justified inclusion and exclusion criteria>**

Step 5: Searching for evidence (See Chapter 5)

|  |  |
| --- | --- |
| Search strategy | |
| Present the full search strategies for all databases, registers and websites, including any filters and limits used (**STARLITE**). | |
| **S**ampling strategy |  |
| **T**ype of study |  |
| **A**pproaches |  |
| **R**ange of Years |  |
| **L**imits |  |
| **I**nclusions & exclusions |  |
| **T**erms used |  |
| **E**lectronic (information) sources\* |  |
| \*Specify all databases, registers, websites, organisations, reference lists and other sources searched or consulted to identify studies. Specify the date when each source was last searched or consulted. | |

**<Narrative review: Conduct of literature searches>**

### Search log

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Source** | **Date searched** | **Search strategy** | **Hits (or records obtained from searches)** | **Comments** |
| PubMed MEDLINE | 29/02/2024 | #1 Cat\* 7953  #2 Dog\* 8574  3 #1 AND #2 973  #4 PET Scan 1501  #5 #3 AND #4 763  #5 Limit English and Years 2011-2022 279 | 279 | Requires synonyms for PET Scan |
|  |  |  |  |  |

Top Tip! It is possible to save your search strategy in most databases by creating a personal profile. This allows you to trial several search strategies before deciding on the most suitable iteration. Alternatively, cut and paste the strategy into your search log or, if necessary, screen capture the complete strategy so you can retype it accurately offline.

Step 6: Screening and study selection (See Chapter 6)

|  |
| --- |
| Selection process |
| Specify the methods used to decide whether a study met the inclusion criteria of the review, including how many reviewers screened each record and each report retrieved, whether they worked independently, and if applicable, details of automation tools used in the process. |
|  |

**<Narrative review: Selection of citations>**

Step 7: Data extraction (See Chapter 6)

|  |
| --- |
| Data collection process |
| Specify the methods used to collect data from reports, including how many reviewers collected data from each report, whether they worked independently, any processes for obtaining or confirming data from study investigators, and if applicable, details of automation tools used in the process. |
|  |

Data collection form

This form is a guide for developing your own data extraction form. Sections can be expanded and added, and irrelevant sections can be removed. It is difficult to design a single form that meets the needs of all reviews, so it is important to consider carefully the information you need to collect and design your form accordingly. The information included on this form should be comprehensive and may be used in the text of your review, ‘Characteristics of included studies’ table, risk of bias assessment, and statistical analysis.

**Notes on using a data extraction form:**

* Be consistent in the order and style you use to describe the information for each report.
* Record any missing information as unclear or not described, to make it clear that the information was not found in the study report(s), not that you forgot to extract it.
* Include any instructions and decision rules on the data collection form, or in an accompanying document. Practice using the form and give training to any other authors using the form.

|  |  |
| --- | --- |
| Review title or ID |  |
| Study ID *(surname of first author and year first full report of the study was published e.g. Smith 2001)* |  |
| Report ID |  |
| Report ID of other reports of this study |  |
| Notes | |

#### General Information

|  |  |
| --- | --- |
| Date form completed *(dd/mm/yyyy)* |  |
| Name/ID of person extracting data |  |
| Reference citation |  |
| Study author contact details |  |
| Publication type  *(e.g., full report, abstract, letter)* |  |
| Notes: | |

#### Characteristics of included studies

##### Methods

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Descriptions as stated in report/paper** | | **Location in text or source** *(pg & ¶/fig/table/other)* |
| **Aim of study** *(e.g., efficacy, equivalence, pragmatic)* |  | |  |
| **Design***(e.g., parallel, crossover, non-RCT)* |  | |  |
| **Start date** |  | |  |
| **End date** |  | |  |
| **Duration of participation**  *(from recruitment to the last follow-up)* |  | |  |
| **Ethical approval needed/ obtained for study** | Yes  No  Unclear |  |  |
| **Notes:** | | | |

##### Participants

|  |  |  |  |
| --- | --- | --- | --- |
|  | Description  *Include comparative information for each intervention or comparison group if available* | | Location in text or source *(pg & ¶/fig/table/other)* |
| Population description *(from which study participants are drawn)* |  | |  |
| Setting *(including location and social context)* |  | |  |
| Inclusion criteria |  | |  |
| Exclusion criteria |  | |  |
| Method of recruitment of participants *(e.g., phone, mail, clinic patients)* |  | |  |
| Informed consent obtained | Yes  No  Unclear |  |  |
| Total no. randomised *(or total pop. at start of the study for NRCTs)* |  | |  |
| Withdrawals and exclusions *(if not provided below by outcome)* |  | |  |
| Age |  | |  |
| Sex |  | |  |
| Race/Ethnicity |  | |  |
| Severity of illness |  | |  |
| Co-morbidities |  | |  |
| Other relevant socio-demographics |  | |  |
| Subgroups measured |  | |  |
| Subgroups reported |  | |  |
| Notes: | | | |

##### Intervention groups

*Copy and paste table for each intervention and comparison group*

**Intervention Group 1**

|  |  |  |
| --- | --- | --- |
|  | Description as stated in report/paper | Location in text or source *(pg & ¶/fig/table/other)* |
| Group name |  |  |
| No. randomised to group *(specify whether no. people or clusters)* |  |  |
| Theoretical basis *(include key references)* |  |  |
| Description *(include sufficient detail for replication, e.g., content, dose, components)* |  |  |
| Duration of the treatment period |  |  |
| Timing *(e.g., frequency, duration of each episode)* |  |  |
| Delivery *(e.g., mechanism, medium, intensity, fidelity)* |  |  |
| Providers *(e.g., no., profession, training, ethnicity etc. if relevant)* |  |  |
| Co-interventions |  |  |
| Economic information *(i.e., intervention cost, changes in other costs as a result of intervention)* |  |  |
| Resource requirements *(e.g., staff numbers, cold chain, equipment)* |  |  |
| Integrity of delivery |  |  |
| Compliance |  |  |
| Notes: | | |

##### Outcomes

*Copy and paste the table for each outcome.*

**Outcome 1**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Description as stated in report/paper | | Location in text or source *(pg & ¶/fig/table/other)* |
| Outcome name |  | |  |
| Time points measured *(specify whether from start or end of intervention)* |  | |  |
| Time points reported |  | |  |
| Outcome definition *(with diagnostic criteria if relevant)* |  | |  |
| Person measuring/reporting |  | |  |
| Unit of measurement *(if relevant)* |  | |  |
| Scales: upper and lower limits *(indicate whether the high or low score is good)* |  | |  |
| Is outcome/tool validated? | Yes  No  Unclear |  |  |
| Imputation of missing data  *(e.g., assumptions made for ITT analysis)* |  | |  |
| Power *(e.g., power & sample size calculation, level of power achieved)* |  | |  |
| Notes: | | | |

##### Other

|  |  |  |
| --- | --- | --- |
| **Study funding sources**  *(including the role of funders)* |  |  |
| **Possible conflicts of interest**  *(for study authors)* |  |  |
| **Notes:** | | |

#### Qualitative considerations

|  |  |
| --- | --- |
| **Software** | State the computer software used if any. |
|  | |
| **Number of reviewers** | Identify who was involved in coding and analysis. |
|  | |

## METHODS – Appraisal (See Chapter 6)

#### Quality assessment (including Risk of Bias assessment)

Quality assessment is an important component of most systematic approaches to a literature review. For randomised controlled trials a formal risk of bias assessment is conducted. Select your appropriate quality assessment tool for the study types you have decided to include in your review:

|  |  |  |
| --- | --- | --- |
| **Study type** | **Tools** | **Comments** |
| Systematic reviews | [AMSTAR](https://amstar.ca/index.php) |  |
| [ROBIS: a tool for assessing the risk of bias in systematic reviews](https://www.nccmt.ca/knowledge-repositories/search/315#:~:text=ROBIS%20is%20a%20tool%20designed,critical%20appraisal%20and%20quality%20assessment.) |  |
| Randomised interventions | [Cochrane Risk of Bias](https://methods.cochrane.org/bias/resources/rob-2-revised-cochrane-risk-bias-tool-randomized-trials) |  |
| Non-randomised interventions | [ROBINS-I tool](https://methods.cochrane.org/methods-cochrane/robins-i-tool) |  |
| [CASP Tools and Checklists](https://casp-uk.net/casp-tools-checklists/) | * CASP Randomised Controlled Trials Checklist * CASP Systematic Review Checklist * CASP Qualitative Studies Checklist * CASP Cohort Study Checklist * CASP Diagnostic Study Checklist * CASP Case-Control Study Checklist * CASP Economic Evaluation Checklist * CASP Clinical Prediction Rule Checklist |  |
| [JBI Critical Appraisal Tools](https://jbi.global/critical-appraisal-tools) | * Checklist for Analytical Cross-Sectional Studies * Checklist for Case-Control Studies * Checklist for Case Reports * Checklist for Case Series * Checklist for Cohort Studies * Checklist for Diagnostic Test Accuracy Studies * Checklist for Economic Evaluations * Checklist for Prevalence Studies * Checklist for Qualitative Research * Checklist for Quasi-Experimental Studies * Checklist for Randomized Controlled Trials * Checklist for Systematic Reviews * Checklist for Text and Opinion |  |
| Qualitative studies | [CASP qualitative research checklist](https://casp-uk.net/casp-tools-checklists/). Also, [JBI critical appraisal checklist for qualitative research](https://jbi.global/sites/default/files/2019-05/JBI_Critical_Appraisal-Checklist_for_Qualitative_Research2017_0.pdf) |  |
| Qualitative evidence synthesis | [Tool to assess methodological limitations of qualitative evidence synthesis](https://www.sbu.se/contentassets/14570b8112c5464cbb2c256c11674025/methodological_limitations_qualitative_evidence_synthesis.pdf) |  |
| Narrative reviews | [SANRA—a scale for the quality assessment of narrative review articles](https://researchintegrityjournal.biomedcentral.com/articles/10.1186/s41073-019-0064-8/figures/1) |  |
| Mixed methods | [Mixed Methods Appraisal Tool (MMAT)](http://mixedmethodsappraisaltoolpublic.pbworks.com/w/file/fetch/127916259/MMAT_2018_criteria-manual_2018-08-01_ENG.pdf#:~:text=What%20is%20the%20MMAT%3F,quantitative%20and%20mixed%20methods%20studies.) |  |
| Diagnostic accuracy | [QUADAS-2: a tool to assess risk of bias and applicability of primary diagnostic accuracy studies](https://www.bristol.ac.uk/population-health-sciences/projects/quadas/quadas-2/#:~:text=QUADAS%2D2%20(PDF%2C%20265kB,index%20test) |  |
| Health economics | [Checklist for assessing the quality of trial-based health economic studies](https://www.sbu.se/globalassets/ebm/metodbok/checklist_trialbased-economic-study.pdf) |  |
| Modelling studies | [Checklist for assessing the quality of health economic modelling studies](https://www.sbu.se/globalassets/ebm/metodbok/checklist_modelbased-economic-study.pdf) |  |
| Grey literature | [AACODS Checklist](https://dspace.flinders.edu.au/xmlui/bitstream/handle/2328/3326/AACODS_Checklist.pdf?sequence=4) | Grey literature (especially unpublished Randomised Controlled Trials) should be appraised to the same standard and using same Critical Appraisal Tools as used to evaluate published literature |
| My Chosen Checklist(s): | | |
| **Study Type(s)** | **Checklist(s)** | **Comments** |
|  |  |  |
|  |  |  |

***Risk of Bias Tool:*** *See* [*Chapter 8*](http://www.mrc-bsu.cam.ac.uk/cochrane/handbook/index.htm#chapter_8/8_assessing_risk_of_bias_in_included_studies.htm) *of the Cochrane Handbook. Additional domains may be added for non-randomised studies.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Domain** | **Risk of bias** | | | **Support for judgement**  ***(include direct quotes were available with explanatory comments)*** | **Location in text or source *(pg & ¶/fig/table/other)*** |
|  | Low | High | Unclear |  |  |
| Random sequence generation  *(selection bias)* |  |  |  |  |  |
| Allocation concealment  *(selection bias)* |  |  |  |  |  |
| Blinding of participants and personnel  *(performance bias)* |  |  |  | Outcome group: All/ |  |
| *(if a separate judgement by outcome(s) required)* |  |  |  | Outcome group: |  |
| Blinding of outcome assessment  *(detection bias)* |  |  |  | Outcome group: All/ |  |
| *(if a separate judgement by outcome(s) required)* |  |  |  | Outcome group: |  |
| Incomplete outcome data  *(attrition bias)* |  |  |  | Outcome group: All/ |  |
| *(if a separate judgement by outcome(s) required)* |  |  |  | Outcome group: |  |
| Selective outcome reporting?  *(reporting bias)* |  |  |  |  |  |
| Other bias |  |  |  |  |  |
| Notes: | | | | | |

#### Data and analysis

*Copy and paste the appropriate table for each outcome, including additional tables for each time point and subgroup as required.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Description as stated in report/paper | | | | Location in text or source *(pg & ¶/fig/table/other)* |
| Comparison |  | | | |  |
| Outcome |  | | | |  |
| Results | Intervention | | Comparison | |  |
| No. with event | Total in group | No. with event | Total in group |
|  |  |  |  |
| Any other results reported |  | | | |  |
| No. missing participants |  | |  | |  |
| Reasons missing |  | |  | |  |
| No. participants moved from other groups |  | |  | |  |
| Reasons moved |  | |  | |  |
| Unit of analysis *(by individuals, cluster/groups or body parts)* |  | | | |  |
| Statistical methods used and appropriateness of these |  | | | |  |
| Notes: | | | | | |

#### Other information

|  |  |  |
| --- | --- | --- |
|  | **Description as stated in report/paper** | **Location in text or source** *(pg & ¶/fig/table/other)* |
| **Key conclusions of study authors** |  |  |
| **References to other relevant studies** |  |  |
| **Correspondence required for further study information** *(from whom, what and when)* |  | |
| **Notes:** | | |

|  |
| --- |
| Data items |
| List and define all outcomes for which data were sought. Specify whether all results that were compatible with each outcome domain in each study were sought (e.g., for all measures, time points, analyses), and if not, the methods used to decide which results to collect. |
|  |
| List and define all other variables for which data were sought (e.g., participant and intervention characteristics, funding sources). Describe any assumptions made about any missing or unclear information. |
|  |
| Study risk of bias assessment |
| Specify the methods used to assess the risk of bias in the included studies, including details of the tool(s) used, how many reviewers assessed each study and whether they worked independently, and if applicable, details of automation tools used in the process. |
|  |
| Effect measures |
| Specify for each outcome the effect measure(s) (e.g., risk ratio, mean difference) used in the synthesis or presentation of results. |
|  |

#### Qualitative considerations

|  |  |
| --- | --- |
| **Coding** | Describe the process for coding of data *(e.g., line by line coding to search for concepts).* |
|  | |
| **Study comparison** | Describe how were comparisons made within and across studies *(e.g., subsequent studies were coded into pre-existing concepts, and new concepts were created when deemed necessary).* |
|  | |

## METHODS – Synthesis (See Chapters 7, 8 and 9)

|  |
| --- |
| Synthesis methods |
| Describe the processes used to decide which studies were eligible for each synthesis |
|  |
| Describe any methods required to prepare the data for presentation or synthesis. |
|  |
| Describe any methods used to tabulate or visually display the results of individual studies and syntheses. |
|  |
| Describe any methods used to synthesize results and provide a rationale for the choice(s). If meta-analysis was performed, describe the model(s), method(s) to identify the presence and extent of statistical heterogeneity, and software package(s) used. |
|  |

**<Narrative review: Tables/figures/diagrams>**

## METHODS – Analysis (See Chapters 7, 8 and 9)

|  |
| --- |
| Describe any methods used to explore possible causes of heterogeneity among study results (e.g., subgroup analysis, meta-regression). |
|  |
| Describe any sensitivity analyses conducted to assess the robustness of the synthesized results. |
|  |
| Reporting bias assessment |
| Describe any methods used to assess the risk of bias due to missing results in a synthesis (arising from reporting biases). |
|  |
| Certainty assessment |
| Describe any methods used to assess certainty (or confidence) in the body of evidence for an outcome. |
|  |

## RESULTS – Search (See Chapter 5)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Study selection | | | | |
| Describe the results of the search and selection process, from the number of records identified in the search to the number of studies included in the review, ideally using a [flow diagram](http://prisma-statement.org/prismastatement/flowdiagram.aspx). | | | | |
|  | | | | |
| Cite studies that might appear to meet the inclusion criteria, but which were excluded, and explain why they were excluded. | | | | |
| **Reference** | | | **Reason for Exclusion** | |
| 1. <Reference> | | | Not RCT | |
| 1. <Reference> | | | Wrong Intervention | |
| 1. <Reference> | | | Incorrect outcome | |
| 1. etc. | | | etc. | |
|  | | |  | |
|  | | |  | |
|  | | |  | |
| Study characteristics | | | | |
| Cite each included study and present its characteristics. | | | | |
| **Study ID** | **Precis of intervention description from study** | **Main intervention strategy** | | **Other intervention components** |
|  |  |  | |  |
|  |  |  | |  |
|  |  |  | |  |
|  |  |  | |  |
|  | | | | |

**<Narrative review: Citation of references>**

Step 8: Quality assessment

## RESULTS – Appraisal (See Chapter 6)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Risk of bias in studies | | | | | | | | | | |
| Present assessments of risk of bias for each included study. | | | | | | | | | | |
|  | **Criterion #1** | **Criterion #2** | **Criterion #3** | **Criterion #4** | **Criterion #5** | **Criterion #6** | **Criterion #7** | **Criterion #8** | **Criterion #9** | **Criterion #10** |
| **Study A** |  |  |  |  |  |  |  |  |  |  |
| **Study B** |  |  |  |  |  |  |  |  |  |  |
| **Study C** |  |  |  |  |  |  |  |  |  |  |
| **Study D** |  |  |  |  |  |  |  |  |  |  |
| **etc.** |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | |
| Results of individual studies | | | | | | | | | | |
| For all outcomes, present, for each study: (a) summary statistics for each group (where appropriate) and (b) an effect estimate and it is precision (e.g., confidence/credible interval), ideally using structured tables or plots. | | | | | | | | | | |
|  | | | | | | | | | | |

**<Narrative review: Critical evaluation of studies>**

Step 9: A knowledge synthesis

## RESULTS – Synthesis (See Chapters 7, 8 and 9)

Think through the analysis plan before you start synthesizing. You should decide at the protocol stage how you will group and visualize your data based on your research question. This will ensure that you extract the data you require to address your review question throughout the review. Here are some recommendations on how to synthesize your findings:

* Provide a descriptive summary of the included studies and their general characteristics. This aids in understanding if these are similar, reliable, and if it is possible at all to pool results.
* A narrative synthesis of findings to interpret the included evidence.
* This can be organized around the PICO question framework elements, reporting results by interventions, then by comparisons, followed by outcomes.
* Crucial to perform to determine the appropriateness of a meta-analysis.
* Involve a statistician where possible

|  |
| --- |
| Results of syntheses |
| For each synthesis, briefly summarise the characteristics and risk of bias among contributing studies. |
|  |
| Present results of all statistical syntheses conducted. If meta-analysis was done, present for each the summary estimate and its precision (e.g., confidence/credible interval) and measures of statistical heterogeneity. If comparing groups, describe the direction of the effect. |
|  |

**<Narrative review: Summary of information>**

## RESULTS – Analysis

|  |
| --- |
| Present results of all investigations of possible causes of heterogeneity among study results. |
|  |
|  |
| Present results of all sensitivity analyses conducted to assess the robustness of the synthesized results. |
|  |
| Reporting biases |
| Present assessments of risk of bias due to missing results (arising from reporting biases) for each synthesis assessed. |
|  |
| Certainty of evidence |
| Present assessments of certainty (or confidence) in the body of evidence for each outcome assessed. e.g., [GRADE](https://www.gradeworkinggroup.org/) or [GRADE-CERQual](https://www.cerqual.org/) |
|  |

#### Qualitative considerations

|  |  |
| --- | --- |
| **Derivation of themes** | Explain whether the process of deriving the themes or constructs was inductive or deductive. |
|  | |
| **Quotations** | Provide quotations from the primary studies to illustrate themes/constructs, and identify whether the quotations were participant quotations of the author’s interpretation. |
|  | |
| **Synthesis output** | Present rich, compelling and useful results that go beyond a summary of the primary studies (e.g., *new interpretation, models of evidence, conceptual models, analytical framework, development of a new theory or construct).* |
|  | |

Step 10: Report production and dissemination

When preparing the final report you should consider who the end-user is and the channels of dissemination (**Chapter 10)**. For example, it may not be appropriate to go through a formal peer-review process to produce a journal article. End-users may be decision-makers who need the final report as quickly as possible to inform decision making. Therefore, the format and communication of key findings may be condensed compared to systematic reviews in peer-reviewed journals. This may involve highlighting key findings and key recommendations first and foremost, with the detailed methods reported in the annexe or a separate technical note.

## DISCUSSION (See Chapter 10)

|  |
| --- |
| Discussion |
| The general interpretation of the results in the context of other evidence. |
|  |
| Limitations of the evidence included in the review. |
|  |
| Limitations of the review processes used. |
|  |
| Implications of the results for practice, policy, and future research. |
|  |

**<Narrative review: Utility to new readers>**

**<Narrative review: Contribution to body of knowledge>**

#### Choice of Appropriate Reporting Standards

Reporting standards ensure the standardisation of reporting. They, therefore, represent a key component of most systematic approaches to a literature review. The [EQUATOR Network](https://www.equator-network.org/) registry documents the most recent reporting standards and helps you to keep up to date with requirements. You should always check to see what target journals require in terms of reporting. Select your appropriate reporting standards for the review types you have decided to include in your review:

|  |  |  |
| --- | --- | --- |
| **Study type** | **Tools** | **Comments** |
| Protocol | [PRISMA-P](https://www.equator-network.org/reporting-guidelines/prisma-protocols/) |  |
| Systematic review | [PRISMA](https://www.equator-network.org/reporting-guidelines/prisma/) |  |
| Scoping Review | [PRISMA-ScR](https://www.equator-network.org/reporting-guidelines/prisma-scr/) |  |
| Abstract | [PRISMA for Abstracts](https://www.equator-network.org/reporting-guidelines/prisma-abstracts/) |  |
| Search Strategy | [PRISMA-S](https://www.equator-network.org/reporting-guidelines/prisma-s/) |  |
| Realist Syntheses | [RAMESES (Realist)](https://www.equator-network.org/reporting-guidelines/rameses-publication-standards-realist-syntheses/) |  |
| Meta-Narrative | [RAMESES (Meta-Narrative)](https://www.equator-network.org/reporting-guidelines/rameses-publication-standards-meta-narrative-reviews/) |  |
| Meta-ethnography | [eMERGe](https://www.equator-network.org/reporting-guidelines/improving-reporting-of-meta-ethnography-the-emerge-reporting-guidance/) |  |
| Other Qualitative Evidence Syntheses | [ENTREQ](https://www.equator-network.org/reporting-guidelines/entreq/) | Not formally ratified by the qualitative synthesis community |
| My Chosen Reporting Standards | | |
| **Study Type(s)** | **Reporting Standards** | **Comments** |
|  |  |  |
|  |  |  |

|  |
| --- |
| Support |
| Describe sources of financial or non-financial support for the review, and the role of the funders or sponsors in the review. |
|  |
| Competing interests |
| Declare any competing interests of review authors. |
|  |
| Reflexivity |
|  |
| Availability of data, code and other materials |
| Report which of the following are publicly available and where they can be found: template data collection forms; data extracted from included studies; data used for all analyses; analytic code; any other materials used in the review. |
|  |

Appendix

#### Definitions

**[See Glossary]**

Sources:

[CASP Glossary](https://casp-uk.net/glossary/)

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Schünemann H, Brożek J, Oxman A, editors. GRADE handbook for grading the quality of evidence and strength of recommendation. Version 3.2 [updated March 2009]. The GRADE Working Group, 2009. Available from <http://www.cc-ims.net/gradepro>.