How to do a literature review
A Guide for Speciality Trainees

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Introduction

For all new ST4s joining the East Midlands (North) Child and Adolescent Psychiatry training scheme, we hold three-monthly supervision and peer review workshops for your literature review. These are led by the above-named authors and the group includes all STs currently doing a literature review. Please aim to circulate your draft documents to the group at least two weeks before the next workshop to allow everyone time to read, review and provide helpful feedback about your review.

Step 1: Choose a subject

Choose a topic that interests you and is not too wide or too narrow. Think about the research question you want answered through your review. The research question should be specific and clear (i.e., not too broad or vague). You can do a preliminary search at this stage, for example on Google Scholar, to help you find an appropriate question that is worth answering and where there is a need and a gap in the existing evidence base. Choose a time-frame, e.g., original articles published in the last three years on the topic of your choice or if there has been a review done previously that covers earlier time periods. Bear in mind that a longer time-period will increase the chances of publishing your review.

Step 2: Arrange a meeting with Trust Library Staff

Arrange a meeting to learn about literature searching; how to identify and use the right key words, alternative search words, filters, how to combine searches, PRISMA Flow Chart etc., and for help creating your OpenAthens account (needed to access electronic resources purchased by the Trust and nationally by Health Education England).

Step 3: Perform a scoping search to check whether a recent review has been done

Library staff can help you to perform a scoping search to avoid duplicating work already published. Check PROSPERO (https://www.crd.york.ac.uk/PROSPERO/) for any registered reviews or search PubMed (https://pubmed.ncbi.nlm.nih.gov/) and limit search using filter for only systematic reviews.

Step 4: Register with PROSPERO

It is good practice to register your research in the PROSPERO (https://www.crd.york.ac.uk/PROSPERO/) database at this stage. This is increasingly expected by journals to get your review published in a peer-reviewed journal.

Step 5: Perform a search

Perform a search and make a note of the following (library staff can advise on what to write):

- The databases and website you searched (e.g., Medline, Embase, PsycInfo, or Cinahl, ERIC for subjects related to education)
- The platform the database is from (e.g., Ovid for Medline or Embase, ProQuest for PsycInfo, or EBSCO for Cinahl)
- The day, month, and year you performed your search
- Your search terms and how you combined them: e.g., for the review titled "Knowledge and attitudes about Attention-Deficit/Hyperactivity Disorder (ADHD) and its treatment: the views of children, adolescents, parents, teachers and healthcare professionals", search terms in the Title/Abstract field were: 'ADHD' in all possible combinations with 'knowledge', 'attitudes' or 'stigma' as second search term, and 'child', 'adolescent', 'young people', 'parent', 'teacher', 'pediatrician', 'family physician', 'general practitioner', 'primary care', or 'professional' as third search term.'
- Subject headings you used to complement the above search terms
- A search strategy from at least one of the databases as an example of how you searched and how many results each line in your strategy retrieved.
- Your inclusion criteria: e.g., 'Papers were included if they were original articles relevant to the topic, written in English and published from 2010 onwards'.
- Your exclusion criteria: e.g., 'Systematic reviews, case reports, case series, conference abstracts, unpublished theses, papers not published in English'.

Step 6: Sifting process: Title & Abstract; Full text

The first sifting is by Title & Abstract. If the Abstract looks relevant, do your best to get the full text. Ask the Library Service for assistance with document supply if you cannot get the full text online.

Assess the content of the paper and decide whether it will be included in the review. Include original articles only but look at the bibliography of any reviews you find on your subject as they are a source of articles that you may have missed in your search.

Make a note of how many papers you have to begin with - keep a record of how many papers are duplicates, and how many you exclude with your criteria.

Make sure you fill out a PRISMA Flow Diagram (https://www.prisma-statement.org//PRISMAStatement/FlowDiagram) as you progress. This depicts the flow of information through the different stages of the review, mapping out the number of records identified in the search, duplicates, included/excluded at Title & Abstract screening stage, included/excluded at full text screening stage, and the reasons for exclusion.

Consider using reference management software to store your results – some free ones include EndNote Web (https://access.clarivate.com/#/login?app=endnote), Mendeley (https://www.mendeley.com/), and Zotero (https://www.zotero.org/)

For papers that will be included, consider doing a quality assessment such as the Critical Appraisal Skills Programme (CASP). The CASP contains eight checklists for various study designs that have been used to critically appraise research, including the risk of bias. The CASP website contains these checklists and online learning which are free to access (https://casp-uk.net/casp-tools-checklists/).

Step 7: Grouping the articles into topics

Save in a Word file the abstracts of the relevant articles. You will notice that a number of articles are related to a particular aspect of your subject. You will probably be able to group the articles into several topics, e.g. in the review titled 'Knowledge and attitudes about Attention-Deficit/Hyperactivity Disorder (ADHD) and its treatment: the views of children, adolescents, parents, teachers and healthcare professionals', the articles were grouped into four main topics: general knowledge and attitudes towards ADHD; young people's and parents' experiences of stigma related to ADHD; interventions aimed at improving the

knowledge and attitudes of professionals; and the influence of the different perspectives of stakeholders working together in the diagnosis and treatment of ADHD.

Step 8: Prepare a Table to compile and collate the findings from all the papers (data extraction)

Putting the information into a table helps you summarise it and find links between the articles. Cochrane has devised data collection forms that may be helpful to extract information systematically. The areas covered by the form is vast, but you can pick the sections that are relevant to the article in question and your review.

Possible headings for the columns of the table are:

Author, year, article	Method	Population of interest	Sample size	Country	Aims	Findings	Comments

Author, year, article: name of first author, year of publication and a short version of the title of the article (one or two words) to help you identify the article.

Method: quantitative (and type of study design) or qualitative or mixed method

Population of interest: the study participants: e.g., teachers or parents of children with ADHD, or GPs.

The table may help you group the articles into topics; once you have identified your topics prepare one table for each topic including all the articles belonging to that topic. This table may or may not appear in your final paper; its main purpose is to help you organize the information and draft the manuscript of the paper.

Step 9: Writing a paper about your literature review

Aim for a text word count of 3000-4000 words, excluding references. The report should be of a standard that could be submitted to a journal for consideration for publication. Writing the Abstract at an early stage usually helps to organise your ideas, consider the key findings and messages and write the rest of the paper.

The **Introduction section** is usually brief and sets the scene: define the main issue (e.g., a condition or treatment) you are writing about and write two or three paragraphs about its relevance and importance. This section should conclude with the clear and specific research

question and aims of your systematic review, and why you have chosen to do a systematic review on the topic. Aim to write this section at an early stage i.e. while you are carrying out the activities in the Methods section.

Include a **Methods section** where you describe your search: sites searched, month and year the search was done, search terms and how these were combined, inclusion and exclusion criteria, how many articles you found and how many were left after the sifting process, what topics you grouped the articles into etc. Include your PRISMA Flow Diagram of the whole process in this section to illustrate your method in form of a figure. If two reviewers are involved, please elaborate the process such as reviewing abstracts independently and comparing notes, including articles at the abstract stage if in doubt, and involving another or a senior reviewer if an agreement can't be reached.

Results section: Using the topics as subtitles, summarise the articles you found. Choose carefully what to say about each article you include. It is not enough to use the information contained in the Abstract; that would not give the reader any added value from reading your literature review. You need to read the full text and make your own summary with the ideas you found relevant and interesting in the article.
Try to find links between the articles: e.g., two articles may have similar aims and try to answer a similar research question. Did they get similar or conflicting results? What may be the reason for the different results? e.g., it may be that they used different outcome measures or a different population.

You may include a table here (similar to the one mentioned in step 8, but more concise) to summarise the findings of each paper, grouped according to findings or grouped according to methodology (e.g., quantitative studies in one table and qualitative studies in another). And elaborate further and link the findings in the main text.

Discussion: Pull together a scholarly overview and interpretation of the findings. This may have the following sections/paragraphs - Summarise the key findings, link these with the existing evidence (whether they are consistent or conflicting with the existing views on the topic), strengths and limitations of your review and the primary studies included, clinical implications, research/methodological implications, suggestions for future research directions.

Conclusion: Usually a short paragraph distilling the key information and salient findings contained in the paper.

Step 10: Group peer-review and feedback

Peer-review and feedback are crucial steps in the review process as these allow your colleagues to offer suggestions or highlight potential amendments. Circulate a well-written draft version of your report at least 2 weeks before each meeting, leaving enough time for feedback to be provided. Each report will be discussed at the workshop meeting so any comments and feedback can be answered or expanded on.

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