

Introduction to systematic reviews and the search process - Video 1 - transcript

My name is Nia Roberts, and I'm going to take you through a series of short video introductions and demonstrations on how to plan and conduct a search as part of the systematic review process. I'll be using systematic review as an overarching term for a range of different review types or evidence synthesis approaches. I will take you through how you start from the point of formulating your question right through to developing a search strategy, running the search across multiple databases, looking for grey literature, as well as briefly introducing the concepts of reference management, review management and issues around documenting your search for publication.

We'll start off with this definition of a systematic review from the Cochrane Library.

The aim is to identify, appraise and synthesise all the empirical evidence.

And the emphasis here is on ALL

Our searching approach for systematic reviews is much more comprehensive than our day to day approach to finding research articles. We'll be looking at both known and unknown literature for systematic reviews, and use explicit methods in doing so, but also report them in a way that people will be able to reproduce that review and see exactly which steps have been taken. The purpose of this is to minimise bias at each stage of the review.

Just a quick recap on the differences between a literature review and a systematic review.

For a systematic review, you will have a protocol where you identify each of the steps you're going to undertake as part of the review process, both from the search point of view, but also how you're going to screen the studies, what you will include and exclude, how are you going to extract data and how you're going to analyse that data.

This is generally not done if you're just doing a literature review with a narrative report of those studies. With a systematic review, you have a focused question that you're trying to answer. Literature reviews generally have an overarching question where you're maybe just trying to update what's known on the literature.

With systematic reviews, we would be reporting quite extensively on all our search methods, so very detailed reports of the databases we searched, what search strategies we used. We would be looking at both research articles, but also grey literature... conference papers, theses, trial protocols for example. When we're screening the literature, we would be looking at doing so in relation to prespecified inclusion and exclusion criteria, from the search point of view, some of these might well be integrated into the search. Some will be left for screening, whether it's at title or abstract or full text screening. At each stage of our search process we're going to keep very detailed records of what we've done so that we can report it adequately for publication at the end.

Most of these steps will not be done in much detail if we're conducting a literature review. Given those differences, depending on what your purpose is, you may decide that a literature review is sufficient to give you background information on a topic.

You might decide that actually you have a very focused question and you want to proceed to a full systematic review. At this stage, you want to make sure that you have the right type of systematic review for your question. So I'll just briefly introduce the different types of systematic or structured reviews.

Systematic reviews really started off about 30 years ago with systematic reviews of intervention studies where we're looking to answer an effectiveness question generally with a review of the randomised controlled trial literature. That has moved on, now we have systematic reviews of diagnostic test accuracy studies, prognostic or risk studies, but also qualitative research, economic evaluations and so forth. Depending on your question, you may well be looking at quantitative or possibly qualitative information.

Research also moved on, there are some structured review types that incorporate both quantitative and qualitative research. You'd find those within mixed methods reviews or realist reviews.

Systematic reviews do take a long time to run and complete satisfactorily. You might find that you want to do a structured review, but you have a limited time period. You might want to look at the methodology around rapid reviews where you may take a more pragmatic approach to the review.

Sometimes you have a question that is quite broad and you might find that you want to undertake scoping review. We have methodology around scoping reviews, that means that they're still quite structured, but with bit more flexibility.

Now we have lots of systematic reviews out there in published literature and you might find that on your topic. There are lots of existing reviews, what you might want to do is synthesised those reviews. In that case, we call them systematic overviews or reviews of systematic reviews.

You'll see that there are lots of different types of review that fall under the broad umbrella of systematic review because they have a structured approach to the methodology. Luckily, from our point of view here, when we're looking at the search methodology, there are often common approaches to searching, irrespective of the type of review you're doing.

We'll start off with formulating a question. We'll then run a scoping search to identify existing reviews and to work on the development of a search strategy. We'll think about which bibliographic databases are appropriate for our subject and we'll run a search across those databases before going on to the less structured approach for the searching, which is looking at identifying grey literature or literature that might have been missed by our search, either because of the nature of the question or the fact that we've taken a more pragmatic approach to the initial search.

We'll then need to think about how we're going to manage and screen our results.

Along the process, we're going to make sure that we're documenting the search so that we can adequately report it.

Next steps...do you have a research question?

So think about the topics that you're interested in. Do they throw up particular questions that you want to address? And if there are a series of questions you want to address, is a systematic review the best way to approach that question?

So we'll pause here for you to think about those issues before we work through the other videos to see how he would take the process on.