Literature searching: Identifying your key concepts

Before you can start developing a search strategy you need to identify the main concepts in your research question as you will develop your search strategy around these ideas.

The words and phrases shown below in bold (and any synonyms for these) are the main concepts in our example research question. They become the words and phrases you type into the search boxes of the information sources you choose.

**Example**

In patients with eating disorders, how effective is cognitive behavioural therapy in improving self esteem?

- Search strategies tend to evolve through trial and error. As you search and read, you will discover different terminology and language. Any new search terms should be integrated into your search strategy to hone it further.

- Once you have established your key concepts, you need to select appropriate search terms to describe these.

**Select appropriate search terms**

- Selecting appropriate search terms is the key to successful literature searching. Without meaningful search terms you are unlikely to find useful articles.

- You should identify the key concepts or main ideas in your topic or research question and select words or phrases that describe these. Think about alternative words e.g. synonyms (similar words), antonyms (opposite words) variant spellings, variant endings (plural, singular, etc.). Authors may refer to the same concept in many different ways e.g. adolescent may be referred to in one article as youth or in another as teenager. You should examine each of your key concepts and consider the different ways in which they could appear in the literature.

- Select words or phrases to describe these key concepts. Avoid the use of vague words and phrases e.g. the role of, the impact of, the affect on, problems with, the implications of, the link between etc. These terms are generally superfluous and not normally helpful as search terms.

- If you are already familiar with the topic you may be able to list many alternative words or phrases for your concepts. If not, or you want to check you are not missing other terms, try some of the following:
If you are already familiar with the topic you may be able to list many alternative words or phrases for your concepts. If not, or you want to check you are not missing other terms, try some of the following:

- Use a thesaurus to identify synonyms.
- Search for your concepts on a search engine like Google Scholar and skim read some of the results, looking for alternative words and phrases.
- If you already have a relevant article, examine the abstract or full text for alternative words and phrases. You could also look it up in a database to see the subject heading fields in the complete reference, and then use those headings when putting together your own search.

**Searching with keywords**

Keywords can be thought of as natural language or “free text” words and phrases that you enter into database search boxes.

**Tip!** You should normally restrict your search to the article citation (description). This includes the title of the article (or journal), the abstract (overview of the article) and the subject headings.

Some databases will only find the exact word or phrase you type, exactly the way you spell it, so make sure your spelling is accurate or you will miss references.

**Acronyms, synonyms, antonyms and related words**

- Acronyms and abbreviations e.g. use QOL for quality of life
- Alternative spellings e.g. use anemia for anaemia
- Broader terms e.g. use body weight for obesity
- Narrower terms e.g. use melanoma for cancer

**Different terminology**

- Differences in terminology across national boundaries e.g. for accident and emergency use emergency room
- Differences in spellings e.g. for anaemia use anemia
- Old and new terminology e.g. for mongolism use downs syndrome
- Brand and generic names e.g. for coumadin use warfarin
- Lay and medical terminology e.g. for stroke use cerebrovascular accident

**Tip!** When you are reading relevant articles, make a note of any specialist terminology, acronyms or other useful keywords that you might want to add to your own search strategy to improve it. Include all common synonyms for each of your concepts using a thesaurus if necessary to help you.