Conducting a research project: Planning & managing the search process

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Plan for today

- Starting the search process
  - What are the questions?
  - How to structure a search?
  - How to apply across multiple search tools?
  - How to use additional search methods?
- Managing references
- Keeping up-to-date
- Writing up the search methods

Background questions

- What are electronic cigarettes?
- How many adults in the UK use electronic cigarettes?
- Which companies market electronic cigarettes in the UK?
- How are electronic cigarettes regulated in the UK?

Background questions

- Textbooks
- Evidence summaries
- Organisational reports
- Government reports
- Statistical summaries
- Review articles
- Web searching

Foreground questions

Can electronic cigarettes be used as an effective smoking cessation technique?

Foreground questions

Population, Patient, Problem
I(E)ntervention, Exposure
Comparator, control
Outcome
Study design

Can electronic cigarettes be used as an effective smoking cessation technique?
Foreground questions

P Smokers
I Electronic cigarettes
C N/A
O Cessation
S Systematic reviews / RCTs

Can electronic cigarettes be used as an effective smoking cessation technique?

Exercise 1

Moving from a PICOS to a search strategy

- Finding search terms
- Combining search terms
- Search tips
- Subject searching

Exercise 2

Search terms

<table>
<thead>
<tr>
<th>Smoker</th>
<th>Electronic cigarettes</th>
<th>Cessation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smokers</td>
<td>E-cigarettes</td>
<td>Stop</td>
</tr>
<tr>
<td>Smoking</td>
<td>E-cigs</td>
<td>Quit</td>
</tr>
<tr>
<td>Tobacco use</td>
<td>Vaping</td>
<td></td>
</tr>
<tr>
<td>Cigarette use</td>
<td>Blucigs</td>
<td></td>
</tr>
<tr>
<td>Nicotine dependence</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Combining search terms

<table>
<thead>
<tr>
<th>AND</th>
<th>OR</th>
<th>NOT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoking AND cessation</td>
<td>Smoking OR tobacco use</td>
<td>Smoking NOT cannabis</td>
</tr>
<tr>
<td>Narrows</td>
<td>Broadens</td>
<td>Excludes</td>
</tr>
</tbody>
</table>
Search tips
Truncation & wildcards
  e.g. smok*
“Phrase searching”
  e.g. “tobacco use”
Nesting
  e.g. (smok* OR “tobacco use”) AND (cessation OR quit* OR stop*)
Limits
  e.g. date, language

Subject searching
On Medline, search using Medical Subject Headings (MeSH)

• Articles are tagged with keywords from a structured vocabulary
• A search for these keywords retrieves articles on the topic

Equivalent subject / thesaurus searching available on many databases but not all

Final search
1. Smoking Cessation/
2. (smok* OR “tobacco use” OR “nicotine dependence”) AND (cessation OR quit* OR stop*)
3. 1 OR 2
4. Electronic Nicotine Delivery Systems/
5. Electronic cigarette* OR e-cig* OR vaping OR blucigs
6. 4 OR 5
7. 3 AND 6
8. Limit 7 to systematic reviews

Choosing a search tool
Bibliographic databases
• Medline, Embase, Web of Science…

Full-text databases
• EuropePMC, GoogleScholar…

Subject web-sites
• NICE Evidence, TRIP…

Full list on SOLO – Databases A-Z
https://libguides.bodleian.ox.ac.uk/az.php - Subject – Medical Sciences

Demonstration - Medline
Run the search

Exercise 3
Demonstration – Web of Science

Run the search

Exercise 4

Additional searches

- Grey literature
- Citation tracking
  - Backward
  - Forward
- Sibling studies
- Related articles
- Identify key authors & organizations

Grey literature

- Conference abstracts
- Theses
- Government documents & organisational reports
- Ongoing studies

Forward citations

Linking to papers that have cited a relevant paper

- Web of Science
- Scopus
- Google Scholar

Backward citations

Linking to papers that have been cited by a relevant paper

- Web of Science
- Scopus
- Google Scholar
Sibling studies

Linking to papers that were part of the same project e.g. cost-effectiveness & related RCT...

✓ Author linking
✓ Common study ID

Related articles

Linking to papers that are similar to a relevant paper

✓ PubMed
✓ Scopus
✓ GoogleScholar

Use similar articles or related articles links

Exercise 5

Reference management software allows you to:

✓ Store & organise references
✓ Insert references in documents & generate bibliographies
✓ Software options
  ✓ Endnote, Mendeley, RefWorks, Zotero...

Managing your References

You will want to keep up to date with developments in your field over the course of your project. To manage this you could set up:

✓ E-mail alerts
✓ RSS feeds
✓ Journal TOCs
✓ Twitter feeds

Keeping up-to-date

Writing up the search

✓ Short paragraph in the text
  • Summary of keywords
  • Sources searched
  • Date of search
  • Overview of additional search methods
✓ Appendix:
  • Full version of search from at least 1 of the databases
Questions

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