

A QUICK GUIDE TO ASSESSING EVIDENCE FOR USE IN POLICY DEVELOPMENT

This is a quick reference guide to assessing the two main types of evidence: published literature and grey literature. It is intended as a starting point for determining if the literature is suitable for inclusion in the process of developing evidence-based policy. You may not need, or be able to, cover all these issues, but you should consider them as part of developing your evidence base.

Assessing published literature¹

Published literature includes published research and scientific evidence, books, or other published peer-reviewed literature. The questions below are a checklist for you to assess the quality of published literature.

1 Purpose of the research

- What was the purpose, objective(s) and hypothesis of study?
- Have the identified objective(s) been met? Is the hypothesis proven or not?

2 Research design

- What was the design? Was the design appropriate for the purpose and objectives?
- What methodology has been used? Is it appropriate for the study?
- How long did the study run? Was this adequate to demonstrate a real effect?
- How were participants chosen? Who actually participated? Who did not participate? Why? Were they different to those who participated? If so, how?
- Is the group of participants big enough to detect meaningful results?
- Who funded and conducted the research? Were there any conflicts of interest declared?

3 Data

- What information sources were accessed, and how? How reliable/consistent are the sources?
- Are the ways of measuring characteristics of the subjects likely to be accurate, and appropriate for the group?
For example, it would not be appropriate to use the same measure of normal range of physical strength for women in their 20s and women in their 70s.
- Did the sources provide enough information to test the hypothesis?

- Are the data complete? What data are missing? How important are the missing data?
- What quality assurance mechanisms have been applied to the data? For example, does the dataset contain incomplete questionnaires, or use data for one part of the study but not include it in other analyses?

4 Analysis

- Does the analysis identify and control for issues that could influence or distort the results?
- Have appropriate analytical and statistical tests been applied? Are the results statistically significant?

5 Results and conclusions of the study: is it internally valid?

- Could the results be due to bias or uncontrolled confounding² in the study design or analysis?
- Could the results be due to chance?
- Do the results support the conclusions and/or recommendations?

6 Conclusions about the study's external validity and its application to policy development

- To what groups and/or circumstances can the results of the study be applied?
- Did the results or methodology identify anything important to the development and/or implementation of your policy?

¹ Adapted from Fowkes F and Fulton P: *Critical Appraisal of published research: introductory guidelines* (BMJ 1991; 302: 1136) and Darzins, Smith, and Heller *How to read a journal article* (Med J Aust, 1992 Sep 21;157(6):389-94)

² Confounding is "mixing of effects" that distorts results. For example, the results of a study on the effects of chocolate consumption on body weight could be confounded by the levels of physical activity among participants.

Grey literature

Grey literature is any documentary material that is not commercially published. It includes unpublished research, technical reports, working papers, surveys or statistical data, conference proceedings and meeting notes, theses or dissertations, trade literature, handbooks, information from the Internet, newsletters, bulletins, fact sheets, and informal communications like casual meetings or conversations.

It is a valuable source of information that can assist policy makers to:

- develop an overview of a new subject area
- understand the environment (political, social, financial, ethical) in which the policy is being developed

- accurately understand the evolution of knowledge
- access, in some cases, the only form of evidence that exists about a certain subject area
- inform the development of future work to ensure that the full evidential base is considered and that publication bias is minimised
- contribute to the wider development of the evidence base.

Assessing the quality and fitness for purpose of grey literature

Grey literature may not have been through an obvious quality assurance process. It is important to assess the literature's credibility, validity, and its fitness for purpose before use.

Assessment depends on the nature of the grey literature: applying broad dimensions of quality can ensure that best evidence is not overlooked in favour of evidential quality. In other cases, methodological rigour (as described overleaf) can provide a better gauge of fitness for purpose. The following questions are a starting point for assessing grey literature.

1 Context for the publication

- Who is the author or key informant? Are they credible?
- What is the background to, and the purpose of, the publication or information?
- Who is the intended audience?
- Are actual or potential conflicts of interest identified or otherwise described?
- Is the political, social, and economic context of the information adequately described?
- Does it seek to provide a balanced argument?

2 Scope of material informing the publication

- What sources informed the publication? Are any key sources omitted? Are these sources appropriate given the current body of knowledge?
- Are any restrictions on the range of information in the publication appropriately described?

3 Quality of information informing the publication

- Are original sources of information stated?
- Are the sources of information credible, valid, and fit for purpose? Refer overleaf for methodological analysis if appropriate.
- If any analysis is included in the publication, is it rigorous, and suitable for the data set?
- Are any limitations with the data or source information appropriately identified?

4 Quality assurance

- Are the quality assurance mechanisms (if any) appropriate to the type of publication?

5 Validity and relevance of conclusions

- Do the conclusions flow logically from the information presented?
- Are there limitations that could affect the publication's fitness for purpose or relevance?
- What is the status of the information or publication? Can you use it openly or is it confidential?

Considering both forms of evidence (published and grey literature) contributes to the development of policy that is well informed, balanced, and in tune with the wider environment.

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