

1. DIMENSIONS OF QUALITY AND RELEVANCE OF THE EVIDENCE

There are many tools for assessing the quality of different types of research. In addition, there are issues of appropriateness of the method and focus of the research to the appraisal of the evidence provided by a study to answer a review question.

Dimensions of quality and relevance appraisal² :

- Quality of execution of study (so generic and not specific to a specific review)
- Appropriateness of research design to answer the review question (so review specific)
- Relevance of the focus of the study (so review specific). This can include propriety of legal and ethical research³
- Decisions can be: (i) exclusion of studies not meeting the criteria (and thus similar to initial inclusion/exclusion criteria); (ii) Weighted inclusion of studies assessed as non optimum on quality or relevance criteria

2. REVIEW STAGES AND QUALITY AND RELEVANCE APPRAISAL

When and in what manner are such appraisals made and to what effect?²

There are at least the following ways in which the assessment of quality and relevance can occur in the process of a synthesis review:

- Initial exclusion criteria:** exclusion of types of evidence at the start of the review process: the exclusion of certain studies on the basis of their evidence type or very basic aspects of quality of the study. For example, the inclusion of only ethnographic studies or only randomized controlled trials. This narrow approach to included research designs may exclude studies with non ideal designs for addressing the review question but these excluded studies might still contain useful information.
- Mapping stage narrowing of criteria:** in a two stage review it is possible to at first include a wider group of designs and then to use the mapping stage as an opportunity to examine the whole field of research and then to maybe then narrow down to a sub-set of the studies. An alternative strategy is to include a wide group of designs all the way through to the synthesis but to use methods of quality and relevance to deal with this heterogeneity (as in '3' below).
- Detailed appraisal:** detailed appraisal of the quality or relevance of the study prior to synthesis often undertaken after detailed data extraction as this provides the necessary detailed information for the assessment of studies This can be: (i) exclusion of studies not meeting the criteria and so similar to inclusion/exclusion criteria; (ii) weighted inclusion of studies assessed as non optimum on a-priori quality or relevance criteria: to allow studies to have an impact on the conclusions of the review.
- Emergent criteria:** inclusion, weighted inclusion, or exclusion of studies on basis of emergent criteria that the studies answer the review question. This is similar to a priori criteria for assessing studies (as in 1, 2 or 3) but based on emergent assessment of the contribution to answering the review question (just as relevance of different types of data might only emerge during the process of some qualitative process studies)³.
- Sensitivity analysis:** studies included or excluded on the basis of quality and relevance appraisal and the impact on the conclusions of the synthesis. Studies considered problematic may be included as long as they do not change the conclusions provided by other studies.

3. QUALITY ASSURANCE OF CONDUCT OF THE REVIEW?

Appraisal of the review, not just studies within

Quality assurance can check the execution of the methods of the review such as:

- Internal QA: individual reviewer skill; moderation; double coding
- External QA: Audit/editorial process; moderation; double coding
- Peer referee of: Protocol; draft report; published report feedback
- Editorial function for publication of the review report: with or without formal quality assurance procedures

Reviews too can be appraised like primary research as in 'reviews of reviews'

REFERENCES

1. Gough D (2007) Dimensions of difference in evidence reviews (Overview; I. Questions, evidence and methods; II..Breadth and depth; III. Methodological approaches; IV. Quality and relevance appraisal; V. Communication, interpretation and application. Series of six posters presented at National Centre for Research Methods meeting, Manchester, January 2007. London: EPPI-Centre.
2. Gough D (In press) Weight of evidence : a framework for the appraisal of the quality and relevance of evidence In J. Furlong, A. Oancea (Eds.) Applied and Practice-based Research. Special Edition of Research Papers in Education, Summer 2007.
3. Pawson R, Boaz A, Grayson L, Long A, Barnes C (2003) Types and Quality of Knowledge in Social Care. Knowledge Review 3.. London: Social Care Institute of Excellence