

Systematic Reviews

What is a systematic review?

A systematic review is an overview of primary research studies conducted according to explicit and reproducible methodology which provides a rigorous method of summarising research evidence. This compares with a conventional literature review which summarises and perhaps critiques existing papers, but may not have a specific rationale for including material nor may examine all the literature in the same way. Systematic reviews usually seek to provide evidence of the effectiveness (or not) of particular services or interventions by summarising and appraising relevant evidence.

Systematic Reviews aim:

- To find all relevant research studies (published and unpublished)
- To assess each study on the basis of defined criteria
- Synthesise the findings in an unbiased way
- Present a balanced and impartial summary of the findings taking any flaws into consideration

In order to show what we know and what is unknown about a particular topic area.

Advantages of Systematic Reviews

- Summarise evidence, keep people up to date without reading all published research literature
- Allow large amounts of data to be assimilated (eg by busy clinicians, policy makers etc)
- Provide a clearer picture by collating results of research
- Break down barriers of getting research into practice
- Reduce bias – remove reviewers personal opinions, preferences and specialist knowledge
- Allow the reader to assess the quality of the review, as they are able to see how review has been compiled
- Provide more reliable conclusions because of methods used

The Systematic Review Process

There are increasingly a number of models of systematic reviews (see below), however all follow the same basic process which involves:

1. Defining/focusing the question
2. Developing a protocol (and following this throughout the whole review)
3. Conducting a comprehensive search of the literature
4. Developing and refining a set of inclusion/exclusion criteria which allow the reviewers to determine which studies should be included in the review
5. Assess the studies using a process of data extraction and critical appraisal of the quality of the studies. Each study is usually assessed independently by 2 reviewers
6. Combine the results of the studies to produce a conclusion– can be a qualitative or quantitative (meta-analysis)
7. Place the findings in context, discuss the quality and heterogeneity of studies and the applicability of the findings

Some systematic reviews include a meta-analysis; a process of using statistical methods to combine the results of different studies to identify the overall trend of results. Meta analysis can be used as a guide to answer the question 'does what we are doing make a difference to X?', even if 'X' has been measured using different instruments across a range of different people. Meta-analysis provides a systematic overview of quantitative research which has

examined a particular question where the research is empirical rather than theoretical and has findings that can be put in a comparable statistical form.

Systematic Review Models

There are different models for conducting systematic reviews:

Medical/Health care

- Those produced by the Cochrane Collaboration or NHS Centre for Reviews and Dissemination
- Often include research evidence based on the results of Randomised Controlled Trials (RCTs) and meta-analyses

Social care/Social Sciences

- Social Care Institute for Excellence (SCIE), Evidence for Policy and Practice Information and Co-ordinating Centre (EPPI), The Campbell Collaboration
- Often include wider range of studies including qualitative, techniques such as meta-ethnography are being introduced
- Often narrative synthesis of evidence

BACP has funded a series of systematic reviews relevant to counsellors which follow a social care/social sciences model

http://www.bacp.co.uk/research/Systematic_Reviews_and_Publications/index.php

Further Information and Reading

Greenhalgh T (1997) How to read a paper: papers that summarize other papers (systematic reviews and meta-analyses), *BMJ*, 315:672-675

Cochrane Collaboration - <http://www.cochrane.org/>

Centre for Reviews and Dissemination - <http://www.york.ac.uk/inst/crd/>

EPPI-Centre – <http://eppi.ioe.ac.uk/cms/>

Social Care Institute for Excellence - The conduct of systematic research reviews for SCIE knowledge reviews - <http://www.scie.org.uk/publications/details.asp?pubID=111>

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