

Research Synthesis

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Plan

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- 6. Conclusions**

Definition

A summary of all the aspects of research in a given field or topic of research (up to the present) with the view to evaluation.

Key issues:

- **Methodology is explicit & transparent**
- **A standard set of steps have been followed**
- **Accountability, replicability & updateable**
- **Peer reviewed to ensure relevance & usefulness.**

Components

The aspects include:

- a. Research question**
- a) Study design**
- b) Reference population**
- c) Study population**
- d) Variables and their definitions, measurement tools**
- e) Selection criteria,**
- f) Sampling frame (randomisation, blinding)**
- g) Bias**

Components (2)

- h) Appropriateness of Sample size calculations, significance level & power of the study**
- i) Appropriateness of analysis**
- j) Results**
- k) Application & usefulness of results (relevance & benefits of study)**

Historical background

Most reviews of research evidence take the form of traditional literature reviews, which usually examine the results of only a small part of the research evidence, and take the claims of report authors at face value

Historical background (2)

- 1. 1975: Beginning of the call to organise knowledge into a useable and reliable format. Birth of the 'evidence movement' and emergence of the critical appraisal & synthesis of research findings in a systematic manner.**
- 2. 1979: Smith, Glass and Miller coined the phrase – Meta Analysis in psychotherapy**

Historical background (3)

- 3. 1972: Birth of the concept of 'Evidence Based Medicine' following the treatise of Archie Cochrane in Oxford entitled 'Effectiveness 7 efficiency'**
- 4. 1976: Professor David Sackett defined 'Evidence Based Medicine' as the conscious, explicit, judicious use of current best evidence in making decision about the case of individual patients'**

Historical background (4)

- 5. 1992 – Birth of the first Cochrane Collaboration Centre in Oxford, UK.**
- 6. There are now 6 Cochrane research network centres worldwide grouping researchers, academics, medical practitioners and various users committed to the principles of managing healthcare knowledge in such a way that is quality assured, accessible and cumulative**

Historical background (5)

- 7. Birth of other Collaboration Efforts in other fields:**
 - Campbell Collaboration: an adaptation of Cochrane principles to bring systematic quality to issues of broader public policy**
 - The EPPI Centre in the Social Sciences**

Methods

- 1. Literature reviews traditionally introduce a topic, summarise the main issues and provide some illustrative examples. If they should be considered a reliable source of research evidence, they should record how the primary studies were sought and selected and how they were analysed to produce the conclusions**
- 2. Readers need to be able to judge whether all of the relevant literature is likely to have been found, and how the quality of the studies were assessed**

Methods: 6 Characteristics of 'Systematic Reviews'

- 1. Systematic Reviews are transparent about how their conclusions are generated**
- 2. A 'protocol' sets out how the review is to be conducted before the work starts**
- 3. Exhaustive researches are undertaken to find as much as possible of the relevant research**
- 4. The review methods are made explicit**
- 5. Potential users of the review are involved**
- 6. The findings of sound research are synthesised**

Users

Every stakeholder with vested interest in a research subject should be involved:

- **Users of services, or those experiencing a particular phenomenon or intervention (e.g. students, patients, parents)**
- **Practitioners (e.g. teachers, nurses, social workers)**
- **Policy makers in local & central government (e.g. education managers)**
- **Researchers**
- **Employers**

Users (2)

- 6. Members of the public**
- 7. A diverse range of users in terms of gender, age & ethnic minorities**

Their expertise is necessary

Conclusions

Evidence based medicine is now the recommended thing in modern medical practice