

Synthesising evidence

UJ-BCURE



How is this relevant to you?

USE THIS SLIDE TO PROVIDE AN OVERVIEW OF THE RELEVANCE OF EVIDENCE-INFORMED DECISION-MAKING TO YOUR AUDIENCE IN THE CONTEXT OF THIS SPECIFIC WORKSHOP

NOTE THAT THERE IS AN ACCOMPANYING HANDOUT FOR THIS MODULE, LINKED TO THE EXERCISE ON SLIDE 11.

Introduction to BCURE

- BCURE = Building Capacity to Use Research Evidence
- A three year programme of work funded by UK's Department of International Development (DFID)
- Focuses on increasing the use of research in decision-making through capacity-building
- Investment is mostly in the decision-makers
- Focus is on supporting governments through civil society capacity building rather than research

Exercise: What is evidence?

- Participant sharing – What is evidence in your world?
 - Each participant shares with their neighbour what they understand by evidence (could be data, information, numbers, policies, qualitative, quantitative, etc.)
 - A handful of participants are asked to share with the wider group (continue until a wide variety has been shared)
- Trainers sharing – What is evidence in our world?
 - We also have different backgrounds
 - Rigorous research evidence such as systematic reviews
 - First finding, appraising, and using what has been done before commissioning new research
 - Using the best, rigorously applied methods to address the question

A cycle of EIDM

- Implementation / action

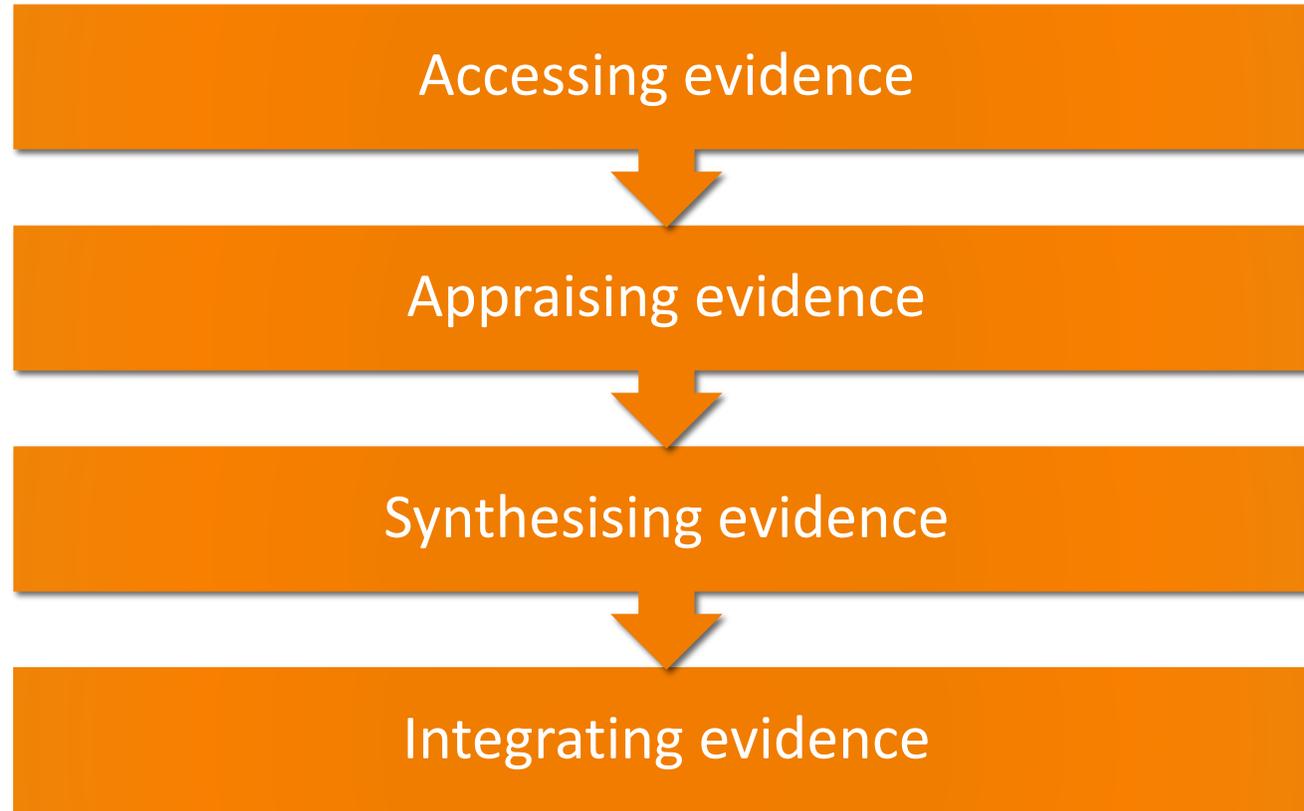
- Monitoring, evaluation, and research



- Evidence-informed decision-making

- Reviewing the evidence

Steps towards EIDM



The need to synthesise evidence

- A lot of different evidence is needed for decisions
 - Personal life: how many opinions do we consider before making a decision?
 - Professional life: how much evidence do we consider before making a decision?
- This is no different when we try to feed evidence into the policy process
- Main principle: the combined results of many pieces of evidence (studies) are more reliable than that of a single piece
- We call the process of combining (i.e. adding up and arranging) different pieces of evidence **synthesis**

There is no 'one size fits all'

- Different evidence answers different questions
 - Match between evidence and question
- Different policies will require different types of knowledge
- Identify your policy question first to moderate what type of evidence you will use in your synthesis
- This will then inform what type of synthesis you will conduct
- Example: Delivering tablets on educational content (Gauteng online project)

Selection of evidence for synthesis

- Risk of arbitrary synthesis
- Develop clear criteria for:
 - What type of evidence you are going to consider
 - How much trust you have in it
 - How you are going to combine it
- Guiding principles for synthesis:
 - Transparency (have you made clear which evidence will be combined?)
 - Replicability (would someone with the same evidence and methods of synthesis have the same findings?)
- It depends on your question

Integration of evidence for synthesis

- Two main approaches to integrating evidence:
 - Adding up
 - Arranging (explaining, exploring)
- Again, this will depend on the question you are trying to answer and on the amount and nature of the evidence you have managed to accumulate

Exercise: preparing for your synthesis

- Please refer to the handout linked to this exercise
- In groups, identify a policy issue / social question
- Brainstorm:
 - What type of evidence could answer this question?
 - Whether you assume that there is sufficient evidence of this type?
 - What approach to synthesis sounds most sensible?

Methods to add up evidence

- Statistical synthesis to address ‘what works’
- Meta-analysis (most commonly used method)
 - Is essentially pooling all the data from different studies into one ‘mega study’
 - Uses numerical effect sizes of evaluation studies
 - Quantifies these effect sizes and allocates weight to each
 - Calculates the average of the effect sizes to have a single numerical answer of the effect (‘what works’)
 - Displays this on a forest plot featuring a diamond representing the pooled effect sizes
- Meta-analysis is highly regarded and a powerful method due to its ability to reliably produce one unambiguous answer = ‘the magic number’
- But it is difficult – best ask a statistician for advice

Methods to arrange and explain evidence

- Explanatory synthesis to address ‘why does it work and how’
- Mainly used for synthesis of qualitative evidence / documentary evidence
- But also if you don’t have the sufficient quantitative data to answer ‘what works’ questions
- Explanatory synthesis often looks at common themes across studies, or uses a conceptual framework to structure the evidence
- It usually involves some form of narrative to combine the insights of different studies

After the synthesis

- You are creating new knowledge out of the synthesis of previous information
 - You added up or arranged a body of research evidence to make it more than the sum of its parts (call yourself a researcher now)
- Pooled findings of a body of evidence are usually more authoritative than single studies
- Questions about social issues are often highly complex and cannot be answered by a single study or even a single type of evidence
 - Best to inform policies with synthesised evidence (if available)
 - Synthesis will draw a more complete picture and answer to complex questions
- Need to interpret your findings
 - Put it in context, explain contradictions / extreme findings, reflect on if the research question has really been answered?

Evidence synthesis supports decision-making

- Evidence synthesis produces more authoritative findings than findings from an individual source / study
- Evidence synthesis shows a wider consultation and engagement with the knowledge in the field
- You will learn a lot about your policy topic in the process of synthesising the evidence

Contact details

Building Capacity to Use Research Evidence (UJ-BCURE) and the Africa Evidence Network

Tel: +27 (0) 11 559 1909

Fax: +27 (0) 11 559 1734

Website: www.africaevidencenetwork.org

Twitter: @Africa_Evidence

Presenter:

Email:

Useful Resources

■ Adding Up:

- A guide to using statistics for evidence-based policy (Australian Bureau of Statistics)
- Practical Meta-Analysis Effect Size Calculator (Campbell Collaboration)
- MetaLight: Software for teaching and learning meta-analysis (EPPI-centre)

■ Arranging:

- Book: Gough et al (2012) An introduction to Systematic Reviews.
- Snilstveit et al (2012) On Narrative approaches to synthesis of evidence for international development policy and practice (the entire special issue of this journal is helpful)
- Thomas and Harden (2008) On thematic synthesis for qualitative data

References

1. Australian Bureau of Statistics (2010) *A guide to using statistics for evidence-based policy*. Accessed 15 September 2014: <http://www.abs.gov.au/ausstats/abs@.nsf/mf/1500.0>
2. Campbell Collaboration (2001) *Practical Meta-Analysis Effect Size Calculator*. Accessed 15 September 2014: http://www.campbellcollaboration.org/resources/effect_size_input.php
3. EPPI-centre (2012) *MetaLight: Software for teaching and learning meta-analysis*. Accessed 15 September 2014: <http://eppi.ioe.ac.uk/cms/Default.aspx?tabid=3086>
4. Graphic from Gough D, Oliver S, Thomas J (2012) *An introduction to Systematic Reviews*. London: SAGE.
5. Snilstveit B, Oliver S, Vojtkova M (2012) 'Narrative approaches to systematic review and synthesis of evidence for international development policy and practice', *Journal of Development Effectiveness*, 4(3): 409-429. (open access).
6. Thomas and Harden (2008) 'Methods for the thematic synthesis of qualitative research in systematic reviews' *BMC Medical Research Methodology*, 8: 45. (open access).

Citation

This presentation should be cited as:

UJ-BCURE (2014, Sept) *Synthesising evidence*. University of Johannesburg. Published via the Africa Evidence Network. www.africaevidencenetwork.org/

We welcome feedback on this presentation. Please email any comments to: cfar@uj.ac.za

This work is licensed under the Creative Commons Attribution-ShareAlike 4.0 International License. To view a copy of this license, visit <http://creativecommons.org/licenses/by-sa/4.0/>.

