The Synthesis of Qualitative Findings

Professor Alan Pearson AM
Professor of Evidence Based Healthcare; Head of the School of Translational Health Science; and
Executive Director, The Joanna Briggs Institute
Faculty of Health Sciences
The University of Adelaide
Australia
Qualitative Research Findings as Evidence for Practice

• Qualitative evidence is of increasing importance in health services policy, planning and delivery.

• It can play a significant role in:
  – understanding how individuals / communities perceive health, manage their own health and make decisions related to health service usage;
  – increasing our understandings of the culture of communities and of health units;
  – Informing planners and providers;
  – evaluating components and activities of health services that cannot be measured in quantitative outcomes.
Application of Qualitative Research to Practice

• As with quantitative research, results from a single study only should not be used to guide practice
• The findings of qualitative research should be synthesized in order to develop recommendations for practice
• However, how this should be done is highly contested.
# Meta-synthesis of Qualitative Evidence: approaches

<table>
<thead>
<tr>
<th>Approach</th>
<th>Purpose</th>
<th>Evidence of Interest</th>
<th>Search Strategy</th>
<th>Critical Appraisal</th>
<th>Data Extraction</th>
<th>Method of Synthesis</th>
<th>Outcome</th>
<th>Software Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Narrative Synthesis</td>
<td>To summarise two or more papers in narrative form</td>
<td>Generic</td>
<td>Unspecified/Selective</td>
<td>Not specified</td>
<td>Not Specified</td>
<td>Unspecified</td>
<td>Review article-type report</td>
<td>NO</td>
</tr>
<tr>
<td>Meta-ethnography</td>
<td>The generate new knowledge /theory use processes of interpretation</td>
<td>Findings of qualitative research studies</td>
<td>Not comprehensive or exhaustive; seekssaturation – theoretical sampling</td>
<td>Opposed; all studies included as each mayprovide insight into the phenomena of interest</td>
<td>Extraction of key concepts</td>
<td>Refutational synthesis; Reciprocal translation; Line of argument synthesis</td>
<td>Higher order interpretation of study findings</td>
<td>NO (Although QARI can be used)</td>
</tr>
<tr>
<td>Approach</td>
<td>Purpose</td>
<td>Evidence of Interest</td>
<td>Search Strategy</td>
<td>Critical Appraisal</td>
<td>Data Extraction</td>
<td>Method of Synthesis</td>
<td>Outcome</td>
<td>Software Available</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------</td>
<td>-------------------</td>
<td>---------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td><strong>Realist Synthesis</strong></td>
<td>To develop and test program theories</td>
<td>Generic; but more suited to qualitative research studies</td>
<td>Not comprehensive or exhaustive; seeks saturation</td>
<td>Not specified</td>
<td>Extracts positive and negative mechanisms/strategies that influence change</td>
<td>Tacit testing of implicit theories; building theory.</td>
<td>A transferable theory on “what works, for whom, in which circumstances”</td>
<td>NO</td>
</tr>
<tr>
<td><strong>Thematic analysis</strong></td>
<td>To aggregate findings of 2 or more studies</td>
<td>Findings of qualitative research studies</td>
<td>Not comprehensive or exhaustive; seeks saturation – theoretical sampling</td>
<td>Not specified</td>
<td>Extracts of major/recurrent themes in literature</td>
<td>Aggregation of themes/metaphors/categories</td>
<td>A summary of findings of primary studies under thematic headings</td>
<td>NO (Although QARI can be used)</td>
</tr>
<tr>
<td>Approach</td>
<td>Purpose</td>
<td>Evidence of Interest</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------------</td>
<td>--------------------------------------------------</td>
<td>----------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Content analysis</strong></td>
<td>To analyse then summarise content of papers.; occurrences of each theme counted and tabulated</td>
<td>Generic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
|                                |                                                  | Usually comprehensive with predeter-
|                                |                                                  | mined search strategy |
|                                |                                                  | Not specified        |
|                                |                                                  | Content extracted then coded using extraction tool designed to aid reproducibility |
|                                |                                                  | coded data categorised under thematic headings; also counted and tabulated |
|                                |                                                  | A summary of findings, and their rate of occurrence, of primary studies under thematic headings |
|                                |                                                  | YES                  |
| **Meta-synthesis/ Meta-
  aggregation**                 | To aggregate the findings of included studies   | Findings of qualitative research studies |
|                                |                                                  | Comprehen-
|                                |                                                  | sive; detailed search strategy at protocol stage required |
|                                |                                                  | Required, using standard-
|                                |                                                  | ised critical appraisal instrument |
|                                |                                                  | Extraction of findings PLUS data that gives rise to finding using data extraction instrument |
|                                |                                                  | Aggregation of findings into categories; and of categories into synthesised findings |
|                                |                                                  | Synthesised findings that inform practice or policy in the form of a standardised chart |
|                                |                                                  | YES                  |
Meta-synthesis: worked examples

Meta aggregation
Meta ethnography
The JBI Position

• Methods applied during the systematic review of qualitative evidence should firstly be congruent with the universally accepted process of systematic review.

• The characteristics of a systematic review might be debated in terms of the detail, but there is general acceptance of a series of steps, stages or processes.

• There are two dominant approaches – Meta-Ethnography and Meta-Aggregation.
Meta aggregation

- A structured and process driven approach to systematic review drawing on the classical understandings and methods associated with systematic review of quantitative literature as practiced by the Cochrane Collaboration.
Meta aggregation

• Based on an a-priori protocol
  – Established, answerable question
  – Explicit criteria for inclusion
  – Documented review methods for searching, appraisal, extraction and synthesis of data
Meta aggregation

• Explicitly aligned with:
  – Philosophy of pragmatism
    • Delivers readily useable findings
    • Informs decision making at the clinical or policy level
  – Transcendental phenomenology
    • Looks for common or “universal” essences of meaning
    • Attempts to “bracket” pre-understandings of the reviewer
Transcendental Phenomenology

• Based on the philosophic traditions of Husserlian phenomenology:
  – the intuitive examination of essences that have immediate validity;
  – Seeks to avoid undue influence of the reviewer on the text;
  – Seeks to generate practice level theory that has explanatory power for policy or practice
  – Seeks to preserve the intended meaning of text
Meta aggregation

- A structured, and process driven approach to systematic review drawing on the classical understandings and methods associated with systematic review of quantitative literature as practiced by the Cochrane Collaboration
Meta aggregation

• Based on an a-priori protocol
  – Established, answerable question
  – Explicit criteria for inclusion
  – Documented review methods for searching, appraisal, extraction and synthesis of data
A systematic review of the experiences of caregivers in providing home-based care to persons with HIV/AIDS in Africa

Patricia McInerney and Petra Brysiewicz (2009), Int J Evid Based Healthcare; 7(4): 130-153
Inclusion Criteria

- The review considered studies in which family members were the primary informal caregivers of a person living with HIV/AIDS (adults and children) in Africa as well as studies in which informal caregivers (volunteers) from the community provided home-based care to persons living with HIV/AIDS in Africa;
- The phenomena of interest were the experiences of caregivers’ in delivering home-based care to people living with HIV/AIDS; and
- the types of data included experiential accounts of caregivers.
Methods

- Each paper was assessed independently by two reviewers for methodological quality. The internal validity (quality) of research papers was assessed using the Joanna Briggs Institute’s Qualitative Assessment and Review Instrument and the authenticity of opinion papers was assessed using the Joanna Briggs Institute’s Narrative, Opinion, and Text Assessment and Review Instrument.
- There were no disagreements between the two reviewers and therefore a third reviewer was not required.
Results

- A total of 32 papers were retrieved.
- Of these, 14 were included in the review with nine being qualitative research papers and the remaining five being opinion or text papers.
- Of the nine papers that were critically appraised using the JBI-QARI critical appraisal tool, three were excluded because of poor or incomplete descriptions of the methodology.
- The findings of the remaining six papers were extracted and used in the metasynthesis.
Results (cont/…)

• A total of 29 findings were extracted from the included qualitative papers
• These findings were aggregated into four categories on the basis of similarity of meaning.
• The categories were synthesised to generate one synthesised finding.
The challenges and burdens of caregivers in providing home-based care to HIV/AIDS clients in Africa may either be lessened by formal or informal support structures or be aggravated by the stigma surrounding HIV/AIDS. However, the stigma surrounding HIV/AIDS is powerful and can compound the burden of caregiving.
Recommendations arising

• Aggregative synthesis seeks to present rather than re-analyse the evidence, therefore, it is a robust technique for informing decision making in health care practice

• Recommendations for practice can be developed from aggregative review findings as they maintain representativeness with the primary literature
Recommendations

– The findings illustrate the burden felt by the caregivers in providing home-based care to persons with HIV/AIDS, and the need for the implementation of formal or informal support structures for the caregivers.

– Healthcare professionals implementing such support programs need to address a variety of issues namely psychological support for the caregiver, poverty alleviation, caregiver level of knowledge and cultural issues.

– These support structures also need to be aware that the caregiving experience may be aggravated by the stigma surrounding HIV/AIDS.
Meta-Ethnography

• Explicitly aligned with philosophy of interpretivism
• Searches for new meaning
• Focuses on multiple realities
Hermeneutic Interpretivism

- Is the basis for meta-ethnography
  - Interpretation of text for its inner meaning
  - Focuses on the reviewers interpretive skills
  - Seeks to re-interpret the published literature
  - Seeks to generate new, mid level theoretical explanations
  - Seeks engagement between reviewer and text
Meta ethnography

- From within the social sciences to develop theories from existing ethnographic data,
- Iterative development of emic interpretations,
- Incorporates 7 phases, these can be aligned to the systematic review process, but there is no requirement to do so.
Meta ethnography

- Identify the research interest
- Decide which studies to include
- Read the studies
- Determine how the studies are related
- Translate the studies into each other
- Synthesize the translations
- Express the synthesis
Meta ethnography: 3 stages of synthesis

• First order interpretations
  – Themes, metaphors or concepts identified

• Second order interpretations
  – The researchers interpretation of how the identified concepts relate to each other

• Third order interpretations
  – Seeks to encompass themes within each other
Interpretation

Second Order Interpretation:

• Reciprocal
  – Like interpretations are brought together “this one is like that one..”

• Refutational
  – Competing discourses; must also have a relationship that can be explored

Third Order Interpretation:

• Line of argument
  – Asks what do the parts infer about the whole
Patient adherence to Tuberculosis treatment

Salla A. Munro, Simon A. Lewin, Helen J. Smith, Mark E. Engel1, Atle Fretheim, Jimmy Volmink.
‘Patient Adherence to Tuberculosis Treatment: A Systematic Review of Qualitative Research’.

Inclusion criteria

- Patients, carers or health professionals delivering DOTs
- Perceptions of adherence was the phenomena of interest
- Context was patients undergoing DOTs therapy for TB
- Qualitative studies on the perception of adherence
Methods

• Studies were assessed using a checklist
• Data extracted using a standardized form
• Synthesis was reciprocal and line of argument
Results

• Following screening, 44 papers were included
• First order interpretations 8
• Second order interpretations 6
• Third order interpretations 4
• Expression of the synthesis: visual model
Structural factors:
incorporating poverty, especially costs and financial burden, gender discrimination, law

Personal factors:
incorporating knowledge, beliefs, and attitudes towards treatment, interpretations of illness and wellness

Social context:
incorporating family, community and household support, including stigma

Health service factors:
incorporating organisation of care and treatment, disease progress, and side effects

Note:
↓ ↑ suggest a bi-directional relationship between factors. For example, health service interventions directed at patients are likely to influence patient adherence behaviour through the filter of “personal factors.” Similarly, patients’ interactions with health services are likely to be influenced by their knowledge, attitudes, and beliefs about treatment as well as their interpretations of illness and wellness.
Recommendations

• Increase visibility of TB programs in the community, which may increase knowledge and improve attitudes towards TB
• Provide more information about the disease and treatment to patients and communities
• Increase support from family, peers, and social networks
• Minimize costs and unpleasantness related to clinic visits. Increase flexibility/ patient autonomy
METASYNTHESIS OF QUALITATIVE RESEARCH STUDIES

- **STEP 2: CATEGORIES**
  - Identification of practice issue
  - Search for appropriate research reports
  - Critical appraisal and selection of studies to include
  - Identify and Assemble Findings from all included studies

- **FIRST ORDER ANALYSIS**

- **SECOND ORDER INTERPRETATION**

- **THIRD ORDER INTERPRETATION**

- **QARI METAGGREGATION**

- **STEP 2: CATEGORIES**
- **STEP 3: SYNTHESISED FINDINGS**

- Aggregate well-founded and explicit Findings

- Synthesis of Findings

- Implications for Practice
Aggregation or Interpretation?

• Aggregation

• Interpretation