A walk through Thematic Synthesis: A worked example of qualitative evidence synthesis

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Evidence Synthesis Ireland Trainer
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Overview

• About me
• About Evidence Synthesis Ireland
• About Qualitative Evidence Synthesis
• About Thematic Synthesis
• A worked example of thematic synthesis
About me

• Senior Lecturer in Nursing and Midwifery, NUIG
• Qualitative researcher
• Co-chair of QUESTS
• ESI trainer
• [On sabbatical]
Acknowledgements

• IIQM
• Atlas-ti
• Evidence Synthesis Ireland
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• NUI Galway
• Alex Clark and Bailey Sousa
Building evidence synthesis knowledge, awareness and capacity on the island of Ireland

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KEY ACTIVITIES

- Webinars
- Fellowships/Studentships
- Workshops
- Evidence Synthesis Ireland
- Primary research
- Trainer Accreditation
About Qualitative Evidence Synthesis
• A real meal deal question-led, protocol-driven study of a body of qualitative literature with a systematic approach to study selection, quality, and synthesis. While more qualitative systematic reviews are being done than ever, more are still needed.

• Relevant Scholarly conversations-where you stand and what your work adds!

• Get specific-what are the nuances of what is being experienced and by what population-avoid generic life experience

• Foster creativity- the specifics require careful thought and creativity

• Strategic sense- "I know my stuff"
Qualitative Evidence Synthesis

Qualitative evidence synthesis is a process of scientific enquiry aimed at reviewing and rigorously integrating the findings of qualitative research (Thorne et al. 2004, Sandelowski and Barroso 2007).

A means of presenting the complexities of human experiences in a way that is recognisable to the evidence-based community (Thorne 2008).
subsuming the concepts from the primary studies... (Dixon-Woods et al. 2005)

...about retaining differences and enlightening complexities (Thorne et al. 2004)
The Family

• “a family of methodological approaches to developing new knowledge based on rigorous analysis of existing qualitative findings” (Thorne et al. 2004, p.1343)
Qualitative Evidence Synthesis: Choosing a Methodology

- Research question
- Epistemology
- Time/timeframe
- Resources
- Expertise
- Audience and purpose
- Type of data

About thematic synthesis

- **Thomas and Harden**
- Pragmatic
- Useful for integrating findings with intervention reviews
- Important to “go beyond” the primary studies (Thomas and Harden, 2008)
- 3 Stages:
  - line by line coding
  - generation of descriptive themes
  - generation of interpretive/analytical themes
A worked example of thematic synthesis

To explore potential participants’ views and experiences of the recruitment process for participation in trials. The specific objectives were to:

• Describe potential participants’ perceptions and experiences of accepting or declining to participate in trials
• Explore the barriers and facilitators to participating in trials
• Explore to what extent the barriers and facilitators identified were addressed by strategies to improve recruitment evaluated in a previously published Cochrane review (Treweek 2018)
STAGES of QES

• Refining the question
• Searching
• Screening
• Data extraction
• Assessment of methodological limitations
• Synthesis
• Assessment of confidence
• Reporting
FORMULATING THE QUESTION

BOOTH ET AL. (2016)

SPICE Setting - Perspective- Interest, Phenomenon of – Comparison – Evaluation (Booth 2006)


PICOC Population – Intervention – Comparison – Outcome – Context (Petticrew & Roberts 2006)

CHIP Context of the particular study, How the study was conducted, the Issues examined, and the People involved in the study (Shaw 2010).
The Question: SPICE (Booth 2006)

**S – Setting:** What is the context? Where is it being done?

**P – Perspective:** Who are the users, potential users, or stakeholders of the service?

**I – Intervention/Phenomena of Interest:** What is being done for the users, potential users, or stakeholders?

**C – Comparison:** What are the alternatives?

**E – Evaluation:** What do we learn about the phenomena being explored or evaluated?
Searching for Qualitative Papers: Exhaustive vs Purposive

Qualitative evidence synthesis aims “to find sufficient cases to explore patterns and so are not necessarily attempting to be exhaustive in their searching” (Booth, 2011)
Search procedures should generally privilege specificity (retrieval of only relevant items) over sensitivity (retrieval of all potential items) in recognition that qualitative research is far less prevalent than quantitative research and so subject searches that run without methodological filters will contain a higher proportion of irrelevant hits (Harris et al. 2017)
# Search Methods

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<th>Search strings</th>
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<tr>
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<tr>
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<td>(participat* OR recruit* OR non-participat* OR nonparticipat*).if ADJ8 (trial*).if</td>
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<td>4</td>
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<td>(experience* OR perceive* OR perception* OR attitude* OR barrier* OR facilitat* OR challenge* OR opportunit* OR opinion* OR agree* OR accept* OR refuse* OR refusal OR decline* OR decision* OR decide*).ti,ab</td>
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<td>(control*).ti,ab AND (trial OR trials).ti,ab</td>
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<td>(random*).ti,ab</td>
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<td>9</td>
<td>(7 OR 8)</td>
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<td>10</td>
<td>(4 AND 5 AND 6 AND 9)</td>
</tr>
<tr>
<td>C: Completeness</td>
<td>We will not include studies that are incomplete and do not fully describe the methods used within the qualitative component of the study (Partial records such as abstracts and short reports have already been excluded).</td>
</tr>
</tbody>
</table>
| A: Accuracy | Accuracy will be measured based on the clear inclusion of qualitative research question/objectives using the CASP screening questions:  
• Was there a clear statement of the aims of the research?  
• Is a qualitative methodology appropriate? |
| R: Relevance | • The phenomenon of interest is the recruitment/decision to participate in trials.  
• “Potential participants” are those with experience of accepting or declining invitations to participate in RCTs.  
• Studies that focus more on the experience of participation in trials, or other elements of the trial process, will be excluded based on reduced relevance to the purpose of this review  
• We will exclude hypothetical trials as advocated in the Treweek (2018) review |
| T: Timeliness | We will only include studies from 2000 onwards as they are likely to be more relevant than older studies. |
DATA EXTRACTION

• Pertinent information-subgroup analysis
• Population and setting
• Methods
• Findings
• Assessment of methodological limitations (CASP)
• Other information
  (consider data management compatibility!)
Assessment of methodological limitations

Appraising Qualitative Research for Evidence Syntheses: A Compendium of Quality Appraisal Tools

Umair Majid and Meredith Vanstone

Abstract
As the movement toward evidence-based health policy continues to emphasize the importance of including patient and public perspectives, syntheses of qualitative health research are becoming more common. In response to the focus on independent assessments of rigor in these knowledge products, over 100 appraisal tools for assessing the quality of qualitative research have been developed. The variety of appraisal tools exhibit diverse methods and purposes, reflecting the lack of consensus as to what constitutes appropriate quality criteria for qualitative research. It is a daunting task for those without deep familiarity of the field to choose the best appraisal tool for their purpose. This article provides a description of the structure, content, and objectives of existing appraisal tools for those wanting to evaluate primary qualitative research for a qualitative evidence synthesis. We then discuss common features of appraisal tools and examine their implications for evidence synthesis.
Assessment of methodological limitations: Critical Appraisal Skills Programme (CASP) tool Commonly Used

Box 1 CASP© qualitative research checklist

1. Was there a clear statement of the aims of the research?  
   Yes Cannot tell No  
2. Is a qualitative methodology appropriate?  
3. Was the research design appropriate to address the aims of the research?  
4. Was the recruitment strategy appropriate to the aims of the research?  
5. Was the data collected in a way that addressed the research issue?  
6. Has the relationship between researcher and participants been adequately considered?  
7. Have ethical issues been taken into consideration?  
8. Was the data analysis sufficiently rigorous?  
9. Is there a clear statement of findings?  
10. How valuable is the research?
Assessment of methodological limitations: CASP tool

<table>
<thead>
<tr>
<th>Appraisal Tool</th>
<th>Country and Discipline</th>
<th>Purpose(s)</th>
<th>Content and Details</th>
<th>Strengths and Criticisms</th>
</tr>
</thead>
</table>
| CASP Qualitative Checklist, 2016   | United Kingdom         | 1. Appraisal in a qualitative evidence synthesis                          | 10 checklist questions answered with a yes, no or can’t tell  
2. Reporting standards for qualitative papers  
3. Educational tool for learners | Strengths  
• Easy to understand and administer.  
• Easy to use as an educational tool for learners and novice researchers.  
• Most commonly used appraisal tool in the quality appraisal process of qualitative evidence syntheses.  
Criticisms  
• Weaker in evaluation of methodological quality compared to other appraisal tools (Hannes, Lockwood, & Pearson, 2010).  
• Adaptations of the tool are time-consuming to use (Campbell et al., 2003)  
• Favors studies with better methodological quality but may make weaker contributions to field (Dixon-Woods et al., 2007) |
| Critical Appraisal Skills Programme (CASP)  
10 Questions to help you make sense of qualitative research: Milton Keynes Primary Care Trust, 2002. | N/A                     |  |

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**Appraising Qualitative Research for Evidence Syntheses: A Compendium of Quality Appraisal Tools**

Umair Majid and Meredith Vanstone

Qualitative Health Research  
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®SAGE
Thematic synthesis

• The findings generated from thematic synthesis are particularly useful to policymakers and practitioners (Booth 2016).

• This approach is suitable for synthesis when there are a larger number of studies included.

• 3 Stages:
  line by line coding
  generation of descriptive themes
  generation of analytical themes
<table>
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<th>References</th>
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### Descriptive themes

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<td>60</td>
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<td>Nothing to gain</td>
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<td>Impact of financial reimbursement</td>
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<td>25</td>
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</table>
Analytical themes

- The impact of potential outcomes on participation
  - Positive impact on care
  - Making a difference
- Personal influences on participation
  - Non-trial related influences
  - Perception of personal risks and benefits
- Trial influences on participation
  - Communication of trial information
  - Significant trial components
Model

WILL I TAKE PART?

DECLINE

- Ineffective trial communication
- Something to lose
- Burden of participation
- Nothing to gain
- Discouragement by other people

ACCEPT

- Effective trial communication
- Nothing to lose
- A chance to help others
- Something to gain
- Encouragement of other people
Assessment of confidence

• **GRADE CERQual**

• Examines individual review findings and appraises them in the context of methodological limitations, relevance, coherence, and adequacy of data ([Lewin 2018](#))
Assessment of confidence

- **Methodological Limitation** refers to the extent of limitations in the design or conduct of the primary studies—CASP
- **Relevance** is the extent to which the evidence from the primary studies is applicable to the context specified in the review question. This may pertain to the relevancy of the population researched, the phenomenon of interest or the setting.
- **Coherence** refers to identifying patterns in the data across the primary studies included in an evidence synthesis. Coherence explores whether the finding is well grounded in data and provides a convincing explanation for the patterns found in these data—Reflexivity
- **Adequacy** of data is an overall determination of the degree of richness and quantity of data supporting a review finding—sensitivity analysis
<table>
<thead>
<tr>
<th>Summary of review finding</th>
<th>Example Quote</th>
<th>Studies contributing to the review finding</th>
<th>CERQual assessment of confidence in the evidence</th>
<th>Explanation of CERQual assessment</th>
</tr>
</thead>
</table>
| Communicate face-to-face: Trial information delivered verbally during face to face contact can be less confusing than written trial details. | “The communication with the FP reassured some patients more than the information sheet – they highly valued the personal information and discussion of the trial which made them feel safe” (Author quote, Bleidorn 2015) | Barnes 2012, Moynihan 2012, Bleidorn 2015, Oud-Rengerick 2015, Attwood 2016, Dellson 2018 | Moderate confidence | Adequacy: very minor concerns  
Relevance: Moderate concerns in one study (Dellson)  
Cohesion: Minor concerns  
Methodological limitations: minor concerns in two studies |
| Communication skills are vital: The person delivering the trial information should have good communication skills, be approachable, trustworthy, person-centered and knowledgeable with a good ability to address potential participants’ queries. Consideration needs to be given to whether a clinician or a researcher is the most appropriate person to provide the trial information. | “He [recruiting doctor] was very calm throughout the whole process ... It was very much he talked to me directly, very clearly, concisely, didn’t mince his words, didn’t beat around the bush. Just very professional and very clear on what he was wanting and what was being said to m” (Participant quote, Sawyer 2017). | Chang 2004, Costenbader 2007, Harrop 2006a, Madsen 2007a, Madsen 2007b, Jackson 2010, Moynihan 2012, Smyth 2012, Habersack 2013, Oud-Rengerick 2015, Tarimo 2010 Bleidorn 2015, Ballantyne 2017, Sawyer 2017 | High confidence | Adequacy: Some individual minor concerns but high number of studies included.  
Relevance: Some individual minor concerns but high number of studies included.  
Cohesion: Minor concerns  
Methodological limitations: Moderate concerns in one study and minor concerns in one study |
| Written information should be an adjunct: Written trial information is beneficial as an adjunct to verbal information and facilitates time and space for reflection without the added influence of recruiters’ presence. | “The letter is a good idea...I mean if they sign you up you have to decide very quickly and you don’t have time to chew over the information, so having a letter makes sense, you can sit and think about it and decide what to do” (Participant quote, Hughes Morley 2016). | Hughes Morley 2016, Jackson 2010, Sawyer 2017, Smyth 2012, | Moderate confidence | Adequacy: very minor concerns  
Relevance: Minor concerns  
Cohesion: Minor concerns  
Methodological limitations: Minor concerns in one study |
Reporting

Enhancing transparency in reporting the synthesis of qualitative research: ENTREQ
Allison Tong, Kate Flemming, Elizabeth McInnes, Sandy Oliver and Jonathan Craig

EPOC Qualitative Evidence Syntheses: Protocol and review template
27th September 2019
Cochrane Effective Practice and Organisation of Care Group (EPOC)
Lessons learned

1. Read, read, read
2. Gather a great team
3. Be inductive, be analytical, be brave
4. Use management software for transparency
5. Embrace the “Q” of QES
6. Write, write, write
Thank you

References available on request
Further queries, please email: Catherine.houghton@nuigalway.ie
Links:
Master Class archive https://www.ualberta.ca/international-institute-for-qualitative-methodology/webinars/master-class-webinar/archived-webinars.html
IIQM blog: iiqm.wordpress.com