

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

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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
- Jenny McSharry
- NUI Galway
- Alex Clark and Bailey Sousa



EVIDENCE SYNTHESIS
I R E L A N D



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Building **evidence synthesis knowledge, awareness and capacity** on the island of Ireland

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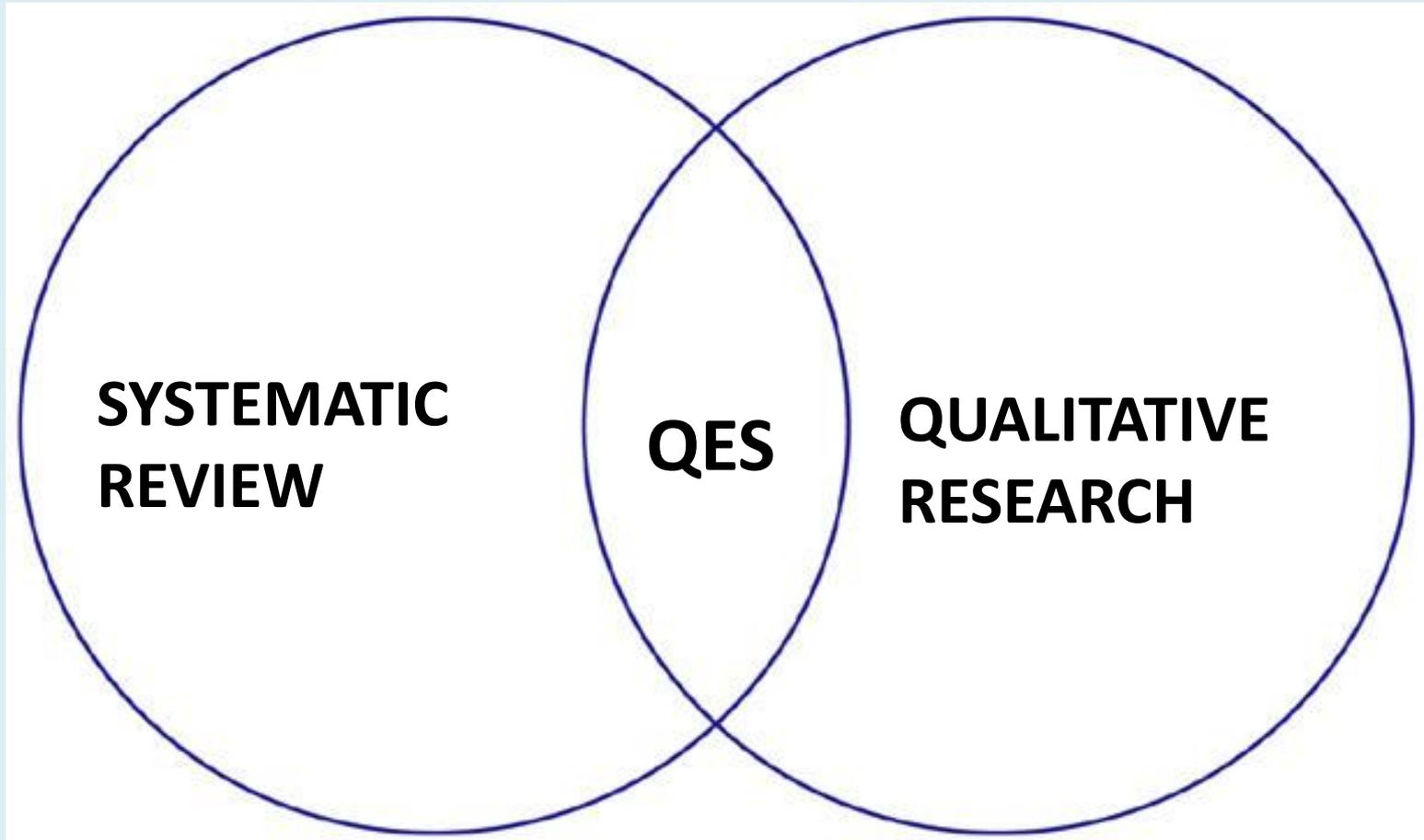
Public Health
Agency

Research and Development

KEY ACTIVITIES



About Qualitative Evidence Synthesis



Why Qualitative Research Needs More and Better Systematic Review

Alexander M. Clark¹

International Journal of Qualitative Methods
January-December 2016: 1-3
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DOI: 10.1177/1609406916672741
ijqm.sagepub.com


- 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).

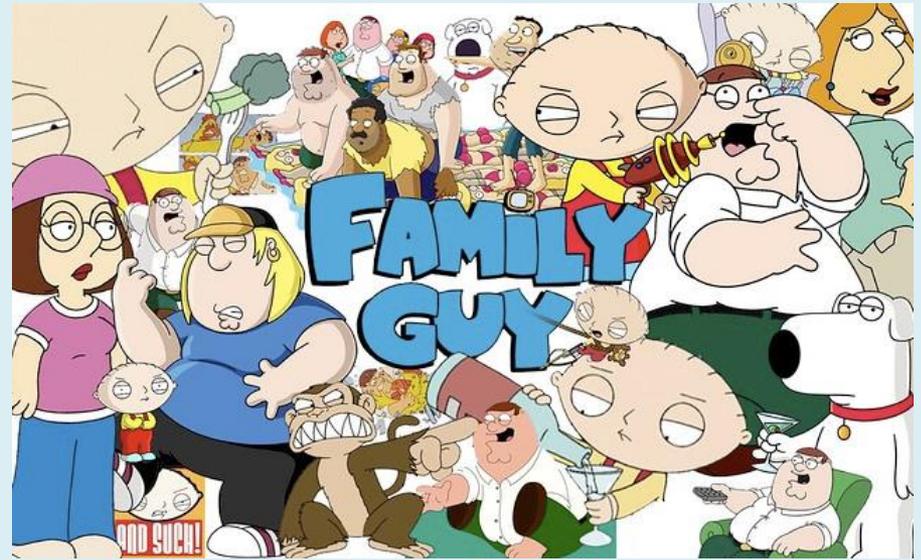
A means of presenting the complexities of human experiences in a way that is recognisable to the evidence-based community (Thorne 2008).

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

BOOTH, A., NOYES J, FLEMMING K, GERHARDUS, A., WAHLSTER, P., VAN DER WILT, G.J., MOZYGEMBA, K., REFOLO, P., SACCHINI, D., TUMMERS, M., REHFUESS, E. (2016) *Guidance on choosing qualitative evidence synthesis methods for use in health technology assessments of complex interventions* [Online]. Available from: <http://www.integrate-hta.eu/downloads/>

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

BMC Medical Research Methodology 

Research article **Open Access**

Methods for the thematic synthesis of qualitative research in systematic reviews

James Thomas*[†] and Angela Harden[†]

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Published: 10 July 2008 Received: 17 April 2008
BMC Medical Research Methodology 2008, 8:45 doi:10.1186/1471-2288-8-45 Accepted: 10 July 2008
This article is available from: <http://www.biomedcentral.com/1471-2288/8/45>

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)

SPIDER Sample - Phenomenon of Interest – Design – Evaluation - Research type (Cooke et al. 2014).

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)

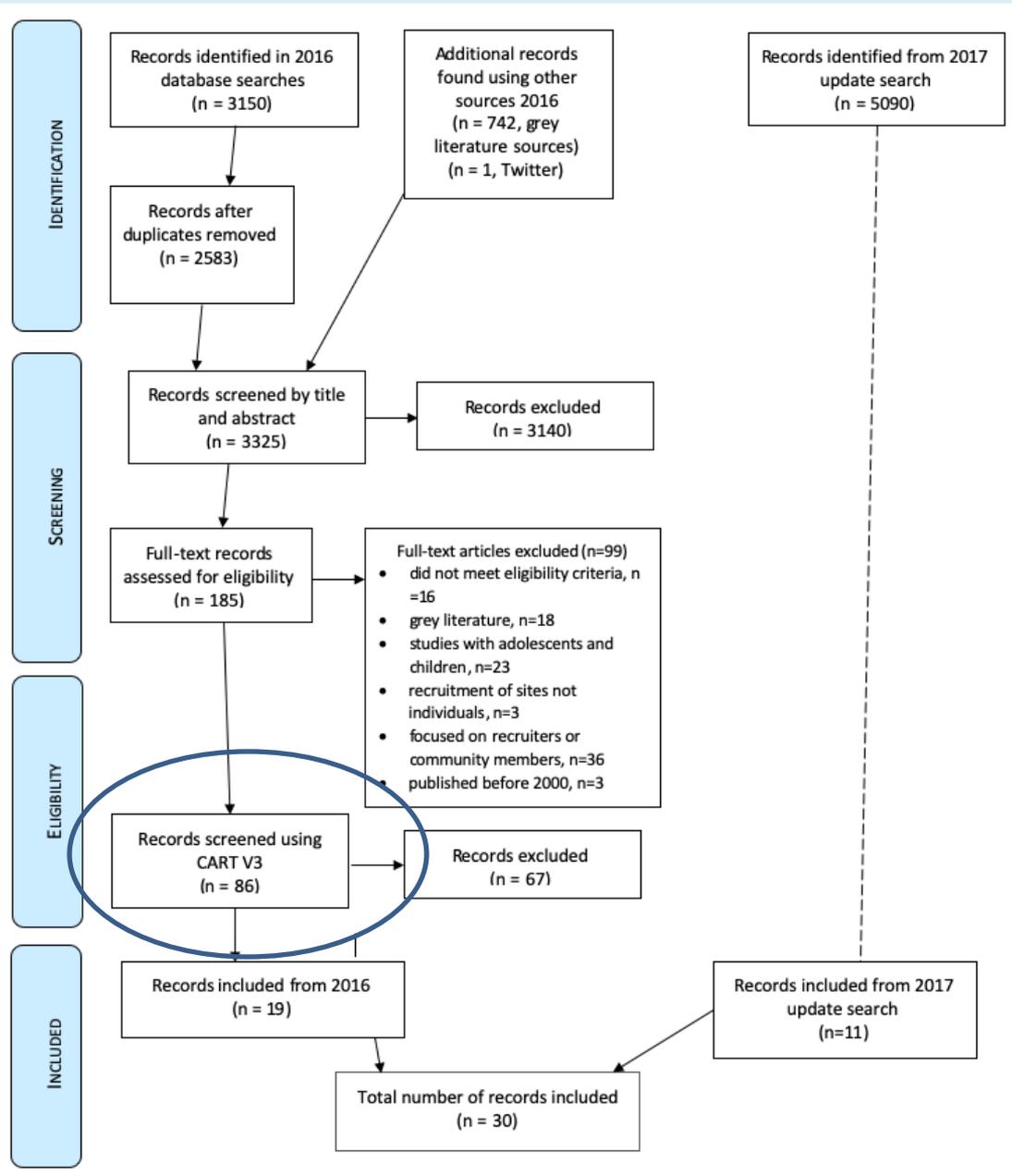
Searching for Qualitative Papers: Specific versus sensitive



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

#	Search strings
1	(participat* OR recruit* OR enrol* OR non-participat* OR nonparticipat* OR selection).ti ADJ8 (trial*).ti
2	(participat* OR recruit* OR non-participat* OR nonparticipat*).ab ADJ8 (trial*).ab
3	(participat* OR recruit* OR non-participat* OR nonparticipat*).if ADJ8 (trial*).if
4	(1 OR 2 OR 3)
5	(qualitative OR ethnograph* OR phenomenol* OR "grounded theory" OR hermeneutic* OR observation* OR "focus group" OR "focus groups" OR interview* OR "mixed method" OR "mixed methods" OR multimethod OR "multi-method").ti,ab
6	(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
7	(control*).ti,ab AND (trial OR trials).ti,ab
8	(random*).ti,ab
9	(7 OR 8)
10	(4 AND 5 AND 6 AND 9)



C: Completeness	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).
A: Accuracy	Accuracy will be measured based on the clear inclusion of qualitative research question/objectives using the CASP screening questions: <ul style="list-style-type: none">•Was there a clear statement of the aims of the research?•Is a qualitative methodology appropriate?
R: Relevance	<ul style="list-style-type: none">•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 Majid¹  and **Meredith Vanstone¹**

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.

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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

Appraisal Tool	Country and Discipline	Purpose(s)	Content and Details	Strengths and Criticisms
CASP Qualitative Checklist, 2016 Critical Appraisal Skills Programme (CASP) 10 Questions to help you make sense of qualitative research: Milton Keynes Primary Care Trust, 2002.	United Kingdom N/A	<ol style="list-style-type: none"> 1. Appraisal in a qualitative evidence synthesis 2. Reporting standards for qualitative papers 3. Educational tool for learners 	<p>10 checklist questions answered with a yes, no or can't tell</p> <ul style="list-style-type: none"> • Screening Questions (2): Aims of study and appropriateness of qualitative methodology to aims • Appraisal Questions (8): Research design, recruitment strategy, data collection, reflexivity-related issues, ethical issues, rigor of data analysis, and the reporting and value of findings. <p>Press releases are available containing a discussion on quality criteria for qualitative research.</p>	<p>Strengths</p> <ul style="list-style-type: none"> • 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. <p>Criticisms</p> <ul style="list-style-type: none"> • 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)

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

Umair Majid¹  and Meredith Vanstone¹

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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

Line by Line....

1 Line by line coding

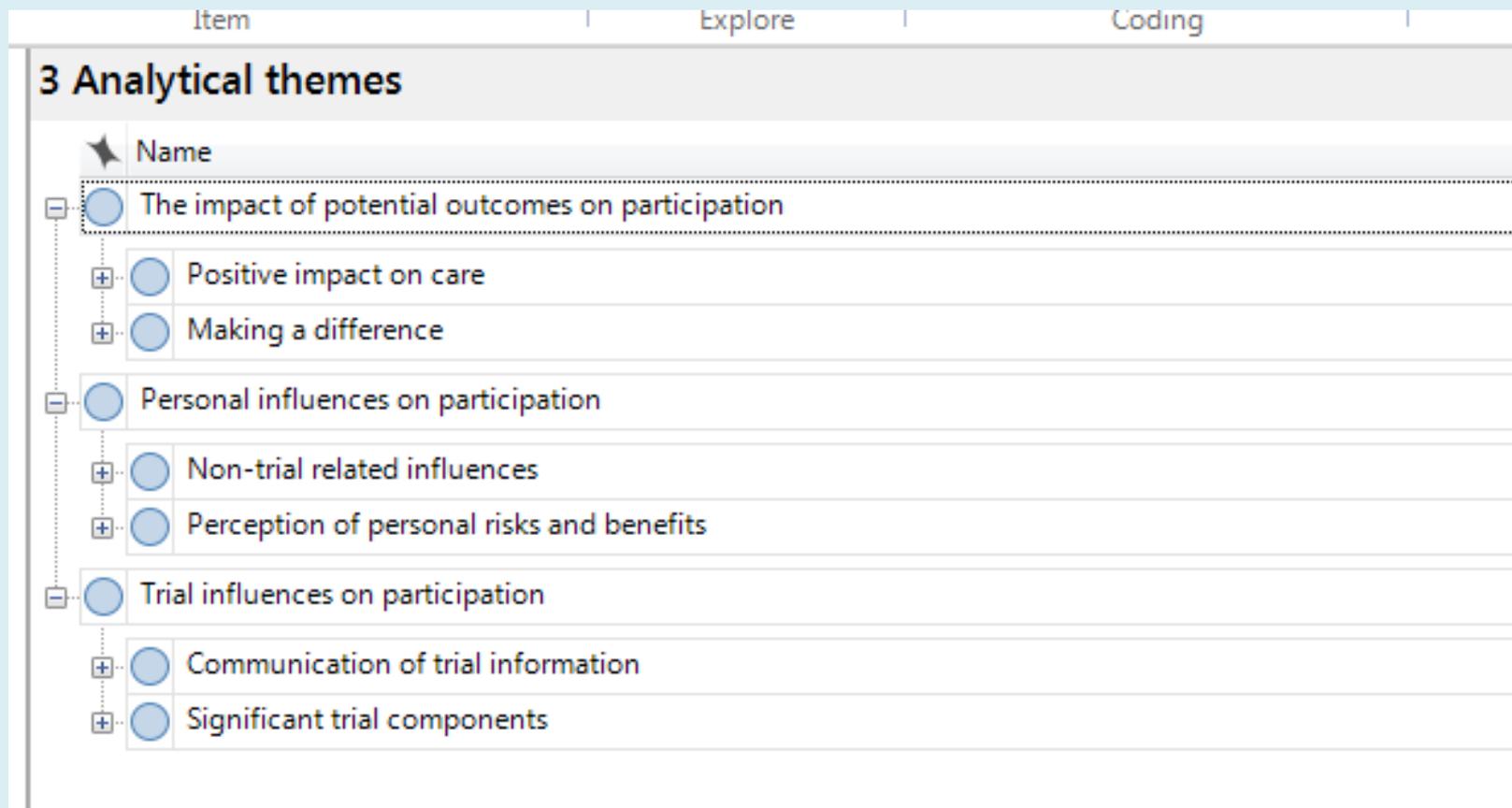
Name	Sources	References	Created On
Barriers		91	2075 08/03/2018 08:44
Individual		79	999 08/03/2018 08:44
Being the guinea pig		14	17 08/03/2018 10:18
Blanket Rule		1	1 08/03/2018 12:20
Dislike or not valuing specific nature of intervention		25	70 08/03/2018 09:14
Enough to cope with		23	45 08/03/2018 11:20
Fear of additional tests or treatment		18	58 08/03/2018 08:59
Influence of family and friends		7	9 08/03/2018 11:05
Knowledge regarding intervention		5	6 08/03/2018 08:51
Lack of trust in HCP		2	3 08/03/2018 11:10
Media and internet		7	14 08/03/2018 10:19
Not seeing the need low priority		10	22 08/03/2018 09:03
Personal needs over altruism		6	8 08/03/2018 09:53
Potential emotional burden		7	23 08/03/2018 11:19
Potential risks		23	70 08/03/2018 10:17
Potential time burden		14	40 08/03/2018 08:58
Seeking expertise of HCP		19	41 08/03/2018 08:48
Self-perceived eligibility or ineligibility		5	30 08/03/2018 08:50
Treatment preference		47	135 08/03/2018 09:55
Trial and recruitment methodology		79	1066 08/03/2018 08:44
Baffled by information		38	105 08/03/2018 13:10
Conflicting information		1	3 08/03/2018 20:22
Differentiating treatments		1	1 08/03/2018 13:11
distrust of recruiters and or clinicians		31	58 08/03/2018 19:40
Feeling out of control		21	34 08/03/2018 20:19
Financial reimbursement		1	1 08/03/2018 13:33
HCPs as gatekeepers		15	19 08/03/2018 19:36
Insufficient time to consider		11	13 08/03/2018 20:36
Lack of clinical staff knowledge		6	6 08/03/2018 13:28
Lack of information		16	37 08/03/2018 14:02
Lack of support in decision making		12	15 08/03/2018 19:42
misunderstanding information		19	51 08/03/2018 14:06
not wanting placebo		9	19 08/03/2018 13:20

Descriptive themes

2 Descriptive themes

Name	Files	References	Created On
Recruitment Approaches		27	237 14/03/2018 11:26
WHO Delivery of Trial Information		14	45 14/03/2018 11:30
HOW Delivery of Trial Information		13	42 14/03/2018 11:30
WHEN Delivery of Trial Information		8	21 14/03/2018 11:30
WHAT Delivery of Trial Information		19	43 14/03/2018 11:30
Ambiguity and confusion		17	86 14/03/2018 11:52
Influence of Others		21	127 14/03/2018 11:26
Independent decision making		10	19 14/03/2018 11:36
Family and friends		11	26 14/03/2018 11:36
Health care professionals		18	66 14/03/2018 11:36
Media and internet		7	15 14/03/2018 11:36
Perceptions of Risk		25	302 14/03/2018 11:26
Worth the risk		14	48 14/03/2018 11:32
Trial burden		15	65 14/03/2018 11:33
Randomisation and equipoise		18	94 14/03/2018 11:33
Level of risk		16	85 14/03/2018 11:33
Voluntariness		7	10 20/03/2018 11:28
Perceptions of Benefit		28	434 14/03/2018 11:27
Personal benefit		26	171 14/03/2018 11:34
Altruism and duty		22	97 14/03/2018 11:34
Contribution to science and knowledge		20	60 14/03/2018 11:34
Nothing to gain		13	81 14/03/2018 11:34
Impact of financial reimbursement		8	25 14/03/2018 11:35

Analytical themes



Model



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](#))

GRADE CERQual

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

Summary of review finding	Example Quote	Studies contributing to the review finding	CERQual assessment of confidence in the evidence	Explanation of CERQual assessment
<p>Communicate face-to-face: Trial information delivered verbally during face to face contact can be less confusing than written trial details.</p>	<p>“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)</p>	<p>Barnes 2012, Moynihan 2012, Bleidorn 2015, Oud-Rengerick 2015, Attwood 2016, Dellson 2018</p>	<p>Moderate confidence</p>	<p>Adequacy very minor concerns Relevance Moderate concerns in one study (Dellson) Cohesion Minor concerns methodological limitations minor concerns in two studies</p>
<p>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.</p>	<p>“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).</p>	<p>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</p>	<p>High confidence</p>	<p>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</p>
<p>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.</p>	<p>“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).</p>	<p>Hughes Morley 2016, Jackson 2010, Sawyer 2017, Smyth 2012,</p>	<p>Moderate confidence</p>	<p>Adequacy very minor concerns Relevance Minor concerns Cohesion Minor concerns Methodological limitations Minor concerns in one study</p>

Reporting

Tong et al. *BMC Medical Research Methodology* 2012, **12**:181
<http://www.biomedcentral.com/1471-2288/12/181>

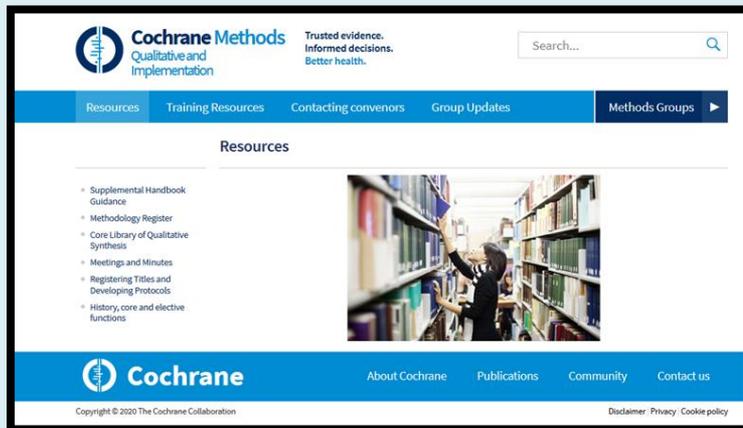
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Enhancing transparency in reporting the synthesis of qualitative research: ENTREQ

Allison Tong^{1,2†}, Kate Flemming^{3†}, Elizabeth McInnes^{4†}, Sandy Oliver⁵ and Jonathan Craig^{1,2}



The screenshot shows the Cochrane Methods website. The header includes the Cochrane logo and the text "Cochrane Methods Qualitative and Implementation". Below the header is a navigation menu with items: Resources, Training Resources, Contacting convenors, Group Updates, and Methods Groups. The main content area is titled "Resources" and lists several items: Supplemental Handbook Guidance, Methodology Register, Core Library of Qualitative Synthesis, Meetings and Minutes, Registering Titles and Developing Protocols, and History, core and elective functions. There is a search bar in the top right and a photograph of a person in a library. The footer contains the Cochrane logo, navigation links (About Cochrane, Publications, Community, Contact us), and copyright information.

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:

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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

