

Online Workshop: Qualitative Research Synthesis

Session 3: Methods for Synthesizing Qualitative Evidence

Ruth Garside, PhD University of Exeter

A webinar sponsored by SEDL's Center on Knowledge Translation for Disability and Rehabilitation Research (KTDRR)

800-266-1832 | www.ktdrr.org

Copyright ©2015 by SEDL, an Affiliate of American Institutes for Research. All rights reserved.

Funded by NIDRR, US Department of Education, PR# H133A120012. No part of this presentation may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from SEDL (4700 Mueller Blvd., Austin, TX 78723), or by submitting an online copyright request form at www.sedl.org/about/copyright_request.html. Users may need to secure additional permissions from copyright holders whose work SEDL included after obtaining permission as noted to reproduce or adapt for this presentation.



Methods for synthesizing qualitative evidence

Dr Ruth Garside. Senior Lecturer in Evidence Synthesis











Plan of the session

- Approaches to synthesis: Aggregative and interpretive methods
- Examples of qualitative synthesis methods: thematic analysis and meta-ethnography
- Presenting a qualitative evidence synthesis
- Knowledge translation







Follows on from presentations about:

- Nature of qualitative research
- Systematic review methods for qualitative research
- Searching for qualitative research
- Quality appraisal of qualitative research
- Data extraction







What is "synthesis"

- Combination of two or more items into a new whole
- The combination of ideas to form a theory or system
- NEW knowledge is generated which goes beyond the sum of its parts







Why synthesise qualitative research?

- Strategic
- Less wasteful
- Create more powerful explanations, higher order conceptualisation
- Broader, more encompassing theories
- Belief that it "will yield truths that are better, more socially relevant, or more complete" (Paterson et al, 2001)
- Enhance transferability of findings







Framework for systematic reviews of qualitative research (Garside, 2008)

Stage	Typical activities	
Developing research question	Assemble team: Consult: Agree approach	

Citation searches

comparison; Assess validity

phing research questi

relevance

relationships

Scoping exercise Identify relevant research; Refine methods

Identifying relevant literature

Initial assessment of study reports

Analysis and synthesis

Preliminary synthesis

Full synthesis Thematic analysis; translation of findings; Theory

Dissemination **Throughout**

development; rival explanations Target audiences; Limitations of review

consultation; revisit review purpose

Multiple viewpoints; Reflexivity; Audit trail; Ongoing

Develop Inclusion/Exclusion criteria; Focused searches;

Preliminary reading; Identify theories; Assess utility/

Reading & rereading study reports; Constant

Categorising; tabulating; mindmaps; Explore

Range of approaches and terminology

- Umbrella terms:
 - Qualitative Evidence Synthesis (2007)
 - Meta-synthesis (1996)







Range of approaches and terminology

- Specific approaches:
 - Meta-Ethnography (1988)
 - Meta-Study (2001)
 - Narrative Synthesis (2002)
 - Realist Synthesis (2002)
 - Meta-Narrative review (2005)
 - Critical Interpretative Synthesis (2006)
 - Qualitative Interpretive Meta-Synthesis (2013)







Approaches to synthesis (I)

- Aggregative
 - More "additive" approach
 - Summation/ aggregation of the existing themes
 - Concepts clearly pre defined
 - More deductive







Approaches to synthesis (II)

- Interpretative
 - Interpretation of existing findings
 - Develops concepts and theories to explain evidence base
 - Inductive







Methods of evidence synthesis

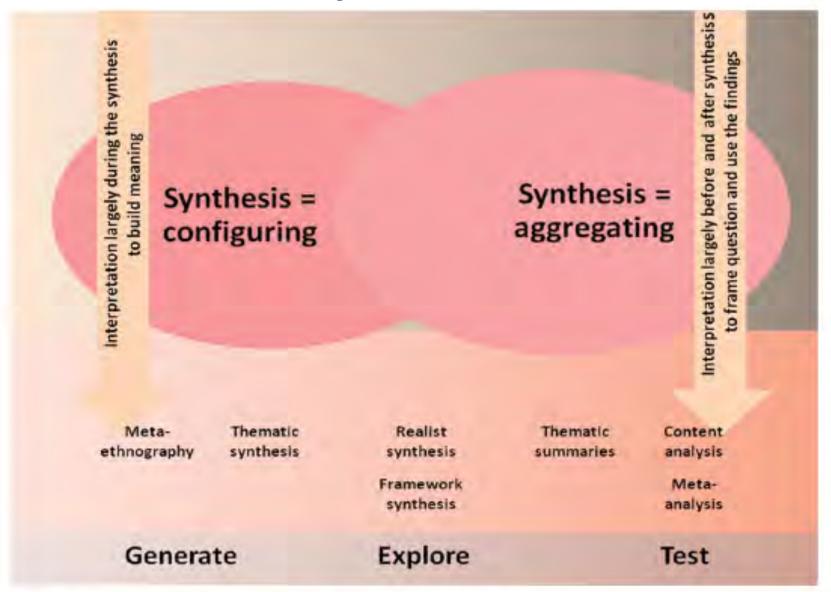


Figure 1. Methodological continuum of synthesis approaches and methods. Source: Adapted from Thomas et al. (2012).

Choosing a method

- Experience
- Time & resources
- Purpose of review
- Audience and purpose
- Type of evidence available







Examples of synthesis I: Thematic analysis







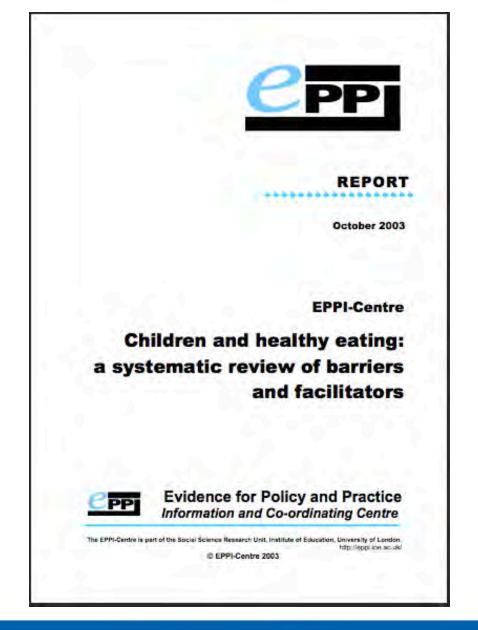
Origins

- Echoes thematic analysis in primary qualitative research
- May use line by line coding or extract themes before coding
- Codes often descriptive, but may build up to be more conceptual









http://eppi.ioe.ac.uk/
EPPIWebContent/hp/reports/
healthy_eating02/
Final_report_web.pdf







Review questions

- (i) What are children's perceptions of, and attitudes towards, healthy eating?
- (ii) What do children think stops them from eating healthily?
- (iii) What do children think helps them to eat healthily?
- (iv) What ideas do children have for what could or should be done to promote their healthy eating?







Three analytic steps described

- 1. the coding of text 'line-by-line' (data driven codes);
- 2. the development of 'descriptive themes'; and
- 3. the generation of 'analytical themes' (theory driven codes).





Synthesis approach

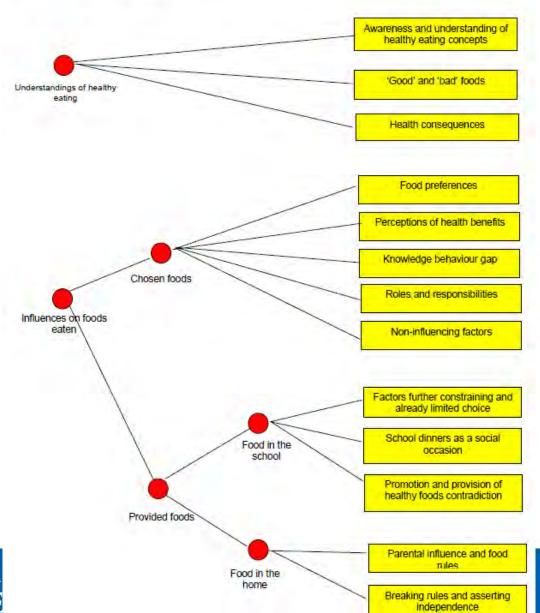
- Findings of each study examined in turn, each sentence or paragraph assigned a descriptive code – "line by line coding" (e.g. children prefer fruit to vegetables) (in NVIVO) 36 initial codes.
- Similarities and differences between codes sought to group them into a hierarchical tree structure.
- New codes were created to capture the meaning of groups of initial codes. 13 descriptive themes.
- A narrative summary of the findings across the studies organized by these 13 descriptive themes was then written.







Figure 6.1 Interrelated descriptive themes identified across studies of children's views (N=8)





Example textual paragraph

'Good' and 'bad' foods

Three studies asked children to name 'good' and 'bad' food and their reasons for these classifications (Edwards and Hartwell, 2003; Hart et al., 2002; Mauthner et al., 1993). Children in all these studies readily used the 'food-health' or 'food-nutrition' links described by Hart et al. (2002) as reasons for labelling foods good and bad (e.g. fat is bad because it causes heart disease; vegetables are good because they provide vitamins). Examples of bad food included: cereals with sugar in them; sweets and chocolates; junk food; and 'fattening food'. Examples of good food included: fruit; vegetables; nuts; and milk.







Policy relevance?

 Reviewers inferred from these themes the factors that help and hinder healthy eating (analytic themes).





Final 6 analytic themes related to policy question (i)

- (1) children do not see it as their role to be interested in health;
- (2) children do not see messages about future health as personally relevant or credible;
- (3) fruit, vegetables and confectionery have very different meanings for children;





Final 6 analytic themes related to policy question (ii)

- (4) children actively seek ways to exercise their own choices with regard to food;
- (5) children value eating as a social occasion; and
- (6) children see the contradiction between what is promoted in theory and what adults provide in practice.







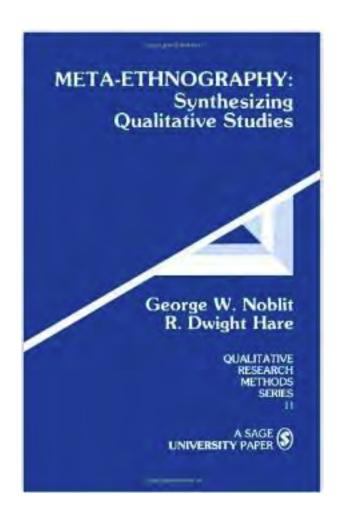
Examples of synthesis II: Meta-ethnography







Key text from 1988









Using meta ethnography to synthesise qualitative research: a worked example

Nicky Britten, Rona Campbell¹, Catherine Pope¹, Jenny Donovan¹, Myfanwy Morgan², Roisin Pill³

Department of General Practice and Primary Care, King's College, London; ¹Department of Social Medicine, University of Bristol; ²Department of Public Health Sciences, King's College, London; ³Department of General Practice, University of Wales College of Medicine, Cardiff, UK

Objectives: To demonstrate the benefits of applying meta ethnography to the synthesis of qualitative research, by means of a worked example.

Methods: Four papers about lay meanings of medicines were arbitrarily chosen. Noblit and Hare's seven-step process for conducting a meta ethnography was employed: getting started; deciding what is relevant to the initial interest; reading the studies; determining how the studies are related; translating the studies into one another; synthesising translations; and expressing the synthesis.

Results: Six key concepts were identified: adherence/compliance; self-regulation; aversion; alternative coping strategies; sanctions; and selective disclosure. Four second-order interpretations (derived from the chosen papers) were identified, on the basis of which four third-order interpretations (based on the key concepts and second-order interpretations) were constructed. These were all linked together in a line of argument that accounts for patients' medicine-taking behaviour and communication with health professionals in different settings. Third-order interpretations were developed which were not only consistent with the original results but also extended beyond them.

Conclusions: It is possible to use meta ethnography to synthesise the results of qualitative research. The worked example has produced middle-range theories in the form of hypotheses that could be tested by other researchers.

Journal of Health Services Research & Policy Vol 7 No 4, 2002: 209-215

© The Royal Society of Medicine Press Ltd 2002

Introduction

Methods for synthesising the results of quantitative research are well developed. The science of meta analysis has established its own norms and procedures, the criteria for which are in the public domain. Meta analysis is a central part of the methodological capon of stemological reasons. Computerised literature searches are likely to miss much qualitative research that is published in books. Criteria for judging the quality of published research are contested, as is the very idea of developing such criteria. Statistical methods for aggregating quantitative data are inapplicable to qualitative research. Thus the attempt to find methods for

This is primarily approach to synthesis

- No guidance in the original text about:
 - Search strategies
 - Inclusion criteria
 - Quality appraisal tools applied outside of the synthesis

- Noblit:
 - "amazed" that the method "is being used mostly in fields of professional practice, as in evidence based practice"

1. Thorne S, Jensen L, Kearney MH, Noblit G, Sandelowski M. Qualitative Metasynthesis: Reflections on Methodological Orientation and Ideological Agenda. Qualitative Health research. 2004;14(10):1342-65.







Definition of synthesis is explicitly interpretative

Activity or the product of activity where some set of parts is combined or integrated into a whole...

(Synthesis) involves some degree of conceptual innovation, or employment of concepts not found in the characterization of the parts as a means of creating the whole

Strike & Posner (1983) quoted in Noblit & Hare (1988)







Seven stages of synthesis

Getting started

"Unless there is some substantive reason for an exhaustive search, generalising from all studies of a particular setting yields trite conclusions" (p.28)

2. Deciding what is

3. Repeated reading of studies

- 4. Decide how studies are related
- 5. Translation
- 6. Synthesising the translations
- 7. Expressing the synthesis







st.

Key method of synthesis:

Translation

- "One case is like another except that....." (p.38)





Translation occurs:

 At the level of existing interpretations of the data (how the researchers interpreted their data)



Translation occurs at the conceptual level





How do we make sense of the world? (Levels of interpretation)

- 1st order constructs :
 - Everyday ways of making sense of our world (seen as participant quotes)
- 2nd order constructs:
 - social science researchers' interpretations of this "common sense world" to academic concepts and theories
- 3rd order constructs?
 - Reviewers' interpretations of the researchers' interpretations.

(After Schultz)







33

CVD prevention programmes

Quote (1 st order)	Researchers' interpretations (2 nd order)	Reviewers' interpretation (3 rd order)
"Pamphlets involve a lot of readingfood sampling gives them the opportunity to feel relaxed and ask questions"	Practical demonstrations are more effective than provision of written information	Personalised support, allowing relationships to develop & facilitating questioning, may be more effective.
"Sue was great, she had lots of information and advice"	Programme "champions" are effective at disseminating information about the interventions	







Translation types I:

- Reciprocal translation
 - "in an iterative fashion, each study is translated into the terms of the others and vice versa"
 - "attention to which metaphors, themes, organizers, enable us to fully render the account in a reduced form."





Reciprocal translation

- Similar to constant comparison
- Look for overlap, similarities, contradictions
- Are some concepts "better"? (scope, utility, explanatory power).
- Reviewer interpretation crucial (third order constructs/ concepts/theory)
- Different ways of juxtaposing concepts (tabulation, mind maps, colour coding, short text descriptions)







Table 4 Experience of visiting the doctor for heavy menstrual bleeding

Garside label	O'Flynn and Britten (2000)	Marshall (1998)	Chapple (1999)	Elson (2001)	Interpretation
Doctors fail to acknowledge women's experience of symptoms	'Need to be listened to and understood'	Drs need to 'hear and respond in a way that is concordant with [women's] concerns.'	'GPs did not listen carefully to women' 'women's concerns not taken seriously.'	'Repeatedly told that nothing was wrong'	Doctors may not value subjective descriptions of symptoms.
Gender	'Good experience of dealing with practice nursesmore caring'	Gender of doctor importance 'varied'.	-	2	Gender of healthcare professional was a concern for some women.
Medical model unhelpfully privileges blood loss	General practitioners 'miss the point' if concentrate on blood loss'	Women 'assumed that these [range of] symptoms would not be of interest to the gynaecologist'		-	Women and doctors may conspire to privilege blood loss. Disease model unhelpful to doctors as well as women.
Desire to identify pinpoint the 'cause'	'Need to name' Wanted referral for 'more thorough examination'	'Desire for explanation and reassurance'	•	-	Concern about potential causes including cancer.

• Garside R, Britten N, Stein K. The experience of heavy menstrual bleeding: A systematic review and meta-ethnography of qualitative studies. Journal of Advanced Nursing. 2008;63(6):550-62.





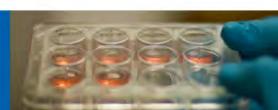


O'Flynn and Britten (2000)	Marshall (1998)	Chapple (1999)	Elson (2001)
'Need to be listened to and understood'		lid not listen ully to women'	'Repeatedly told
and discostore	Interpretation	omen's concerns aken seriously.'	was wrong'
Gar	Doctors may		
Do	not value	women's	
ex	subjective		
	descriptions of		
	symptoms.		

• Garside R, Britten N, Stein K. The experience of heavy menstrual bleeding: A systematic review and meta-ethnography of qualitative studies. Journal of Advanced Nursing. 2008;63(6):550-62.







Meta-ethnographic synthesis Adapted from Britten et al., 2003

CONCEPTS described in primary studies	Second order interpretations	Third order interpretations ©)Self regulation includes the use of alternative coping strategies	
Ather ence/compliance:correct and routine medicine taking Self regulation: problematic adherence; leaving off drugs Aversion: eg dislike of taking drugs; harmful side effects Alternative coping strategies: eg Traditional remedies	a)P atients conduct cost- benefit analyses: weigh up risks vs benefits b) Medicine taking influenced by cultural meanings and resources		
Sanctions: Dreitalk severely about need to take tablets regularly, coercion from significant others, fear of coercion	d) Self regulation is inhibited by the threat of social and professional sanctions	e) Self regulation flourishes if sanctions are not severe	
Selective disclosure: patients don't tell Dr of altered doses; manage info to psychiatrists	f) Patients may not articulate views which they do not perceive as medically legitimated	g) Alternative coping strategies are not seen by patients as medically legitimate h) Fear of sanctions and guilt produce selective disclosure	





Translation types II:

- Refutational translation
 - "a specific form of interpretation"
 - Oppositional/ counter argument findings
 - Specific search for metaphors, themes, and concepts that oppose/ refute emerging patterns.







Table 3 Themes reflecting uncertainty and influences on seeking help

Garside label	O'Flynn and Britten (2000)	Marshall (1998)	Chapple (1999)	Elson (2002)	Interpretation
HMB as a cleansing process	'Cleaning out the womb is necessary and healthy'	+	'Welcomed heavy period	s' –	Internal conflict between understanding of purpose of periods (even HMB) and impact on life.
Time limited in National Health Service	-	'Everybody is overworked in the health service'	Worried about 'wasting doctors time'		Reticence about accessing health care as unsure whether they have a legitimate complaint.
Suffering as women's lot	41	4	-	'Women's suffering is normal'	Women feel that they should put up with periods even when they are an unpleasant experience
Impact of unconnected emotional/ psychological health	4 - 1	'Life stresses and traumatic life events'	'Level of concern varies' 'watchful waiting'	1.0	Impact of HMB may not be consistent – physical and psychological/ emotional input.
Varied confidence in	'Authority for patient	'Question the validity of	Unsure about 'reality	0.47	Refutational findings - suggest that
validity o' Othe	rs encourage to en	nter Others b	elittle level	Refutational fi	ndings - suggest that
Impact of : the 'sick role'		of suffering		women are influenced by external sources and these may either encourage or discourage accepting validity of experience.	





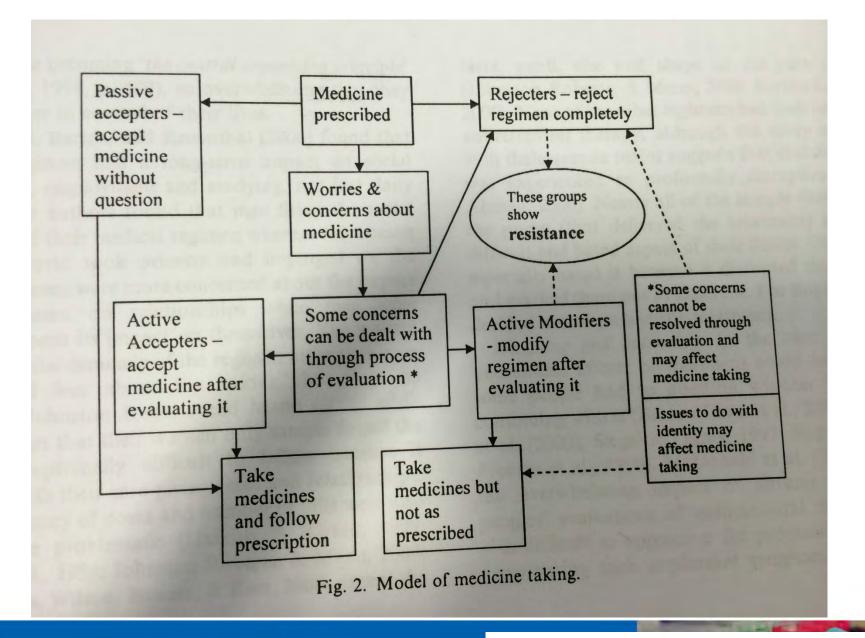
Translation types III:

- Line of argument
 - "What can we say about the whole?" (p. 62)
 - Development of a new model, theory or understanding through the synthesis













Pound et al. Resisting medicines: a synthesis of qualitative studies of medicine taking. *Soc Sci Med*. 2005; 61(1): 133-155

Figure 1 The patient illness model for heavy menstrual bleeding.

Garside R, Britten N, Stein K. The experience of heavy menstrual bleeding: A systematic review and meta-ethnography of qualitative studies. Journal of Advanced Nursing. 2008;63(6):550-62



Medical disease model

atient illness model

>80 ml blood loss

Physical:

- · Type of loss colour, sensation, clots
- Associated symptoms: bloat, breast tenderness, pain, fatigue
- Amount of sanitary protection needed (amount and duration of bleeding)
- Change in these symptoms from prior experience
- · Comparison with other women.

Impact in life:

- . Leaks staining clothes and bedclothes
- Associated embarrassment, feeling unclean
- Restricts normal social, professional, familial and sexual roles.

A lay illness model and a medical disease model exist for HMB and there is little overlap between them.

This lack of fit is problematic for both women and doctors, leading to communication problems in consultations, and the possibility of under- or over- treating the condition.

Outcomes of qualitative synthesis

- Description of a phenomenon
- Definition of a new concept
- Creation of a new typology
- Description of processes
- Explanations or theories
- Development of strategies







Presenting findings of qualitative synthesis

- Textual description
- Tables of findings
- Tables showing which sources contribute to a synthesized finding
- Summary statements
- Conceptual frameworks/ diagrams







Resources









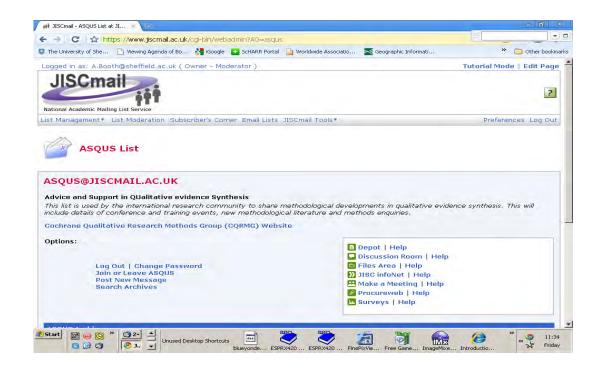






ASQUS Discussion List

Twitter





http://www.jiscmail.ac.uk/asqus

@CochraneQual

















References

Barnett-Page E, Thomas J. Methods for the synthesis of qualitative research: a critical review. *BMC Med Res Methodol.* 2009 Aug 11;9:59.

Britten N, Campbell R, Pope C, et al. Using meta ethnography to synthesise qualitative research: a worked example. *J Health Serv Res Policy*. 2002;7(4):209-15.

Dixon-Woods M, Agarwal S, Young B, Jones D, Sutton A. (2004) *Integrative approaches to qualitative and quantitative evidence*. London: Health Development Agency.

Dixon-Woods M, Bonas S, Booth A, Jones DR, Miller T, Shaw RL, Smith J, Sutton A, Young B. How can systematic reviews incorporate qualitative research? A critical perspective. *Qualitative Research 2006;* 6: 27-44.

Garside R. A comparison of methods for the systematic review of qualitative research: two examples using meta-ethnography and meta-study. 2008. University of Exete.r

Garside R, Pearson, M, Moxham, T. What influences the uptake of information to prevent skin cancer? A systematic review and synthesis of qualitative research. *Health Education Research* 2010; 25 (1): 162-182.

Garside R, Britten N, Stein K. The experience of heavy menstrual bleeding: A systematic review and meta-ethnography of qualitative studies. *Journal of Advanced Nursing* 2008; 63 (6): 550-562.

Gough, D, Oliver, S, & Thomas, J. (2012). *Introduction to systematic reviews*. London: Sage.

Harden A, Garcia J, Oliver S, Rees R, Shepherd J, Brunton G, Oakley A Applying systematic review methods to studies of people"s views: an example from public health research. *Journal of Epidemiology and Community Health* 2004; 58:794-800.

References (cont.)

Lorenc, T., Pearson, M., Jamal, F., Cooper, C. and Garside, R. (2012), The role of systematic reviews of qualitative evidence in evaluating interventions: a case study. *Res. Synth. Method*, 3: 1–10.

Lucas PJ, Arai L, Baird, Law C, Roberts HM Worked examples of alternative methods for the synthesis of qualitative and quantitative research in systematic reviews. BMC Medical Research Methodology 2007; 7(4).

Martin Hilber A, Kenter E, Redmond S, Merten S, Bagnol B, Low, N, Garside R. Vaginal practices as women's agency in Sub-Saharan Africa: a synthesis of meaning and motivation through meta-ethnography *Social Science and Medicine*. 2012; 74: 1311-1323.

Paterson BL, Thorne SE, Canam C, Jillings C (2001) *Meta-Study of Qualitative Health Research. A Practical Guide to Meta-Analysis and Meta-Synthesis*. Thousand Oaks, CA: Sage Publications.

Popay J, Roberts H, Sowden A, Pettticrew M, Arai L, Rodgers M, Britten N: *Guidance* on the conduct of narrative synthesis in systematic reviews. http://www.lancs.ac.uk/fass/projects/nssr/2007.

Pope C, Mays N, Popay J (2007) Synthesizing Qualitative and Quantitative Health Evidence: a Guide to Methods. Maidenhead: Open University Press.

Smithson J. Garside R. Pearson M, Barriers to, and facilitators of the prevention of unintentional injury in children in the home: a systematic review and synthesis of qualitative research. *Injury Prevention* 2011; 17:119-126.

Sandelowski M, Barroso J (2007) *Handbook for Synthesizing Qualitative Research*. New York: Springer Publishing Company.

Thomas J, Harden A. Methods for the thematic synthesis of qualitative research in systematic reviews. *BMC Medical Research Methodology* 2008; 8:45.

Thank you.

R.Garside@exeter.ac.uk

@Ruth_Garside















Thank you for participating!

We invite you to:

- Provide your input on today's session
- Share your ideas for future sessions
- Participate in the Community of Practice to continue the dialogue
- PLEASE CONTACT:

joann.starks@sedl.org

Please fill out the brief Evaluation Form: http://www.surveygizmo.com/s3/1883006/QualSynth-3



Disclaimer

 This presentation was developed for grant number H133A120012 from the National Institute on Disability and Rehabilitation Research (NIDRR), Office of Special Education and Rehabilitative Services (OSERS), U.S.
 Department of Education. However, the contents do not necessarily represent the policy of the Department of Education, and you should not assume endorsement by the federal government.