



Integrating qualitative and quantitative research in systematic reviews: Issues and challenges

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Acknowledgements



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- Co-convenors of the Cochrane Qualitative Research Methods Group



Outline

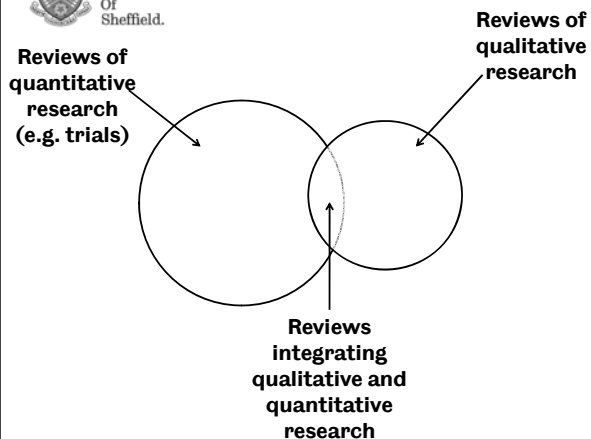
- Drivers and challenges of integration
- Approaches and methods
- Frameworks for comparing methods
- Future challenges and issues

Drivers for integration

- Greater recognition of the value of qualitative research in evidence-based health care
- 'Empty' reviews
- Patient perspectives and experiences
- Systematic reviews of complex interventions
- Issues of process and implementation
- Extension of evidence-based health care to other areas of public policy
- Growing tradition for integration in primary research (mixed methods research)
- Dedicated research funding for methodological research
- Establishment of dedicated methods groups (e.g. Cochrane Qualitative Methods Research Group)

Challenges of integration

- New and evolving field
- Scale of task
- Lack of training and expertise
- Paradigm wars
- Lack of worked examples





In focus: Critical Interpretive Synthesis

- Aim is to generate theory from large and diverse body of literature
- Literature itself is an object of scrutiny (*critical*)
- Comprehensive search to identify sampling frame
- Purposive and theoretical sampling
- Analysis leads to generation of synthetic constructs and a synthesising argument

Access to health care for vulnerable groups (Dixon-Woods et al. 2006)

Based on 119 papers
Interpretive qualitative analysis of diverse types of studies
Conceptual and methodological problems with measures of health service utilisation
Synthesising argument organised around a set of central concepts (e.g. navigation, adjudications) with the synthetic construct of 'candidacy' at the core



In focus: Mixed methods synthesis

- Aim is to generate and test theory from diverse body of literature
- Exhaustive search, review questions, inclusion criteria and quality assessment largely specified a priori
- Each review typically has three syntheses:
 1. Statistical meta-analysis
 2. Thematic synthesis
 3. Cross-study synthesis

Teenage pregnancy and social disadvantage (Harden et al. 2009)

15 studies (10 trials and 5 qualitative studies)

Meta-analysis - early childhood interventions and youth development programmes reduced pregnancy rates by 39%

Thematic synthesis generated key themes: dislike of school, poor material circumstances and unhappy childhood, and expectations and aspirations

Cross-study synthesis identified matches, mis-matches and gaps

Method	Developed by/Exemplars	Context and purpose
Bayesian synthesis	Roberts et al. (2002)	Factors that affect the uptake of childhood immunisation
Narrative synthesis	Popay et al. (2005) Arai et al. (2007); Noyes and Popay (2007)	Cochrane remit – to examine issues of process, implementation and experience
Mixed methods synthesis	Thomas et al. (2004) Harden and Thomas (2005)	Informing policy to promote children's health
Framework synthesis	Oliver et al. (2008)	To analyse and synthesise research on public involvement in healthcare research
Critical interpretive synthesis	Dixon-Woods et al. (2006)	Access to healthcare for vulnerable groups
Meta-narrative	Greenhalgh et al. (2005)	To review research on diffusion of innovation to inform healthcare policy
Realist synthesis	Pawson (2006)	To develop and test theories of change underpinning complex policy interventions

New frameworks for comparing approaches and methods

Barnett-Page and Thomas (2009)

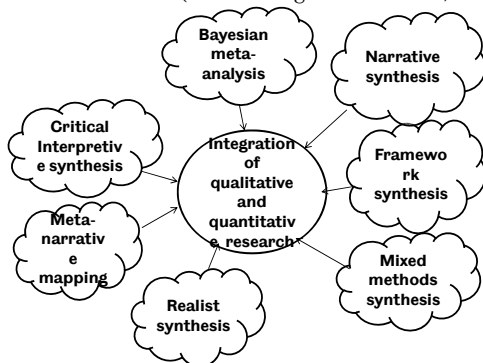
Dimensions of difference

- Epistemology (idealism realism)
- Type of question
- Extent of iteration
- Quality assessment
- Going beyond primary studies
- Problematizing the literature
- The synthetic product

Method	Idealist – realist continuum	Going beyond primary studies	Deconstruct body of literature?	Other characteristics
Bayesian synthesis	Realist	Translation	No	Little iteration in methods Synthetic product aims to directly address policy
Framework synthesis	Realist	Translation	No	
Narrative synthesis	Realist	Translation/Transformation	No	
Mixed methods synthesis	Realist	Transformation	No	
Critical interpretive synthesis	Idealist	Transformation	Yes	Iterative approach key Synthetic product requires interpretation
Meta-narrative	Idealist	Transformation	Yes	
Realist synthesis	Idealist	Transformation	No	

Approaches and methods

(Barnett-Page and Thomas, 2009)





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Barnett-Page and Thomas (2009)

Dimensions of difference →

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Harden and Thomas (2010)

Mixed methods lens

- 'Mono' or mixed synthesis methods
- Paradigmatic stance
- Independence/interaction between methods
- Relative status of different methods
- Point of integration

Method	Developed by/Exemplars	Viewed through a mixed methods lens
Bayesian synthesis	Roberts et al. (2002)	Alternative or single paradigm stance
Narrative synthesis	Popay et al. (2005) Arai et al. (2007) Noyes and Popay	Complementary strengths stance
Mixed methods synthesis	Thomas et al. (2004) Harden and Thomas (2005)	Complementary strengths stance Dialectical stance
Critical interpretive synthesis	Dixon-Woods et al. (2006)	Alternative or single paradigm stance
Meta-narrative	Greenhalgh et al. (2005)	Dialectical stance
Realist synthesis	Pawson (2006)	Alternative or single paradigm stance



Future challenges

- More worked examples are key
- Focus on methods and tools for the actual integration
 - Enhancing transparency
 - Establishing rigour
- Further conceptual work to illuminate points of difference, strengths and weaknesses, fit for purpose
- Learning from, and contributing to, the mixed methods literature for primary research.
