Development of methodological guidance, publication standards and training materials for realist and meta-narrative reviews: the RAMESES (Realist And Meta-narrative Evidence Syntheses – Evolving Standards) project

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Declared competing interests of authors: none

Published September 2014
DOI: 10.3310/hsdr02300

Scientific summary

The RAMESES project

Health Services and Delivery Research 2014; Vol. 2: No. 30
DOI: 10.3310/hsdr02300

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Background

Academics and policy-makers are increasingly interested in policy-friendly approaches to evidence synthesis which seek to illuminate issues and understand contextual influences on whether, why and how interventions might work. A number of different approaches have been used to address this goal. Qualitative and mixed-method reviews are often used to supplement, extend and in some circumstances replace Cochrane-style systematic reviews. Theory-driven interpretive approaches to such reviews include realist and meta-narrative review. Realist review was originally developed by Pawson for complex social interventions to explore systematically how contextual factors influence the link between intervention and outcome (summed up in the question: what works, how, for whom, in what circumstances and to what extent?) (Pawson R. *Evidence-based Policy: A Realist Perspective*. London: Sage; 2006). Greenhalgh *et al.* developed a meta-narrative review for use when a policy-related topic has been researched in different ways by multiple groups of scientists, especially when key terms have different meanings in different literatures (Greenhalgh T, Robert G, Macfarlane F, Bate P, Kyriakidou O, Peacock R. Storylines of research in diffusion of innovation: a meta-narrative approach to systematic review. *Soc Sci Med* 2005;**61**:417–30).

Quality checklists and publication standards are common (and, increasingly, expected) in health services research. They have two main purposes: they help researchers design and undertake robust studies, and they help reviewers and potential users of research outputs assess validity and reliability. This project seeks to produce a set of quality criteria, comparable publication guidance and training materials for realist and meta-narrative reviews.

Objectives

1. To collate and summarise the literature on the principles of good practice in realist and meta-narrative reviews, highlighting in particular how and why these differ from conventional forms of systematic review and from each other.
2. To consider the extent to which these principles have been followed by published and in-progress reviews, thereby identifying how rigour may be lost and how existing principles could be improved.
3. To use an online Delphi method with an interdisciplinary panel of experts from academia and policy, to produce, in draft form, an explicit and accessible set of methodological guidance and publication standards.
4. To produce training materials with learning objectives linked to these steps and standards.
5. To refine these standards and training materials prospectively on real reviews-in-progress, capturing methodological and other challenges as they arise.
6. To synthesise expert input, evidence review and real-time problem analysis into more definitive guidance and standards.
7. To disseminate these guidance and standards to audiences in academia and policy.

Methods

To fulfil objectives 1 and 2, we undertook a narrative review of the literature that was supplemented by collating feedback from presentations and workshops. We synthesised our findings into briefing materials (one for realist synthesis and another for meta-narrative reviews). We recruited members to two Delphi

panels, which had wide representation from researchers, students, policy-makers, theorists and research sponsors. We used the briefing materials to brief the Delphi panel so they could help us in fulfilling objective 3.

For objective 4, we drew not only on our experience in developing and delivering education materials, but also on relevant feedback from the Delphi panel, an e-mail list we set up specifically for this project (www.jiscmail.ac.uk/RAMESES), training workshops and the review teams we supported methodologically. To help us refine our publication standards (objective 5) we captured methodological and other challenges that arose within the realist or meta-narrative review teams to which we provided methodological support.

To produce the definitive publication standards, quality standards and training materials (objective 6), we synthesised expert input (from the Delphi panel), literature review and real-time problem analysis (e.g. feedback from the e-mail list, training sessions and workshops, and presentations).

Throughout this study, we iteratively and contemporaneously fed any data we captured into our draft publication standards, quality standards and training materials, making changes gradually. The definitive guidance and standards were, thus, the product of continuous refinements. We addressed objective 7 through academic publications, online resources and delivery of presentations and workshops.

Results

An important early output of this study was an e-mail mailing list (www.jiscmail.ac.uk/RAMESES) to bring together researchers in the field, especially since before the study began researchers were dispersed across the globe and many were working in isolation. The list at present has over 350 members and it regularly serves as a resource for its members to ask and get help with methodological questions. The Realist And Meta-narrative Evidence Syntheses – Evolving Standards (RAMESES) list will continue to run after the end of this project.

Our literature review identified 35 realist reviews and and nine meta-narrative reviews. Analysis and discussion within the project team produced a summary of the published literature, and common questions and challenges in briefing materials for the Delphi panel, comprising 37 and 33 members (for realist and meta-narrative reviews respectively). There was an overlap in the membership of the panels. Within three rounds the panels had reached a consensus on 19 realist and 20 meta-narrative key publication standards, with an overall response rate of 90% and 91% respectively. The RAMESES publication standards for realist syntheses and meta-narrative reviews have been published in open access journals and the EQUATOR (Enhancing the QUAlity and Transparency Of health Research) network (www.equator-network.org).

The quality standards and training materials drew on the following sources of data: (1) personal expertise as researchers and trainers; (2) data from the Delphi panels; (3) feedback from participants at training sessions we ran; and (4) comments made on RAMESES mailing list. We developed eight quality criteria for realist syntheses and nine for meta-narrative reviews. Versions of these quality criteria were developed for researchers, peer reviewers and funders/commissioners of research. For our training materials we used the data we captured to identify the methodological topics that were identified by the majority of reviewers as most challenging. We developed training materials for four methodological topics in realist reviews and three in meta-narrative reviews. The quality standards and training materials are freely available online (www.ramesesproject.org).

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Limitations

This project developed quality and publication standards and training materials for realist and meta-narrative reviews. These outputs are not definitive. As practice and experience in the use of these review approaches increases, we anticipate that these standards and materials are likely to require updating and further development.

Conclusions

Realist and meta-narrative reviews are relatively new approaches to systematic review whose overall place in the secondary research toolkit is not yet fully established. As with all secondary research methods, if used, guidance on quality assurance and uniform reporting is an important step towards improving quality and consistency of reviews. This project has developed the first ever set of such standards and materials. However, further methodological development is needed for both review approaches. These developments should help to refine this project's outputs. Formal evaluations of the value of the project's outputs have not been undertaken and may be of value. Capacity building remains an important area for the future. We anticipate that, as more reviews are undertaken, further refinement will be needed to the publication and quality standards and training materials.

Funding

Funding for this study was provided by the Health Services and Delivery Research programme of the National Institute for Health Research.

Health Services and Delivery Research

ISSN 2050-4349 (Print)

ISSN 2050-4357 (Online)

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The research reported in this issue of the journal was funded by the HS&DR programme or one of its proceeding programmes as project number 10/1008/07. The contractual start date was in April 2011. The final report began editorial review in July 2013 and was accepted for publication in January 2014. The authors have been wholly responsible for all data collection, analysis and interpretation, and for writing up their work. The HS&DR editors and production house have tried to ensure the accuracy of the authors' report and would like to thank the reviewers for their constructive comments on the final report document. However, they do not accept liability for damages or losses arising from material published in this report.

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