

FOREWORD

This new edition of *An Introduction to Systematic Reviews*, like its predecessor, is a gateway and a guide to a most important and undervalued area of research: the art and science of collecting and pooling information from primary research studies. The aim of systematic research synthesis is to generate a more comprehensive and trustworthy picture of the topic being studied than is possible from individual studies. Reviewers and users of the 1st edition of *An Introduction to Systematic Reviews* applauded its accessibility, readability and huge value in opening the doors of the world of systematic reviews to audiences keen to learn more about their mysteries, myths, methodologies and general utility in helping to answer leading policy questions of our time. We know that the most common barriers to using systematic reviews are lack of awareness, access and familiarity (Wallace et al. 2012). Reviewers praised *An Introduction to Systematic Reviews* for its twin emphasis on the logic and purpose of systematic reviews and its function as a resource for those getting started on actually doing reviews (see, for example, Zadeh 2012). Key to the book's success have been two of its contributions to this exercise: the integration of *theory* (about systematic reviews, about review questions) with *practical* guidance about how to do systematic reviews, and the contextualisation of both theory and practice in a broad landscape of examples of policy and review questions including education, welfare, health and social care, crime and justice, transport and the environment, and international development.

Despite allegations that are still sometimes made about systematic reviews as illegal imports from the world of medicine, they are no respecters of disciplines. The fundamental principle of evidence-based policy is 'beguilingly simple' (Davies 2012: R42). We certainly would not wish to die because a doctor has prescribed a drug whose sometimes fatal side-effects would have been known had a systematic review of all studies of the drug been carried out; but neither would we want our children and grandchildren to be affected by educational policies which inhibit learning and motivation; and we would prefer to avoid watching anti-social behaviour escalate because no one has taken a careful look at strategies capable of reducing it.

When social scientist and policy activist Barbara Wootton carried out one of the first systematic reviews of research on anti-social behaviour in 1959 (Wootton 1959: Chapter 3), she incurred the wrath of many in suggesting that the conclusions of some studies could not be relied upon because these studies were not done or reported soundly enough for policy makers to have any confidence in them (Oakley 2011). The exclusion or criticism of studies that supported cherished ideas (about, for example, the value of social workers or the adverse effects on children of maternal employment) was particularly liable to evoke outrage. Systematic reviewing is not the best way to make friends. All research, and all research reviews, happen in a social context which both shapes how they are done and contributes to what is done with them. The complicated matter of how to get the policy and practice world to sit up and pay attention to the findings of research is not a unique challenge for systematic reviews, but it is a very important one. The modern claim that public policy making is increasingly evidence-based can be rhetorical rather than real. For example, a review of the

51 interventions identified in the UK government's White Paper *Healthy Lives, Healthy People*, showed that most referred to single evaluations of dubious methodological quality rather than to robust systematic reviews of relevant studies (Katikireddi et al. 2011).

This new edition of *An Introduction to Systematic Reviews* preserves the integrity of the original text while adding to it in significant ways. The purpose of systematic reviews is to answer questions about what research tells us about an issue, but this framing of questions is not a simple mechanistic procedure. It requires thought, discussion with stakeholders, probing of concepts, interrogation of assumptions and expectations, and a considered appraisal of where a systematic review might fit into the general scheme of knowledge about an issue. This important intellectual work has been given more space in the new edition. Reviews can include all kinds and levels of data; this more expansive territory also gets increased recognition here. Examples are the integration of longitudinal cohort data, individual patient data, routinely collected data, realist synthesis and qualitative comparative analysis. Another innovative aspect of the new edition is the greater attention paid to exploring the use of computer-assisted technologies in the review process. We know from hundreds of reviews that the universe of studies potentially relevant to answering a single research question is usually vast – much vaster than the reviewer(s) initially thought – and that the diversity of bibliographic databases and their mode of operation makes trawling through these a laborious exercise. Can machines 'learn' (be taught) how to apply criteria for including or excluding studies in a review and how to carry out assessments of possible bias? What is 'text mining' and does it work? Read Chapter 7 to find out. Similarly, the use of statistical techniques to arrive at conclusions about what reviewed studies tell us, and their relationship to other methods of synthesis, is an area that has seen new injections of energy recently, and accordingly has a larger place in this new edition. The complicated matter of judging the quality of individual studies has been extended to include the review as a whole.

Systematic reviewing is a tool of democracy. The lives of many people are touched by what policy makers decide to do to promote health, education and welfare, so it is essential that policy decisions and strategies are founded on the best evidence, not only about 'what works', but also about what people want and what they consider to be appropriate. Since the beginning of systematic reviewing, researchers have had to confront the unhappy finding that a good deal of social research is quite uncommunicative about how it was done, and often it tells us about a research design which is a poor match with the research question (Rees and Oliver 2007). Too much reliance is placed on our believing what researchers say they found. In a democratic world, we would rather be in a position to decide for ourselves. Some new developments such as the movement of 'civic universities' and 'public engagement with research' reflect a new awareness on the part of universities and research councils that their spending must be justified in terms of its public participation and wider public impact. It is another feature of this new edition of *An Introduction to Systematic Reviews* that the whole question of public participation, of how the notion of stakeholders can be both conceptualised and applied, is exposed to a new level of critical exposure.

Systematic reviews are living entities. They are constantly subject to change and evolution, both methodologically and as the domains of research they draw on themselves expand, contract and alter their character. Reviews also reflect the lived experiences of those who do and use them. *An Introduction to Systematic Reviews* is rooted in the collective and collaborative experiences of researchers at the Evidence for Policy and Practice Information and Co-ordinating Centre (EPPI-Centre) at the UCL Institute of Education in London. The original

group of ten EPPI-Centre authors who contributed to the 1st edition of the book has expanded to 21 for this new edition (18 current and three ex-EPPI-Centre researchers).

The story of the EPPI-Centre is a key part of my own development as a social scientist, as someone who has used and promoted both 'qualitative' research and the contribution 'quantitative' and experimental research can make to our understanding of social interventions, structures and experiences (Oakley 2000a). The evolution of the EPPI-Centre's work has been told in more detail elsewhere (Oakley et al. 2005). In the early 1990s the methodological tools of research synthesis as applied to public policy questions were relatively unsophisticated. Social researchers who wanted to do systematic reviews really only had the medical model to copy – a model inappropriately based on usually quite specific 'what works' questions and relatively unconcerned with ethical issues about inclusiveness in research. In 1993, the Economic and Social Research Council gave us a grant to establish a database of social interventions, and we subsequently carried out reviews of behavioural interventions for AIDS prevention and of sex education funded by the Medical Research Council and the (then) Health Education Authority; by 1995 we had moved on to a programme of health promotion reviews funded by the Department of Health in England. In 2000 there was also a five-year grant from the (then) Department for Education and Skills to work with educationalists undertaking systematic reviews of theory, policy and practice. Since then the range of work and funders has expanded enormously; the 29 funders listed on the EPPI-Centre website in 2016 include Research Councils, international agencies and ten UK government departments. What started out as a cottage industry in a basement room in Bloomsbury is now a sophisticated and professional exercise. The chapters of this book bear witness to an extraordinarily imaginative and sustained endeavour. One feature of EPPI-Centre reviews from the start has been the use of particular reviews to push methodological development further, work which is crucially driven by the collaborative efforts of researchers working together and pooling their ideas and experiences. Capacity-building – creating the conditions for this sustained collective innovation – is another issue addressed more fully in this new edition.

The members of the EPPI-Centre who have written these chapters do not boast about their achievements, but there is much to be proud of. The EPPI-Centre's work is now a 'brand name' in the complex world of social and policy research, and has done much to bring the importance of systematic reviews to people's attention. A recent contribution to the prestigious scientific journal *Nature*, for instance, entitled 'Map the evidence', noted the work of the EPPI-Centre in popularising internationally the role of systematic reviews (McKinnon et al. 2015). In 2016 a significant development has been the signing of a contract between the EPPI-Centre and the National Institute for Health and Care Excellence for the use of the EPPI-Centre's web-based software for research synthesis – EPPI-reviewer 4 – in the management of NICE reviews.

The view of research and knowledge subscribed to by the authors of this book continues to be contested in some circles, where it is held to be based on the misleading idea of a stable external reality. This clash of paradigms is acknowledged and discussed at various points in the text, and it is to the authors' credit that they do not get seduced into a full-blown disputation about the use and meaning of terms such as 'qualitative' and 'quantitative' or 'positivist' and 'realist'. 'Isms' are notoriously unhelpful as aids to communication, since people tend to use them in different ways. What matters is not the label that can be attached to the method, but whether the method is the right one for the question.

What matters is the question, and then the answer. The bit in-between the question and the answer is a long and careful process requiring much thought and judgement as well as dedicated tools and approaches. Anyone who wants to know more about this process will reach the end of this book much wiser and better informed and in a much sounder position to contribute their own skills to the undervalued but critical exercise of finding out what we really do know. As the public health doctor Muir Gray has said, the great advances made in the nineteenth century through the provision of clean, clear water deserve to be repeated in the twenty-first century through the provision to everyone of clean, clear information about issues of our collective human life which concern us all (Goldacre 2009: 98).

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