

Methodological Briefs on Evidence Synthesis Brief 2: Introduction

2

Shivit Bakrania

UNICEF Office of Research – Innocenti

This series of eight briefs, produced by the UNICEF Office of Research – Innocenti, is intended to provide guidance on how to undertake, commission and manage evidence synthesis products such as systematic reviews, rapid evidence assessments and evidence gap maps. Evidence synthesis can play an important role in UNICEF's knowledge management and evidence translation efforts by collating knowledge from multiple studies on what interventions work, and why and how they work. It makes research more accessible and therefore can contribute to evidence-informed programming and policy decisions. The primary audience for these briefs is professionals, including UNICEF staff, who conduct, commission or interpret research and evaluation findings in development contexts to make decisions about policy, programming and advocacy. These briefs cover topics including:

- What is evidence synthesis? What kinds of questions can evidence synthesis products help to answer and how can they contribute to decision-making?
- How to design and undertake a systematic review, a rapid evidence assessment or an evidence gap map
- How to commission and manage an evidence synthesis product
- The future of evidence synthesis and key innovations for making the process faster and more efficient

These briefs have been written by Shivit Bakrania with input from some of the world's leading evidence synthesis experts. The other briefs in this series can be accessed at www.unicef-irc.org.

UNICEF OFFICE OF RESEARCH – INNOCENTI

The Office of Research – Innocenti is UNICEF's dedicated research centre. It undertakes research on emerging or current issues in order to inform the strategic direction, policies and programmes of UNICEF and its partners, shape global debates on child rights and development, and inform the global research and policy agenda for all children, and particularly for the most vulnerable.

Publications produced by UNICEF Innocenti are contributions to a global debate on children and may not necessarily reflect UNICEF policies or approaches. The views expressed are those of the author.

UNICEF Innocenti receives financial support from the Government of Italy, while funding for specific projects is also provided by other governments, international institutions and private sources, including UNICEF National Committees.

For further information and to download this and other publications, please visit the website www.unicef-irc.org.

UNICEF OFFICE OF RESEARCH – INNOCENTI METHODOLOGICAL BRIEFS

UNICEF Office of Research – Innocenti Methodological Briefs are intended to share contemporary research practice, methods, designs and recommendations from renowned researchers and evaluators. The primary audience is UNICEF staff who conduct, commission or interpret research and evaluation findings to make decisions about programming, policy and advocacy.

This brief has undergone an internal and external peer review. The text has not been edited to official publication standards and UNICEF accepts no responsibility for errors.

Extracts from this publication may be freely reproduced with due acknowledgement. Requests to use larger portions or the full publication should be addressed to the Communication Unit at <florence@unicef.org>.

To consult and download the Methodological Briefs on Evidence Synthesis and a glossary of key terms, visit the website <www.unicef-irc.org>.

For readers wishing to cite this document, we suggest the following form: Bakrania, Shivit, 'Methodological Briefs on Evidence Synthesis: Brief 2 – Introduction', Innocenti Research Brief 2020-02, United Nations Children's Fund Office of Research – Innocenti, Florence, 2020.

© United Nations Children's Fund (UNICEF), 2020

FURTHER GUIDANCE ON EVIDENCE SYNTHESIS

This series of methodological briefs is part of broader efforts by UNICEF Innocenti to support UNICEF staff to appraise, commission, generate, communicate and use research to drive change for children.

For further guidance on evidence synthesis, or to ask about anything covered in these methodological briefs, please contact the author, Shivit Bakrania, or Kerry Albright, Chief of Research Facilitation and Knowledge Management, at <research@unicef.org>.

ACKNOWLEDGEMENTS

This brief benefited from the guidance and input of many individuals. The author and UNICEF Innocenti wish to thank everyone who contributed and in particular the following individuals who constituted the advisory group for the project and provided substantial input to the initial concept note for the series and the drafts of the briefs themselves.

Kerry Albright is Chief of Research Facilitation and Knowledge Management at UNICEF Innocenti, where she oversees UNICEF research and knowledge activities relating to research governance and standard setting, research capacity building, evidence synthesis, research uptake and impact, and research-related organizational learning and knowledge management.

Tamara Lotfi holds a medical degree and a Master's in Public Health and has worked for more than five years in evidence synthesis, leading on at least 10 projects from different sectors. Tamara is Coordinator of the Secretariat for the Global Evidence Synthesis Initiative (GESI), hosted by the American University of Beirut, which aims to enhance capacity in low- and middle-income countries in producing and using evidence synthesis. Tamara is widely engaged in the non-profit sector in Lebanon and in community-based projects.

Rhona Mijumbi-Deve is a physician, public policy analyst and evidence broker for policy, based in Uganda. She is passionate about the use of evidence for government decision-making, with a focus on evidence for urgent and/or emergency situations, and is the Founding Director of the Center for Rapid Evidence Synthesis.

Susan Munabi-Babigumira is a researcher based at the Norwegian Institute of Public Health and an editor with the Cochrane Effective Practice and Organisation of Care (EPOC) Group. Her work is mainly in the field of implementation research, including systematic reviews of interventions to improve the organization and delivery of health care.

Sandy Oliver is Professor of Public Policy at the EPPI-Centre, University College London, and Distinguished Visiting Professor at the Africa Centre for Evidence, University of Johannesburg, South Africa. For 30 years, she has worked at the forefront of research synthesis methods and stakeholder engagement with research.

Ramya Subrahmanian is Chief of Child Rights and Protection at UNICEF Innocenti. She is an international social policy analyst with extensive experience in research, policy advocacy, training and teaching. Previously, she was Executive Director of Know Violence in Childhood. Prior to this, she was a Social Policy Specialist at UNICEF India, where she led research, policy analysis and advocacy in the areas of child-sensitive social protection, equity and social inclusion, and gender equality.

FUNDING

This methodological briefs series was funded by UNICEF. The views expressed within the briefs are those of the author and of UNICEF Innocenti and do not necessarily reflect the views of the advisory group.

1. INTRODUCTION

This brief will consider three different types of evidence synthesis products – namely, systematic reviews (SRs), rapid evidence assessments (REAs) and evidence gap maps (EGMs) – and how they differ and compare in terms of their uses and the time and resources needed for their application. It will also provide guidance on how evidence synthesis can contribute to evidence-informed decision-making, which is particularly important in the context of UNICEF’s evidence infrastructure and for ensuring that appropriate evidence is considered when making policy and programming decisions (see *Box 1*).

2. DEFINING DIFFERENT EVIDENCE SYNTHESIS PRODUCTS

SRs, REAs and EGMs are all based on a standard set of stages. The approach used is transparent and explicit and enables evidence synthesis products to be replicable and updatable (see *Briefs 3 and 4*). Table 1 provides a brief description of each product and its strengths and limitations, as well as the time frame and approximate cost of its application.

Box 1. Key questions addressed in this brief

- What are the different evidence synthesis products, how can they be defined and what are their key features?
- What kinds of questions can evidence synthesis answer and what kinds of evidence can be included?
- How can evidence synthesis contribute to evidence-informed decision-making?

Table 1. Summary descriptions of evidence synthesis products¹

| | Systematic review (SR) | Rapid evidence assessment (REA) | Evidence gap map (EGM) |
|---------------------------------|--|--|--|
| Time frame and approximate cost | An average of 12 to 15 months US\$ 80,000–100,000 | 2 to 6 months US\$ 20,000–40,000 | 6 to 9 months US\$ 60,000–80,000 |
| Description | A comprehensive and transparent approach to finding, collating, critically appraising and synthesizing the results of research relevant to a research question | A more ‘rapid’ synthesis of evidence, made possible by employing one or more options: <ul style="list-style-type: none"> ■ Focusing on a narrow or more specific research question or objective ■ Drawing on and re-analysing existing SRs ■ Increasing the size of the team and intensity of the work ■ Taking short cuts with the methods ■ Automating review steps | A visual and interactive map providing an overview of the available evidence on a particular topic, theme or domain. EGMs map out empirical evidence to highlight gaps in the evidence base and to show where evidence is more abundant. They most commonly include quantitative impact evaluations and SRs, to map out evidence on ‘what works’. However, there are also EGMs of qualitative evidence, which map the evidence on ‘how’ or ‘why’ interventions work. They are usually accompanied by a report presenting a descriptive analysis of the evidence base |

¹ The approximate costs stated in this table are based on average costs of evidence synthesis products commissioned through bilateral/multilateral development agencies. Costs may vary depending on the commissioning agent and context, and are also gradually decreasing as increased automation is starting to enable quicker completion times and reducing the need for repetitive data collection across different products. See Brief 5, section 6, for cost and budgetary considerations.

| | | | |
|-------------------------|--|---|--|
| <p>Uses</p> | <ul style="list-style-type: none"> ■ To underpin policy decisions or programme design, particularly when decisions are not urgently required. They can be publicly accessible global goods that respond to a recognized policy need | <ul style="list-style-type: none"> ■ To underpin policy decisions or programme design, particularly when decisions are urgently required within a specified time frame | <ul style="list-style-type: none"> ■ To feed into strategic decisions about research commissioning ■ To provide an intuitive research communication tool for policy and programming staff who may want to access rigorous evaluative research on particular interventions |
| <p>Strengths</p> | <ul style="list-style-type: none"> ■ SRs are the most comprehensive, authoritative and rigorous means of synthesizing evidence ■ They aim to include all of the relevant research (peer-reviewed and grey literature) ■ They have less space for subjectivity, which reduces sources of bias in assessing the strength of causal relationships and allows for a more trustworthy synthesis of qualitative research ■ They involve a duplicate and independent process for selecting studies to reduce selection bias ■ They use transparent and explicit methods that allow for the verification of findings and the replicability of the review ■ They are subject to peer review, sometimes by international coordinating bodies, which helps to maintain levels of rigour | <ul style="list-style-type: none"> ■ REAs are typically quicker to complete than SRs ■ They have a shorter time frame, meaning that they can feed into policy decisions that are required within months ■ They follow the methodological principles of an SR ■ They have a transparent methodology, which means that the limitations are clearly stated | <ul style="list-style-type: none"> ■ EGMs follow the methodological principles of an SR – including transparent and explicit methods ■ They provide an interactive and accessible means of demonstrating the distribution of evidence on a particular topic, theme or domain ■ They provide links to documents with plain language summaries ■ They can focus on a broad scope covering a range of interventions and outcomes ■ They can inform strategic decisions on research commissioning |

| Weaknesses | <ul style="list-style-type: none"> ■ SRs take a long time and are resource-intensive (both in terms of human and financial resources) ■ It is often difficult to interpret the main report without additional forms of translation and communication ■ Research questions and scope often need to be specific to obtain the best results | <ul style="list-style-type: none"> ■ REAs are not as comprehensive or reliable as SRs ■ The lack of an internationally accepted methodology and coordinating bodies means they are less reliable and more prone to risk of bias ■ They are not suitable for broad topics | <ul style="list-style-type: none"> ■ EGMs do not answer specific research questions and the level of analysis is limited ■ They most commonly include studies that assess the effectiveness of interventions (experimental and quasi-experimental studies). However, EGMs of qualitative studies are becoming more common ■ They do not provide recommendations or guidelines for policy or programme decisions |
|------------|---|---|--|
|------------|---|---|--|

2.1 Systematic reviews

An SR summarizes the best available evidence relevant to a specific research question. SRs are the most comprehensive way to collate all the relevant evidence on a particular topic or theme and they take an average of 12–15 months to complete.² They can include quantitative and (increasingly so) qualitative studies.

SRs use transparent and explicit methods to search for and select relevant studies, to appraise the quality of included studies using standardized tools, and then to report or synthesize the results of these studies in a form that is accessible. In doing so, they follow a standard set of stages, which enables the replication of SRs by other researchers and which theoretically means that another research team using the same approach and methodology would find similar results (*for details on the stages for developing, designing and conducting an SR, see Briefs 3 and 4*). They are also updatable: SRs can be revisited using the same methodology and criteria at a later stage. Due to this staged and systematic approach, they minimize the biases that can occur in other secondary research reviews.³

Box 2 describes some of the more prominent repositories in which to find examples of SRs relevant to UNICEF.

2.2 Rapid evidence assessments

As suggested above, SRs can be quite time-consuming. This runs counter to the requirements of policymakers and practitioners, who often need to make urgent decisions. A REA is therefore a compromise between rigour and timeliness as it takes less time to complete than an SR.

Whilst they do follow a systematic approach, REAs differ from SRs in several key ways:⁴

- The initial search for studies is designed to take less time and is much less comprehensive. Therefore, REAs cannot claim to include all relevant studies on a particular topic or theme.
- They usually have more specific and narrower objectives and therefore set out to include and synthesize fewer studies.

2 Borah, Rohit, et al., 'Analysis of the Time and Workers Needed to Conduct Systematic Reviews of Medical Interventions Using Data from the PROSPERO Registry', *BMJ Open*, vol. 7, no. 2, 2017, e012545. Available at: <<https://doi.org/10.1136/bmjopen-2016-012545>>, accessed 4 February 2020.

3 Campbell Collaboration, 'What is a Systematic Review?', n.d., <www.campbellcollaboration.org/explore/what-is-a-systematic-review.html>, accessed 4 February 2020.

EPPi-Centre, 'What is a Systematic Review?', n.d., <<https://eppi.ioe.ac.uk/cms/Default.aspx?tabid=67>>, accessed 4 February 2020.

4 Thomas, James, Mark Newman and Sandy Oliver, 'Rapid Evidence Assessments of Research to Inform Social Policy: Taking stock and moving forward', *Evidence & Policy: A Journal of Research, Debate and Practice*, vol. 9, no. 1, 2013, pp. 5–27. Available at: <<https://doi.org/10.1332/174426413X662572>>, accessed 4 February 2020.

Box 2. Where to find examples of systematic reviews

There are several repositories that contain SRs on issues pertinent to UNICEF. Some of the most prominent are listed below:

[The International Initiative for Impact Evaluation \(3ie\) systematic review repository](#): This repository contains SRs on the effects of a range of social and economic interventions in low- and middle-income countries (LMICs), many of which include a user-friendly summary of findings. The repository contains all of the organization's own SRs and is updated and populated annually with externally sourced SRs.

[The Campbell Collaboration library](#): This library contains a range of reviews on the effectiveness of social interventions in high-, medium- and low-income countries. Many of these reviews are accompanied by a plain language summary. All reviews in the library have been registered with Campbell and have been through a peer-review process.

[The EPPI-Centre knowledge library](#): The EPPI-Centre has conducted and supported a large number of SRs on a range of social policy themes in high-, middle- and low-income countries, including education, health, social care, developing economies, sport, environment and crime.

[The Evidence Aid library](#) contains a collection of SRs on different humanitarian topics.

[The Cochrane Database](#) contains SRs of research on health care and health policy in high-, middle- and low-income countries.

[The The United Kingdom of Great Britain and Northern Ireland's Department for International Development \(DFID\) Research for Development page](#) includes SRs that the department has commissioned. Select document type 'systematic review' to see the full collection.

- If done at all, there is often only a basic critical appraisal of studies and a minimal peer-review process.⁵
- They sometimes use other methods to speed up the process, such as increasing the size of the research team and the intensity of the work or automating some of the review steps (*for further details of innovations to improve the efficiency and timeliness of evidence synthesis, see Brief 6, section 2*).⁶

REAs are usually undertaken where: there is an existing and known body of research on the topic being studied; there is uncertainty about the effectiveness of a policy; and where policy decisions are required within a short time frame. There are no hard-and-fast rules on how long a REA should take, primarily because there are neither internationally accepted guidelines nor clarity on what constitutes 'rapid'. This leads to wide variation in the process of conducting and reporting on REAs.

The amount of time needed to undertake a REA will be determined by how quickly the evidence is needed, the available resources and the limits imposed on the established SR process.⁷

A REA is more systematic and rigorous than a traditional literature review. REAs use a systematic, explicit and transparent approach to collating studies, and studies are often screened independently by two researchers. Even so-called 'systematic' literature reviews, which adopt some elements of the systematic approach, do not apply the same level of rigour. However, the process is less thorough than for an SR, which means that less confidence can be placed in the findings of a REA. This is because the rapid approach risks introducing publication bias and there is a chance that there are other studies out there which may change the results or findings. Box 3 provides details of where to find examples of REAs relevant to UNICEF.

5 Ibid.

6 Tricco, Andrea, Etienne V. Langlois and Sharon E. Straus, *Rapid Reviews to Strengthen Health Policy and Systems: A practical guide*, World Health Organization, Geneva, 2017. Available at: <<http://apps.who.int/iris/bitstream/10665/258698/1/9789241512763-eng.pdf>>, accessed 4 February 2020.

7 United Kingdom Civil Service, 'What is a Rapid Evidence Assessment?', April 2014, <<https://webarchive.nationalarchives.gov.uk/20140402163359/http://www.civilservice.gov.uk/networks/gsr/resources-and-guidance/rapid-evidence-assessment/what-is>>, accessed 4 February 2020.

Box 3. Where to find examples of rapid evidence assessments

REAs are less common than SRs. [The UK Department for International Development \(DFID\) has a collection of REAs](#): DFID has been a prominent commissioner of REAs, which are then conducted by research teams working to a deadline. The findings are then fed into DFID business cases for policy and programming decisions. The collection contains a range of REAs on a variety of international development themes.

2.3 Evidence gap maps

EGMs are intuitive, visual and interactive tools designed to provide an overview of the existing evidence on a particular topic, theme or domain. EGMs usually map out the available empirical evidence to highlight gaps in the evidence base and to show where evidence is more abundant. They most commonly include quantitative impact evaluations, which use experimental or quasi-experimental designs, and SRs of intervention effectiveness, which map the evidence on ‘what works’. EGMs of qualitative studies are becoming more common. They map the evidence on implementation issues or on ‘how’ or ‘why’ interventions work. EGMs take the form of a matrix, where the rows represent the interventions and the columns represent outcomes (for ‘what works’ type EGMs) or the factors that may affect the implementation of interventions (for ‘how’ or ‘why’ type EGMs). Each cell in the matrix visually displays the amount of evidence available, representing the number of studies that present evidence on the effects of a particular intervention on a particular outcome, or the evidence on intervention and implementation factors. In most EGMs, there is also usually a visual representation of the degree of confidence that can be placed in the findings of the included SRs.⁸ Figures 1 and 2 show two examples of EGMs commissioned by UNICEF.

EGMs follow the same staged systematic approach as SRs. However, they do not answer a specific research question. Instead, the objective is to visually map and display the distribution of evidence. They are usually accompanied by a report that: presents descriptive findings on the evidence base (including key characteristics such as the geographical distribution of interventions, the research designs used and the populations targeted); analyses the distribution of evidence; highlights the key evidence clusters and gaps; and presents recommendations on topics where future research could most usefully be focused. Therefore, EGMs serve the purpose of: (1) making evidence available in an intuitive, visual and accessible format for decision makers that is less intimidating than an academic paper; and (2) facilitating informed decisions about which topics new primary studies could most usefully address (i.e., where there are evidence gaps) or which topics would be suitable for SRs (i.e., where there are clusters of primary studies and no existing syntheses of evidence).⁹ Box 4 provides some of the main repositories for finding EGMs relevant to UNICEF.

8 Snilstveit, Birte, et al., ‘Evidence & Gap Maps: A tool for promoting evidence informed policy and strategic research agendas’, *Journal of Clinical Epidemiology*, vol. 79, 2016, pp. 120–129. Available at: <<https://doi.org/10.1016/j.jclinepi.2016.05.015>>, accessed 4 February 2020.

Bakrania, Shivit, Anita Ghimire and Nikola Balvin, *Bridging the Gap to Understand Effective Interventions for Adolescent Well-being: An evidence gap map on protection, participation, and financial and material well-being in low- and middle-income countries*, UNICEF Office of Research – Innocenti, 2018. Available at: <www.unicef-irc.org/publications/931-bridging-the-gap-to-understand-effective-interventions-for-adolescent-well-beingan.html>, accessed 4 February 2020.

9 Snilstveit, Birte, et al., *Evidence Gap Maps: A Tool for promoting evidence-informed policy and prioritizing future research*, the World Bank, Washington, D.C., 2013. Available at: <<https://doi.org/10.1596/1813-9450-6725>>, accessed 4 February 2020.

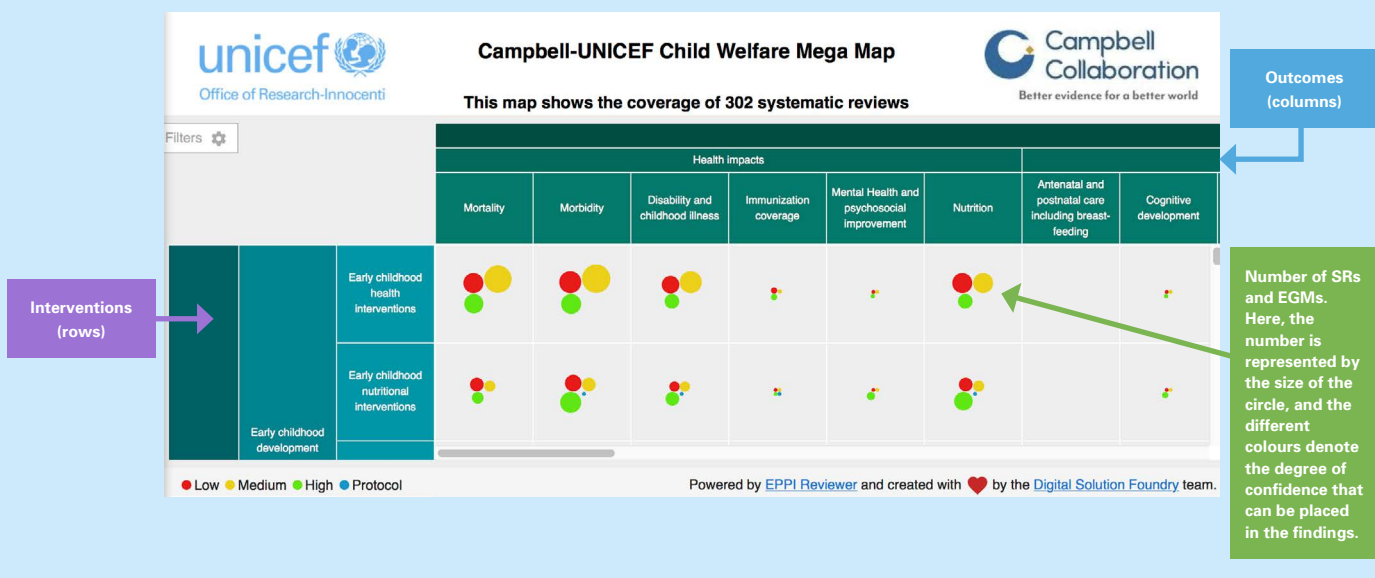
Figure 1. UNICEF’s Evidence Gap Map on Adolescent Well-being in Low- and Middle-income Countries: Protection, participation, and financial and material well-being

This EGM was commissioned by UNICEF Innocenti. It collates the evidence base for adolescent well-being interventions in LMICs. The thematic scope broadly corresponds with the UNICEF adolescent well-being outcome domains of protection, participation and livelihoods. Only a portion of the EGM is shown below.



Figure 2. The Campbell-UNICEF Child Welfare Mega Map

UNICEF Innocenti partnered with the Campbell Collaboration to produce the Child Welfare Mega Map, which shows the ‘state of evidence synthesis’ of the effectiveness of child welfare/well-being interventions in LMICs. This Mega Map differs from an EGM in that it is a higher level ‘map of maps’, which summarizes evidence from SRs and EGMs (not from individual impact evaluations). These have been mapped against the five high-level goals of the UNICEF Strategic Plan 2018–2021. Only a portion of the Mega Map is shown below.



Box 4. Where to find examples of evidence gap maps

The UNICEF Innocenti website has an [Evidence Synthesis and Knowledge Management](#) section, where the [EGM on Adolescent Well-being in Low- and Middle-income Countries](#) and the [Campbell-UNICEF Child Welfare Mega Map](#) can both be accessed.

[The 3ie evidence gap map repository](#) contains all of the EGMs created by 3ie and other organizations on a range of social and economic topics, mostly focusing on LMICs.

[The International Rescue Committee \(IRC\)](#) was an early adopter of EGMs (which it calls ‘evidence maps’). IRC has five main evidence maps, which are centred on the organization’s five main outcome areas: [health](#), [education](#), [economic well-being](#), [safety](#) and [power](#). In addition to these, there are three cross-cutting maps focused on [cash transfer interventions](#), [service delivery interventions](#) and interventions in [humanitarian emergencies](#).

[The Centre for Homelessness Impact](#) carries two EGMs. There is a [Homelessness Effectiveness Map](#) on ‘what works’, which includes quantitative impact evaluations and SRs of intervention effectiveness. There is also an [Implementation Issues Map](#) on ‘why’ or ‘how’ things work or not, which focuses on the factors that affect the successful implementation of homelessness interventions. This EGM includes qualitative process evaluations.

3. THE TYPES OF QUESTIONS THAT CAN BE ANSWERED BY EVIDENCE SYNTHESIS

Evidence synthesis products, and SRs in particular, are commonly associated with answering questions related to the effectiveness of a given intervention (‘what works’) through the synthesis of quantitative evidence. This has led to criticisms of the evidence synthesis movement for being reductionist because certain types of research designs and methods – namely, experimental or quasi-experimental studies that can claim causal inference between interventions and outcomes – are seen to be favoured. However, SRs can equally answer questions of ‘why’ or ‘how’ an intervention works, and this can entail the synthesis of qualitative studies and mixed methods studies. Indeed, there have been efforts in recent years within the evidence synthesis movement to promote and highlight a more pragmatic approach, recognizing that ‘context matters’.

3.1 Using evidence synthesis for ‘what works’ type research questions

Many SRs set out to test a hypothesis about the effects of an intervention to help determine what kinds of intervention work. These types of SRs are sometimes referred to as ‘systematic reviews of effects’ or ‘effectiveness reviews’. They often collate experimental or quasi-experimental studies on a particular intervention or a set of related interventions. They use statistical methods to summarize the results of these studies and offer conclusions on how effective an intervention, or a set of related interventions, is. They sometimes use an ‘aggregative’ approach, whereby data – usually quantitative data – from multiple studies are combined or pooled in a meta-analysis in order to test the impact of interventions.¹⁰

A meta-analysis is a statistical process for combining numerical data from multiple studies (*for further details of analysis and synthesis methods for SRs of effects, see Brief 4, section 7*). Box 5 summarizes the approach and findings of an SR of effects that sets out to answer a ‘what works’ type question. It may not always be possible to summarize quantitative data in a meta-analysis. Some SRs may describe the results narratively and others may provide a graphic display of the results from the included studies.

10 Snilstveit, Birte, Sandy Oliver and Martina Vojtkova, ‘Narrative Approaches to Systematic Review and Synthesis of Evidence for International Development Policy and Practice’, *Journal of Development Effectiveness*, vol. 4., no. 3, 2012, pp. 409–429. Available at: <<https://doi.org/10.1080/19439342.2012.710641>>, accessed 4 February 2020.

Oliver, Sandy, David Gough and James Copestake, *Approaches to Evidence Synthesis in International Development*, Centre of Excellence for Development Impact and Learning, London, 2017. Available at: <<https://cedilprogramme.org/wp-content/uploads/2018/01/Approaches-to-evidence-synthesis-in-international-development.pdf>>, accessed 4 February 2020.

Box 5. A systematic review of parental, community and familial support interventions to improve children's literacy in developing countriesⁱ

[This review](#) examines the availability of evidence on the effectiveness of interventions to improve parental, familial and community support for children's literacy development in developing countries. It is an example of an SR that sets out to answer a 'what works' type question.

The SR includes quantitative studies with experimental or quasi-experimental designs, which use a treatment and comparison group to evaluate the impacts of interventions. The SR finds that many intervention models are widely used in LMICs, including: the provision of libraries (standing or mobile); local language publishing in, for example, Cambodia, Sri Lanka and Zambia; literacy outside schools, including the teaching of literacy interventions through religious instruction; the distribution of e-readers; educational television and radio; and supporting community members to educate children.

The review synthesizes studies using meta-analysis to determine the effectiveness of interventions. It finds that, overall, parent training and child-to-child tutoring interventions are ineffective, though some approaches may be effective in some contexts. It also finds that educational television appears to improve literacy with frequent viewing.

i Spier, Elizabeth, et al., 'Parental, Community, and Familial Support Interventions to Improve Children's Literacy in Developing Countries: A systematic review', *Campbell Systematic Reviews*, vol. 12, no. 1, 2016, pp. 1–98. Available at: <<https://doi.org/10.4073/csr.2016.4>>, accessed 4 February 2020.

3.2 Using evidence synthesis for 'how' or 'why' type questions

These SRs aim to generate theories or concepts and add contextual or descriptive analysis to answer questions about 'how' or 'why' an intervention works. This is sometimes referred to as a 'configurative' approach, whereby data, usually qualitative, from multiple studies are collated, configured and interpreted using qualitative data analysis techniques to infer a theory or to build an argument. Methods of analysis include thematic synthesis and meta-ethnography (*for further details of these methods, see Brief 4, section 7*).

3.3 Evidence synthesis that mixes methods and approaches

Some SRs attempt to answer 'what works' type as well as 'how' and 'why' type questions. These SRs will often have two sets of objectives: to synthesize quantitative evidence on the effects of interventions; and to explore features or mechanisms associated with the success or failure of interventions. The analysis then combines findings from both objectives to explore the implications for policy and practice. Box 6 provides an example of such an SR.

Box 6. A systematic review of interventions for improving learning outcomes and access to education in low- and middle-income countriesⁱⁱ

[This is an example of an SR](#) that mixes methods and approaches to answer two distinct but related sets of objectives. The first set of objectives pertains to identifying, assessing and synthesizing evidence on the effects of education interventions on children's access to education and learning. The second set of objectives is focused on the intervention and implementation features associated with success or failure, and contextual barriers to, and facilitators of, the education interventions.

For the first set of objectives, the SR includes experimental and quasi-experimental studies assessing the effects of education interventions. These studies were synthesized using meta-analysis to estimate the average effects of different education interventions. For the second set of objectives, the SR also includes qualitative studies, descriptive quantitative studies, process evaluations and project documents linked to the interventions that were evaluated in the included experimental and quasi-experimental studies. This evidence was synthesized using a thematic synthesis approach to identify process, implementation and contextual factors that may explain the effects of interventions.

The SR finds that education interventions typically improve learning or participation, but not both. Cash transfers and structured pedagogy interventions work in most contexts. Cash transfers had the largest and most consistent positive effects on increasing school enrolment, reducing dropouts and improving completion. However, on average, they have not improved learning outcomes. Structured pedagogy interventions had the largest and most consistent positive effects on improving learning outcomes.

ii Snilstveit, Birte, et al., *Interventions for Improving Learning Outcomes and Access to Education in Low- and Middle-income Countries: A systematic review*, *Systematic Review* 24, International Initiative for Impact Evaluation, London, 2015. Available at: <<https://doi.org/10.23846/SRS007>>, accessed 4 February 2020.

3.4 What kinds of questions can REAs and EGMs help with?

REAs can be relevant to policymakers because they take less time and so may feed into time-sensitive decisions. However, they are less comprehensive than SRs because less time is usually allocated to conducting them. Therefore, whilst REAs could conceivably answer the same types of questions as SRs ('what', 'how' or 'why'), the scope of the original question would arguably need to be much narrower. There is also limited time for the synthesis and analysis stages of a REA, meaning that less can be expected at these stages too. Meta-analysis could conceivably be conducted because the techniques are standardized and readily transferable. Limited thematic synthesis could also be conducted, with findings summarized thematically according to categories outlined in a pre-existing thematic or conceptual framework. However, it is

probably too much to expect the generation of new concepts from a REA.¹¹ Box 7 summarizes the approach and findings of a REA that draws on a pre-existing framework to synthesize evidence.

As stated earlier, EGMs do not answer specific research questions. The objective of an EGM is to collate, map and describe the distribution and state of evidence within a particular topic, theme or domain. While most EGMs map the evidence on 'what works', there are some that map qualitative evidence on 'how' or 'why' interventions work (*see Box 4*). This mapping can then underpin a research strategy – by helping to support decisions on where new primary studies should be conducted or by identifying those topics that would benefit from new evidence syntheses (such as SRs or REAs).

Box 7. A rapid evidence assessment on the impact of livelihood opportunities and interventions on migrationⁱⁱⁱ

[This REA](#) focuses on two research questions:

- What effect does the availability of sustainable livelihood opportunities have on international migration from LMICs, both within the region and to higher-income regions?
- To what extent are livelihood interventions in origin, transit or first asylum countries likely to have an identifiable impact on migration decisions among targeted groups and communities?

The REA includes qualitative and quantitative studies that focus on livelihood opportunities and interventions. Theoretical and conceptual studies are excluded. It synthesizes the evidence using a thematic synthesis approach that draws on a pre-existing conceptual framework (DFID Sustainable Livelihoods Framework) to inform the analysis and categorization of data.

The REA finds that: an increase in livelihood assets facilitates more migration; more education may lead to more migration whereas school enrolment may decrease short-term migration; a perceived lack of livelihood opportunities may contribute to migration aspirations; in situations of conflict or environmental degradation, migration may be part of a household adaptation strategy.

The REA also finds that evidence on livelihood interventions is limited. Most of the evidence is on financial programmes but the findings are inconsistent. The limited body of evidence on education programmes suggests that education and training programmes may increase beneficiaries' desire to move if they are unable to use their new skills locally after the programme concludes.

ⁱⁱⁱ Fratzke, Susan, and Brian Salant, *Understanding the Impact of Livelihood Opportunities and Interventions on Migration Patterns: Rapid evidence assessment*, Department for International Development, London, 2017. Available at: <https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/685188/Migration-Livelihoods1.pdf>, accessed 4 February 2020.

4. HOW CAN EVIDENCE SYNTHESIS CONTRIBUTE TO EVIDENCE-INFORMED DECISION-MAKING?

Evidence synthesis products have the potential to inform policy and programming decision-making processes. As stated above, policy questions are rarely answered by a single study and decision-making is more rigorous if policymakers have access to all of the relevant evidence on a particular topic. Box 8 states how UNICEF has used evidence synthesis to inform decision-making.

Box 8. How has UNICEF used evidence synthesis to inform decision-making?

The [Campbell-UNICEF Child Welfare Mega Map](#) is informing global research priorities for UNICEF. It collates evidence and maps this against the [five goal areas of the UNICEF Strategic Plan 2018–2021](#), which makes it particularly relevant for the organization. The findings on the distribution of evidence across these Strategic Plan areas have fed into a series of [five research briefs](#), which provide user-friendly and accessible overviews of: (1) the areas in which there is ample evidence to guide policy and practice (to encourage policymakers and practitioners to use the Mega Map as a way to access rigorous studies of effectiveness); and (2) the gaps in the evidence base (to encourage research commissioners to commission studies to fill these evidence gaps).

The Mega Map has also been used as a basis for discussion and coordination with other stakeholders and institutions interested in evidence-informed decision-making for children. The findings of the Mega Map were used to guide a broader conversation on child well-being at the [‘Evidence for Children’ roundtable](#).

Evidence synthesis products can be relevant to policymaking by presenting clear findings from different types of evidence in order to:

- Define and frame a problem, by collating evidence from studies addressing the nature and magnitude of the problem rather than ‘cherry-picking’ research findings to support an existing view.
- Assess the potential policy options, by collating evidence from studies evaluating the effectiveness of interventions.
- Identify implementation considerations for policy options, by collating evidence from studies exploring the factors that may lead to policy success or failure, including contextual considerations.
- Map the evidence base, which may form the basis for strategic decisions on research commissioning.
- Gain new insights from the existing body of evidence by facilitating comparison and critical appraisal to assess the reliability of claims made in single studies.¹²

4.1 The disconnect between policymaking needs and evidence synthesis practice

The uptake of findings from evidence synthesis by policymakers has often been hampered due to certain disconnects between policymaking needs and realities, and traditional academic approaches to evidence synthesis. Several potential issues can lead to evidence synthesis being less useful for decision-making:¹³

- **The complexity of policy problems and questions:** Particularly in the social sciences, policy problems are often broad and multifaceted and policymakers are interested in wide-ranging and complex questions, which may involve multiple interventions with complex causal linkages to multiple and long-term outcomes. These questions may entail a scope that crosses multiple academic disciplines and themes. In contrast, SRs have traditionally tended to focus

12 Snilsveit, Birte, ‘Synthesis as the Cornerstone of Evidence Informed Decision Making’, Presentation, UNICEF Office of Research – Innocenti, Florence, 2019.

Lavis, John N., ‘How Can We Support the Use of Systematic Reviews in Policymaking?’, *PLOS Medicine*, vol. 6, no. 11, 2009, e1000141. Available at: <<https://doi.org/10.1371/journal.pmed.1000141>>, accessed 4 February 2020.

13 Oliver, Sandy, and Kelly Dickson, ‘Policy-relevant Systematic Reviews to Strengthen Health Systems: Models and mechanisms to support their production’, *Evidence & Policy: A Journal of Research, Debate and Practice*, vol. 12, no. 2, 2016, pp. 235–259. Available at: <<https://doi.org/10.1332/174426415X14399963605641>>, accessed 4 February 2020.

on discrete and narrow sets of interventions and simple conceptual frameworks. This is because more complex questions, a larger scope and the inclusion of multiple and varied interventions affects the manageability of evidence synthesis products.

- **Issues of presentation and accessibility:** Evidence synthesis products are often full of technical jargon and presented in an inaccessible style. Furthermore, some synthesis articles appear in academic journals, which often require a paid subscription.
- **Issues of generalizability and transferability:** Evidence synthesis products can have a large geographic scope. Many of the examples included in this brief, for example, have a global scope or incorporate studies from LMICs generally. However, a key issue for policymakers is the transferability of findings at a global level to specific and individual contexts. For example, is there any guarantee that an intervention shown through aggregative synthesis (e.g., through meta-analysis) to be effective at a global level can be transferred effectively to a specific context?¹⁴
- **Time considerations:** Policymakers usually need timely or urgent answers to policy questions and may not be able to wait months or years for the completion of evidence synthesis products.

4.2 Towards policy-relevant evidence synthesis

Experience shows that continual engagement between policymakers and researchers, from shaping the research question and objectives to interpreting the findings, can increase the chances of evidence synthesis products having policy-relevant insights. The principle of stakeholder engagement is explored further in Briefs 3, 4 and 5, but some of the key issues are highlighted below:

- **Shaping the research question and framework:** Engagement at the design stage of evidence synthesis products can help to navigate the tension between: (1) being too inclusive (with a large scope and a complex research question); and (2) being too focused, which may have benefits in terms of manageability but may, in turn, lead to the exclusion of important data and reduce the policy usefulness of the product.¹⁵
- **Including a broad range of expertise and perspectives:** An inclusive process involving policymakers, practitioners and researchers ensures that all key and priority issues within a certain topic are considered and that a full range of evidence types, sources and expertise is included.¹⁶ This is especially important in the Sustainable Development Goals era, which focuses on ‘wicked’ or complex problems where trade-offs between several desired policy outcomes across multiple sectors may be required.
- **Ensuring that evidence synthesis is accessible:** There are several ways to make findings from evidence synthesis accessible. This involves moving a step beyond evidence synthesis to knowledge brokering and translation. Knowledge brokering entails building relationships, networks and trust between groups of people (e.g., between researchers, policymakers and local communities) to facilitate the use of evidence in policymaking. A key issue here is to make linkages between different types of knowledge to improve decision-making.¹⁷ It is also important to ensure that knowledge generated from evidence synthesis

14 The transferability of findings from evidence synthesis is an ongoing concern and research has been conducted to explore this. For example, see: Munthe-Kaas, Heather, Heid, Nøkleby, and Lien Nguyen, ‘Systematic Mapping of Checklists for Assessing Transferability’, *Systematic Reviews*, vol. 8, no. 1, 2019. Available at: <<https://doi.org/10.1186/s13643-018-0893-4>>, accessed 4 February 2020.

15 Oliver and Dickson, ‘Policy-relevant Systematic Reviews to Strengthen Health Systems’.

16 The Royal Society, *Evidence Synthesis for Policy: A statement of principles*, The Royal Society/The Academy of Medical Sciences, London, 2018. Available at: <<https://royalsociety.org/-/media/policy/projects/evidence-synthesis/evidence-synthesis-statement-principles.pdf>>, accessed 4 February 2020.

17 Cummings, Sarah, et al., ‘The Future of Knowledge Brokering: Perspectives from a generational framework of knowledge management for international development’, *Information Development*, vol. 35, no. 5, 2019. Available at: <<https://doi.org/10.1177/0266666918800174>>, accessed 4 February 2020.

is accessible, understandable and actionable by decision makers. This entails using different formats for different audiences – for example, summary reports or plain language summaries of SRs, policy briefs that draw on the findings of SRs, and online evidence portals, which present easily accessible (and often visual) findings from evidence synthesis on what works (and what does not work). Knowledge brokering and translation are explored in further detail in Brief 5.

- Stakeholder engagement on the interpretation and implementation of findings:** This is another part of the knowledge brokering process. For example, deliberative dialogues are processes that bring together policymakers, researchers and other stakeholders to integrate and interpret evidence synthesis and combine this with contextual evidence for the purpose of context-specific policy development. Apart from providing a forum for interaction between different stakeholders, such dialogues can also help identify agreement between the scientific evidence and the beliefs, values, interests, political goals and strategies of policymakers.¹⁸ Stakeholder engagement is further explored in Briefs 3, 4 and 5.

18 Lavis, John N., Jennifer A. Boyko and Francois-Pierre Gauvin, 'Evaluating Deliberative Dialogues Focussed on Healthy Public Policy', *BMC Public Health*, vol. 14, no. 1, 2014, p. 1287. Available at: <<https://doi.org/10.1186/1471-2458-14-1287>>, accessed 4 February 2020.