



DIGITAL CHILD WORKING PAPER 2022-05

Topaz Project: How to conduct a transdisciplinary realist review

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NON-TECHNICAL SUMMARY

This paper is part of a 'how to...' series aimed at supporting researchers from different specialist areas to work together to summarise evidence regarding technology use with, by and for young children. This paper focuses on how to conduct a realist review. Another paper in this series focussed on how to conduct a systematic review. A traditional systematic review aims to locate, appraise, and synthesise a body of evidence with specific inclusion criteria to answer certain research, policy, or practice question/s. In contrast, a realist review is an evidence synthesis method established in response to criticisms that systematic reviews were not delivering practice- and policy-pertinent conclusions relevant to real-world complex problems. Realist reviews are often based on a theoretical framework and involve stakeholders early on in the process.

Realist reviews focus not only on what works but how and why it works, and within what context. Realist reviews attempt to incorporate theory, and their conclusions are more likely to be relevant to policy and practice, which can be used to support better outcomes for children growing up in a digital world. The purpose of this paper is to provide a readily accessible resource of information on how to conduct transdisciplinary realist reviews. By 'transdisciplinary', we mean researchers from different discipline areas working together with a shared understanding. For example, a review team could include a physiotherapist, a software engineer and an educator. The realist review process is conceptualised to include several steps, with iteration possible within each stage and between stages. There can be frequent changes as new evidence can shift the direction and focus of searching. This 'how to...' guide builds on the prior frameworks and approaches and provides explanations of what to do at each step, along with a curated list of resources relevant to each step, in a manner sensitive to diverse disciplines.

In conducting a realist review, it is important to engage and involve end-users (the people who will use the synthesis of evidence) and stakeholders early and throughout the process. Within the early stages, it is important to identify the review question. Realist review questions are generally formed around the overall aim of identifying programme theory based on what works, for whom and in what circumstances. A plan for the realist review should be written before commencing. Realist reviews include a few search stages or components that span from early to late in the review process. Overall, the search for evidence is through a purposive sampling strategy. The researchers then judge if the evidence should be included based on its relevance and rigour to determine if it is 'fit for purpose', and the information from the included evidence is gathered. An evidence summary is then prepared and presented in a report, which should clearly identify recommendations for stakeholders.

Realist reviews provide a structured yet iterative and creative process to deal with synthesising evidence on more complex transdisciplinary issues. These reviews integrate theory to focus not only on what works but how and why it works, and within what context to provide conclusions that are more likely to be relevant to policy and practice. Overall, this paper promotes the use of realist reviews across multiple specialist areas relevant to young children and digital technologies.



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How to...conduct a transdisciplinary realist review to support evidence-based decision-making with, by and for young children

ABSTRACT

This paper is part of a 'how to...' series aimed at supporting transdisciplinary reviews regarding technology use with, by and for young children. A realist review is an evidence-synthesis method that seeks an explanatory focus instead of a judgemental focus. Realist reviews focus not only on what works but how and why it works, and within what context. These reviews attempt to incorporate theory to create conclusions that are more likely to be relevant to policy and practice. They are particularly useful to review evidence on complex issues and therefore lend themselves well to transdisciplinary research. The aim of this paper is to provide a readily accessible resource of information on how to conduct transdisciplinary realist reviews. The realist review process is conceptualised to include several steps conducted with iteration possible within each stage and between stages. Conducting a realist review is typically not a linear process but rather has some flexibility. This 'how to...' guide builds on the prior frameworks and approaches and provides explanations of what to do at each step, along with a curated list of resources relevant to each step, in a manner sensitive to diverse disciplines. Transdisciplinary realist reviews can provide an important mechanism for not only aiding in transdisciplinary understanding of complex issues, but for creating evidence summaries that are relevant to end-user needs.



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INTRODUCTION

This paper is part of a ‘how to...’ series aimed at supporting transdisciplinary reviews regarding technology use with, by and for young children. This paper focuses on how to conduct a realist review. Other papers in this series are focussed on how to conduct systematic, scoping and rapid reviews (Beynon and Straker, 2022a; Beynon and Straker, 2022b; Beynon and Straker, 2022c). Conventionally a systematic review aims to locate, appraise and synthesise a body of evidence with specific inclusion criteria to answer a certain research, policy or practice question (or series of questions). In contrast, a realist review is an evidence-synthesis method established in response to criticisms that systematic reviews were not delivering practice- and policy-pertinent conclusions relevant to real-world complex problems. Realist reviews are often based on a theoretical framework and early involvement of stakeholders. Systematic reviews and meta-analyses can tell you if an intervention is effective or not, but they typically cannot tell you why, how, or for whom it worked (Hunter et al., 2020).

A realist review (also called realist synthesis) is an evidence-synthesis method that seeks an explanatory focus instead of a judgemental focus. Realist reviews focus not only on what works but how and why it works, and within what context. This approach attempts to incorporate theory to create conclusions that are more likely to be relevant to policy and practice (Pawson et al., 2004). Realist reviews can incorporate the complexities of modern service delivery and are amenable to the use of multi-method, transdisciplinary evidence base (Pawson et al., 2004). Realist reviews focus on underlying ‘theories’. Evidence can be gathered on the process of how information from policy makers is implemented by practitioners, educators and managers, and then how this information is used by the users (i.e. patients, parents, children). Authors conducting realist syntheses typically review evidence on complex issues to provide explanatory analyses of how and why certain complex interventions work (or don’t work) in certain contexts or settings (Pawson et al., 2005). What works in setting A may not work in setting B. Realist reviews complement more traditional methods such as systematic reviews, which historically were developed and used mainly for clinical interventions (Pawson et al., 2004).

Transdisciplinary interventions are complex, multi-faceted, often have a social focus and may be dynamic. In attempting to determine what works by means of more conventional systematic review approaches, it is common to conclude a homogenous answer of ‘sometimes’ or ‘to some extent’ or ‘more evidence is required’. However, such conclusions are of little value to end-users such as policy makers, practitioners or educators (Pawson et al., 2004). Systematic reviews do not provide information about why that intervention works sometimes and sometimes it doesn’t, or in what situations or for whom it is more or less likely to work. Comparatively, realist reviews can unpack the mechanisms of how and consider why complex interventions may thrive or fail, in certain settings (Pawson et al., 2005).

The overall aim of a realist review is to explore — ‘what works, for whom, in what circumstances, in what respects, and how?’ (Pawson et al., 2004).

Realist reviews are useful when considering a complex intervention or programme, with the aim of having an explanatory focus, while still using very rigorous methods (Hunter et al., 2022). There is generally a theory-driven synthesis that assesses the intervention of interest in terms of relevant



theories. Realist reviews use an iterative process, which is not always linear, and the theories may need to be refined throughout the process (Gough, 2013). However, the process should still be accurate and transparent. Realist reviews follow similar steps to traditional systematic reviews but do have some important differences. Realist reviews overall follow a more heterogeneous process.

In a realist approach, the implications of the study design and methods, and the roles of the participants, need to be considered (Greenhalgh et al., 2015). Realist reviews can offer an approach to uncover the underlying theories in order to rationalise these demi-regularities by examining the interactions between mechanism, context, and outcome (Context + mechanism = outcome) (Pawson et al., 1997; Rycroft-Malone et al., 2012). For example, instead of simply comparing mean differences in participants who have or have not undertaken a particular programme (such as in a randomised controlled trial), a realist approach would assess context-mechanism-outcome within programmes. In this approach, if and when a programme works more or less well in different locations, for different population groups, and/or through different mechanisms, may be considered.

When initiating a realist review, identify underlying assumptions about how an intervention is meant to work (called the 'programme theory') and gather evidence systematically to refine this theory (Pawson et al., 2004). Instead of seeking to find one answer or universal truths, realist reviews attempt to address the notion that the 'same' intervention will never be implemented identically and will not have the same impact due to differences in the context, setting, process, stakeholders and outcomes (Pawson et al., 2004). Realist reviews are theory-led because they consider programme outcomes to develop theories and then patterns among the theories, and after consultation of literature and stakeholders, the theories are tested. Realist reviews generally use formal, well-established theories (like self-determination theory (Adams et al., 2017)) to inform the theory development (Hunter et al., 2022).

Realist reviews can reflect on the causal model during the review process instead of as a prior developmental stage (such as in a typical systematic review). Realist reviews can test aspects of the model utilising an iterative investigative position instead of a typical *a priori* approach (Gough, 2013).

The advantages and disadvantages of realist reviews are summarised in Table 1 (Berg and Nanavati, 2016; Hunter et al., 2022; Pawson et al., 2004; Pawson 2005 et al.,)



TABLE 1 ADVANTAGES AND DISADVANTAGES OF REALIST REVIEWS

Advantages	Disadvantages
Focus not only on what works but how and why it works, and within what context Attempt to integrate theory and seek not to judge but to explain concepts. Conclusions are more likely to be relevant to policy and practice	May not have clearly established methods, may have little uniformity, and may stray from the initial protocol
Can deal with more complex social and transdisciplinary interventions	Theoretical frameworks may introduce bias
Can include a range of articles (including both quantitative and qualitative), from a range of evidence sources (peer reviewed articles, policy reviews, stakeholder analysis, grey literature etc.)	Can be very challenging to conduct. Require more judgement, experience, and the ability to converse with policy makers
Should be transparent and rigorous in the approach	May not be standardised or reproducible
Engage stakeholders systematically and can use a creative process	

The realist review process is conceptualised to include several steps conducted with iteration possible within each stage and between stages (see Table 2). There can be frequent changes as new evidence can shift the direction and focus of searching, which can open up new areas of theory (Pawson et al., 2004). Conducting a realist review is typically not a linear process but rather generally has some flexibility and can be iterative in nature. It is just for clarity that the steps are written in sequence but practically these steps can overlap or repeat, particularly as new insights emerge. Before starting a realist review, be sure to understand all the steps involved.

There may be differences between a traditional systematic review and a realist review but one area of consensus between the two methods is the need for transparency and ‘auditability’ throughout the review process. It is important to ensure the review is conducted rigorously to ensure the findings and conclusions are verifiable (Pawson et al., 2004). However, when conducting a realist review, transparency may not be a simple goal, because the process of the review is complex and heterogeneous. Nevertheless, the intention should be the same: each step should be mapped out with explicit details about decisions made and the justification, in order for others to understand how review went from its initial question/objective to its findings and recommendations. It is extremely important to document everything and have good records as you go.



TABLE 2 OUTLINE OF STEPS INVOLVED IN CONDUCTING A SYSTEMATIC REVIEW

Step 1	Define the scope of the review a. Engage and involve users: Develop an advisory group to ensure uptake of review b. Identify the question: Create an answerable question c. Clarify the purpose(s) of the review d. Find and articulate the programme theories e. Write a protocol: Establish the methods
Step 2	Search for the evidence Locate available articles through purposive sampling
Step 3	Appraise evidence and extract data a. Appraise the evidence: Test relevance and rigour of the evidence b. Extract data: Collate relevant information
Step 4	Formulate a synthesis Collate, compare, contrast, and summarise the results
Step 5	Write a report Put everything together, draw conclusions and make recommendations
Step 6	Disseminate, implement, and evaluate a. Make academic community aware of the findings b. Consult with stakeholders for widest impact c. Help end-users apply the findings



The purpose of this paper is to provide a readily accessible resource on how to conduct transdisciplinary realist reviews. There are a number of ways to conduct a realist review with varying number of steps, so there can be alterations in how the review is conducted. This resource is based primarily on the recommendations by Pawson et al., 2014, Pawson et al., 2005, Hunter et al., 2022, and the realist syntheses publication standards (the RAMESES [Realist and Meta-narrative Evidence Syntheses: Evolving Standards] publication standards, Wong et al., 2013). This 'how to...' guide builds on the prior frameworks and approaches and provides explanations of what to do at each step, along with a curated list of resources relevant to each step, in a manner sensitive to diverse disciplines.

RESOURCES

- Pawson R, Greenhalgh T, Harvey G, Walshe K. (2004). Realist synthesis: An introduction. Manchester, UK: ESRC Research Methods Program.
 - This is a critical working paper that outlines the steps to conduct a realist review. This paper provides an introductory overview of realist synthesis with examples that can be applied to many fields such as; social care, healthcare, welfare, education, environment, and criminal justice.
- Pawson R, Greenhalgh T, Harvey G, Walshe K. (2005). Realist review - a new method of systematic review designed for complex policy interventions. *Journal of Health Services Research & Policy*. 10(1_suppl):21-34.
 - This article builds on the previously listed working paper with additional details about the purpose, limitations and steps involved in a realist review.
- Hunter R, Gorely T, Beattie M, Harris K. (2022) Realist review. *International Review of Sport and Exercise Psychology*. 15(1):242-65.
 - This paper explains what a realist review is, with a focus on the value of realist reviews within the context of sport and exercise psychology interventions and programmes. This paper also outlines the steps involved and provides a diagrammatic overview of how to apply Pawson's stages of a realist review.
- Wong G, Greenhalgh T, Westhorp G, Buckingham J, Pawson R. (2013). RAMESES publication standards: realist syntheses. *BM Medicine*. 11(1):1-4.
 - The RAMESES [Realist and Meta-narrative Evidence Syntheses: Evolving Standards] realist syntheses publication standards.
 - Available at: <http://www.ramesesproject.org/>



- Wong G, Greenhalgh T, Westhorp G, Pawson R. (2014). 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. *Health Service Delivery Research*. 2(30). DOI 10.3310/hsdr02300
 - This paper details the process for developing the publication standards for realist and meta-narrative reviews and outlines the publication standards, as well as methodological guidance and training material to assist in conducting realist and meta-narrative reviews.
- Rycroft-Malone J, McCormack B, Hutchinson AM, DeCorby K, Bucknall TK, Kent B, Schultz A, Snelgrove-Clarke E, Stetler CB, Titler M, Wallin L. (2012) Realist synthesis: illustrating the method for implementation research. *Implementation Science*. 7(1):1-0
 - Available at <http://www.implementationscience.com/content/7/1/33>
 - Background information about the purpose of realist reviews and the steps involved in conducting a realist review with a focus on implementing the research.

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Step 1: Define the scope of the review

The first step in a realist review is to define the scope of the review. Within this step there are several sub-steps, including the important sub-steps to have discussions with end-users, policy makers and decision makers. This discussion may consist of negotiations to determine the reason for the review and to determine how the review will be used.

Another initial sub-step is to assemble your team. Realist reviews can be challenging to conduct as they require judgement, experience, and the ability to converse with policy makers. Therefore, gathering the right team is crucial. To gain differing viewpoints, it is highly beneficial to have a transdisciplinary team. This should include review authors with domain expertise and review methodological expertise.

Within the initial stage, it is valuable to 'map the territory' to gain an understanding of how the programme or intervention is intended to work, what aspects are important, and which facets are likely to encounter difficulties. It may be worthwhile to first get a 'lay of the land' by having an exploration of the literature and consulting with key stakeholders (see Step 1A).

1A: Engage and involved users: Develop an advisory group to ensure uptake of review

Realist reviews generally require a high level of involvement and engagement from policy makers and decision makers. If there is appropriate engagement from the stakeholders, it should help in the uptake of the review, and make communicating the key findings and recommendations easier.

- Consider incorporating end-users (stakeholders) such as policy makers, parents, carers, educators, consumers, clinicians, guidelines developers, designers, engineers, policy makers etc. throughout the process.
- For research regarding children, consider involving children as stakeholders, providing input relevant to their developmental capacity.
- In the initial phase of the review, policy makers, decision makers and other stakeholder may assist by helping to identify certain theories and 'expert framing' of the problem. These initial discussions with the advisory group can help to frame the whole review.
- A Delphi method could be a highly effective way of engaging with the advisory group.

1B: Identify the question: Create an answerable question

Within the early stages, it is vital to identify the review question. Realist review questions are generally formed around the overall aim of identifying programme theory based on what works, for whom and in what circumstances.

As with all reviews, realist reviews should begin with defining and refining the research questions, which may involve conceptual sharpening. Reviewers should be working with the stakeholders (and/or commissioners of the review) to define and refine the research question.

In defining the research question within a realist review, consider:

- What is the nature and content of the intervention?
- What are the circumstances or context for its use?
- What are the policy intentions or objectives?
- What are the nature and form of its outcomes or impacts?



Undertake exploratory searches to inform discussion with review commissioners/decision makers. Refining and ‘focusing of the question’ can be very time-consuming and an ongoing task throughout the review. Often this process is iterative and shaped by the literature and conversations with the advisory group.

Due to the nature of realist reviews and the interventions they consider (usually complex as opposed to simple and discrete), and the differing purpose (generally explanatory compared to a final judgement), defining and refining a research question can occur throughout a realist review compared to being pre-established in a typical systematic review. A realist review approach is likely to take an explanatory basis, where the focus is not just about whether an intervention works but rather ‘why’, ‘when’, and ‘how’ it works. Therefore, there may not be a single question but instead a range of sub questions that may consist of:

‘What is it about this kind of intervention that works, for whom, in what circumstances, in what respects and why?’

The question should be initially framed within the early stages of the review but should then also periodically revisited and potentially revised with input from the stakeholders, based on emerging knowledge as the review is undertaken. Figure 1 shows examples of realist review questions/objectives.

FIGURE 1 EXAMPLE REVIEW QUESTIONS/OBJECTIVES:

- “The primary aims of this realist review are (i) to critically examine the impact of early years interventions on the health and wellbeing of children and (ii) to transform the wealth of data in this area into a cohesive evidence base of ‘what works, for whom and in what circumstances’, in terms of implementation in given contexts.” (Coles et al., 2015)
- “The aim of this rapid realist review was to determine, within a socioecological model, what works, for whom, and in what circumstances for physical activity interventions in school settings for children aged 7- to 11-years.” (Defever et al., 2021)
- “What are the universal population-level parent education interventions that public health nurses can implement to support children’s social, emotional, and cognitive development from the prenatal period to the end of the first year of life?” (Gilmer et al., 2016)
- “How, why, to what extent, for whom and in what circumstances can low-intensity Life Story Work (LSW) interventions, or elements of LSW interventions, be delivered to improve important and relevant outcomes for adolescents with care experience with mental health and wellbeing needs?” (Hammond et al., 2021)

1C: Clarify the purpose(s) of the review

Generally, the purpose of a realist review is explanatory. However, there are various overarching principles that the review can consider based on the explanatory theme, which may have differing policy significance. Based on the work of Pawson et al., 2004, here are just four possible directions the realist review may take:

- Theory integrity – does the intervention work as predicted?
- Theory adjudication – which theories about the intervention seem to fit best?
- Comparison – how does the intervention work in different settings, for different groups?
- Reality testing – how does the policy intent of the intervention translate into practice?

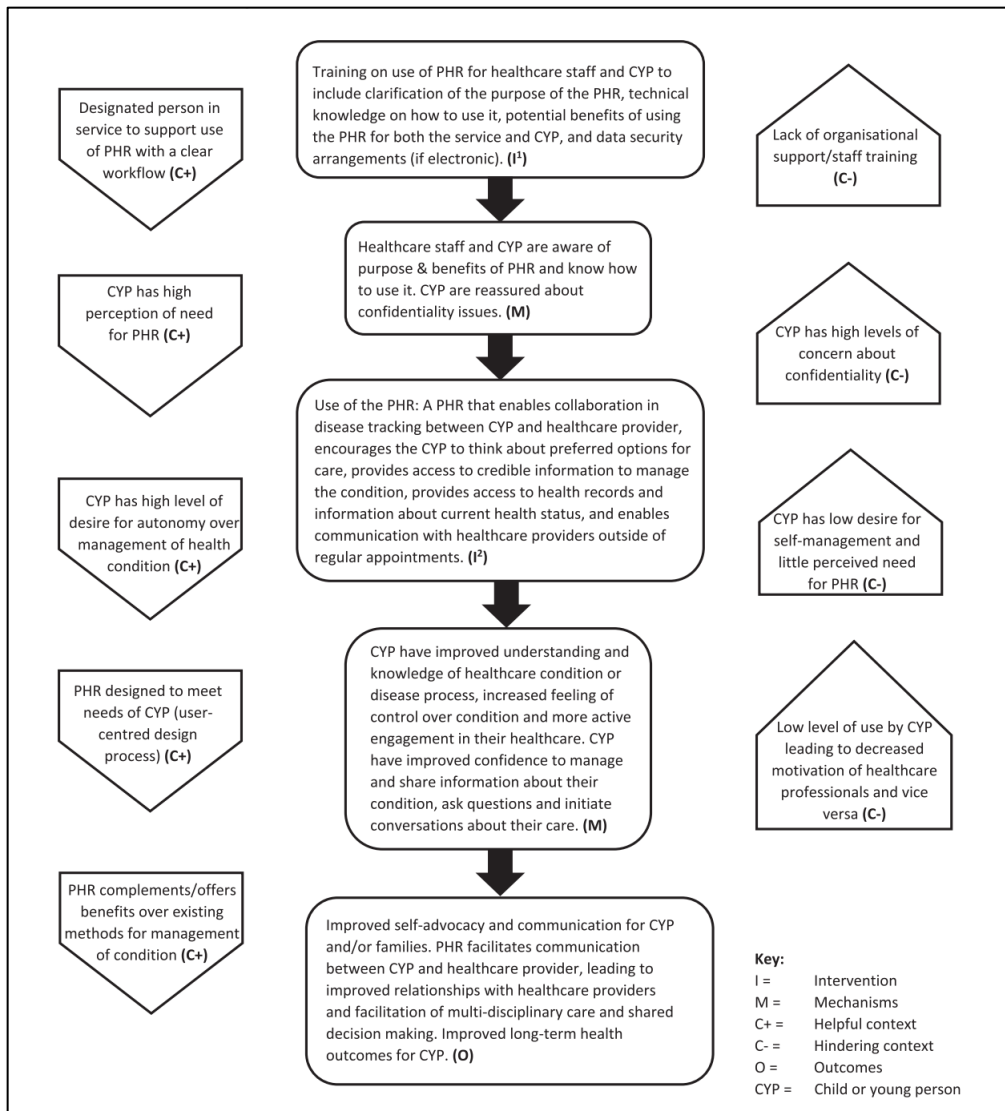


1D: Find and articulate the programme theories

Within the initial stage of defining the scope of the review, there should be discussions with the stakeholders to dissect the potential theoretical underpinnings of the intervention. As well as consulting with review commissioners, policy makers and other stakeholders (See Step 1A) to attempt to identify certain theories, it is also recommended to search the literature with the specific purpose of identifying theories, potential expectations, and rationales as to why the intervention may work. The purpose of searching for key theories is not to search for the efficacy of the intervention but rather to search for explanations of how the intervention is supposed to work and perhaps under what context, and under what context it may not work. The initial exploratory search of the literature can help to map out broadly the conceptual and theoretical territory.

Within this step, it is useful to search for the relevant theories in the literature and to create a list of programme theories. It can help to synthesis, group and/or categorise the theories and then design/build a hypothetical theory model or map. This theoretical framework can then be tested in the literature reviewed. See Figure 2 as an example of an initial theory map.

FIGURE 2 AN EXAMPLE – THEORETICAL MODEL OF HOW PERSONAL HEALTH RECORDS (PHR) ARE THOUGHT TO WORK FOR CHILDREN AND YOUNG PEOPLE (CYP) LIVING WITH A COMPLEX HEALTH CONDITION (SOURCE: DIFFEN ET AL., 2018)



1E: Write a protocol: Establish the methods

Through the review process, realist reviews can change, be flexible and are generally very iterative in nature. In early stages of the history of realist reviews, it was recommended that protocols of realist reviews not be published because it was thought this would then constrict the review to the predefined methods and objectives, which may not keep in the nature of realist reviews (Pawson et al., 2004). However, based on more recent advice from the RAMESES group (a project developed to provide guidance, training and reporting standards on realist evaluation and synthesis), it has been recommended that it is worthwhile to make the protocol publicly available early in the process.



Realist reviews have been previously criticised for their lack of rigour, therefore, to ensure that the review is rigorous and transparent, publication and reporting standards should be followed. RAMESES have published practical guidance and reporting standards for realist reviews [Realist and Meta-narrative Evidence Syntheses: Evolving Standards] publication standards, Wong et al., 2013).

The protocol for a realist review is likely to require the following sections (consult other steps for more information); this is based on a sample list of items to be included when reporting a realist synthesis (taken from (RAMESE):

- Title (Identify the document as a realist synthesis or review)
- Abstract

Introduction

- Rationale for review
- Objective and focus of review

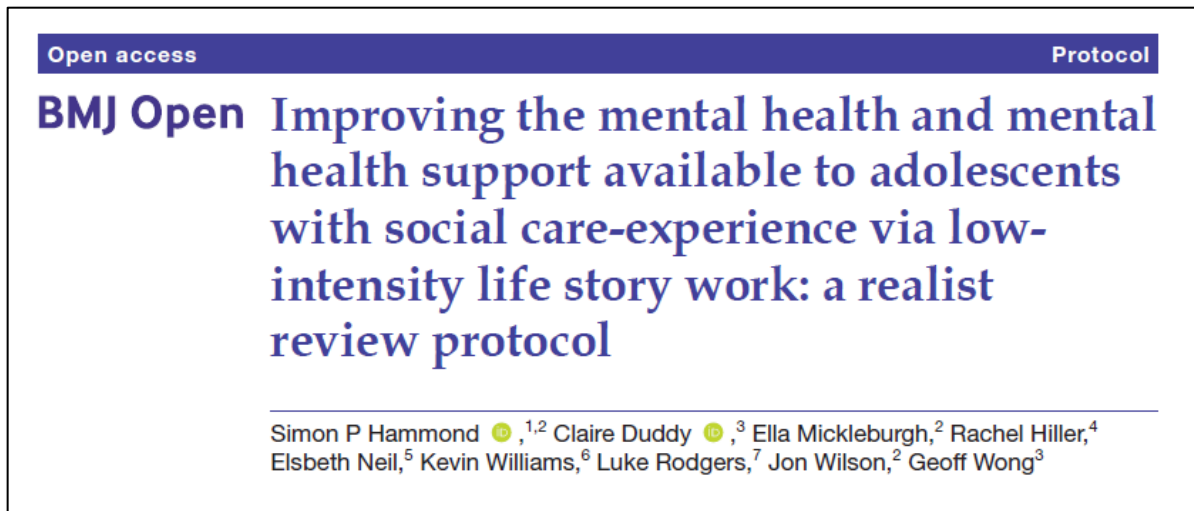
Methods

- Rationale for using a realist synthesis
- Scoping the literature
 - Describe and justify the initial process of exploratory scoping of the literature
- Search process
 - Rationale for how the iterative searching will be done including databases, search terms, dates etc.
- Selection and appraisal of documents
- Data extraction
- Analysis and synthesis processes

Historically, realist reviews were not accepted for submission to certain registers because realist reviews generally did not stick to strict *a priori* criteria. However, there are now registers, including PROSPERO and The Research Registry, that accept realist review protocols even if the methods are iterative and developing. Therefore, it is now desirable to make the realist review protocol publicly available in the early stages.

Realist review protocols may also be published and/or made publicly available on research repositories such as [Open Science Framework](#), [Figshare](#) and [Research Square](#). Some journals also publish realist review protocols (e.g., BMJ Open). See Figure 3 as an example of a published realist review protocol.

FIGURE 3 AN EXAMPLE - A REALIST REVIEW PROTOCOL PUBLISHED IN BMJ OPEN (SOURCE: HAMMOND ET AL., 2021)



RESOURCES

- Greenhalgh T. (2004) Meta-narrative mapping: a new approach to the systematic review of complex evidence. *Narrative Research in Health and Illness*. 15;349.
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- PROSPERO: Register for systematic reviews, rapid reviews, realist reviews and umbrella reviews (not scoping reviews or literature scans). Available at: <https://www.crd.york.ac.uk/prospero/> Wong G, Greenhalgh T, Westhorp G, Pawson R. (2014). 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. *Health Service Delivery Research*. 2(30). DOI 10.3310/hsdr02300

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- Hammond, S. P., Duddy, C., Mickleburgh, E., Hiller, R., Neil, E., Williams, K., Rodgers, L., Wilson, J., & Wong, G. (2022). Improving the mental health and mental health support available to adolescents with social care-experience via low-intensity life story work: a realist review protocol. *BMJ Open*, 12(3), e058424. <https://doi.org/10.1136/bmjopen-2021-058424>



Step 2: Search for the evidence: Locate available articles through purposive sampling

There are a few stages or components to the search in realist reviews, spanning from early in the review process (before or alongside defining the research question (See Step 1)) to late in the review process. Overall, the search for evidence is through purposive sampling, and the process and progress may change depending on what is found.

Searching for the evidence in a realist review is not necessarily a linear process, but the different components of the search may include:

1. Background search to gain an understanding and feel for the literature.
 2. An exploratory search of the literature to map out broadly the conceptual and theoretical territory (see Step 1D). This component of the search can be used to track the programme theories.
 3. Search for empirical evidence to test the theories or a subset of the theories. This search should consider including a range of primary studies through an array of research strategies.
 4. Final search near the end of realist review to locate any additional literature that may refine the programme theories.
- The search for empirical evidence may be viewed as the main search of the realist review. The purpose is generally to ‘populate’ the theoretical framework. Utilising the theoretical framework assists in locating, combining, comparing, and contrasting the empirical evidence.
 - Within the search process, it is key to decide and define the purposive sampling strategy, which may include:
 - Scoping the literature
 - Describe and justify the initial process of exploratory scoping of the literature
 - Iterative search process
 - Define search sources (databases and other sources), search terms, and methods to be used (including dates and cited reference searching).
 - Complementary searches are generally performed iteratively throughout the review.
 - Based on emerging data and as the programme theories are refined, the inclusion criteria may need to be changed.
 - Determine **where** to search for relevant evidence, including empirical evidence, such as which databases (and other sources) to locate relevant evidence, potentially including journal articles, policy papers, grey literature, etc.
 - Potential databases and registries to search for journal articles include (examples of subject-specific bibliographic databases):
 - ACM Digital Library (computing Machinery)
 - ASSIA (social sciences)
 - BIOSIS (life sciences)
 - British Education Index (education and training)
 - CareData (social care)
 - CINAHL (nursing and allied health)



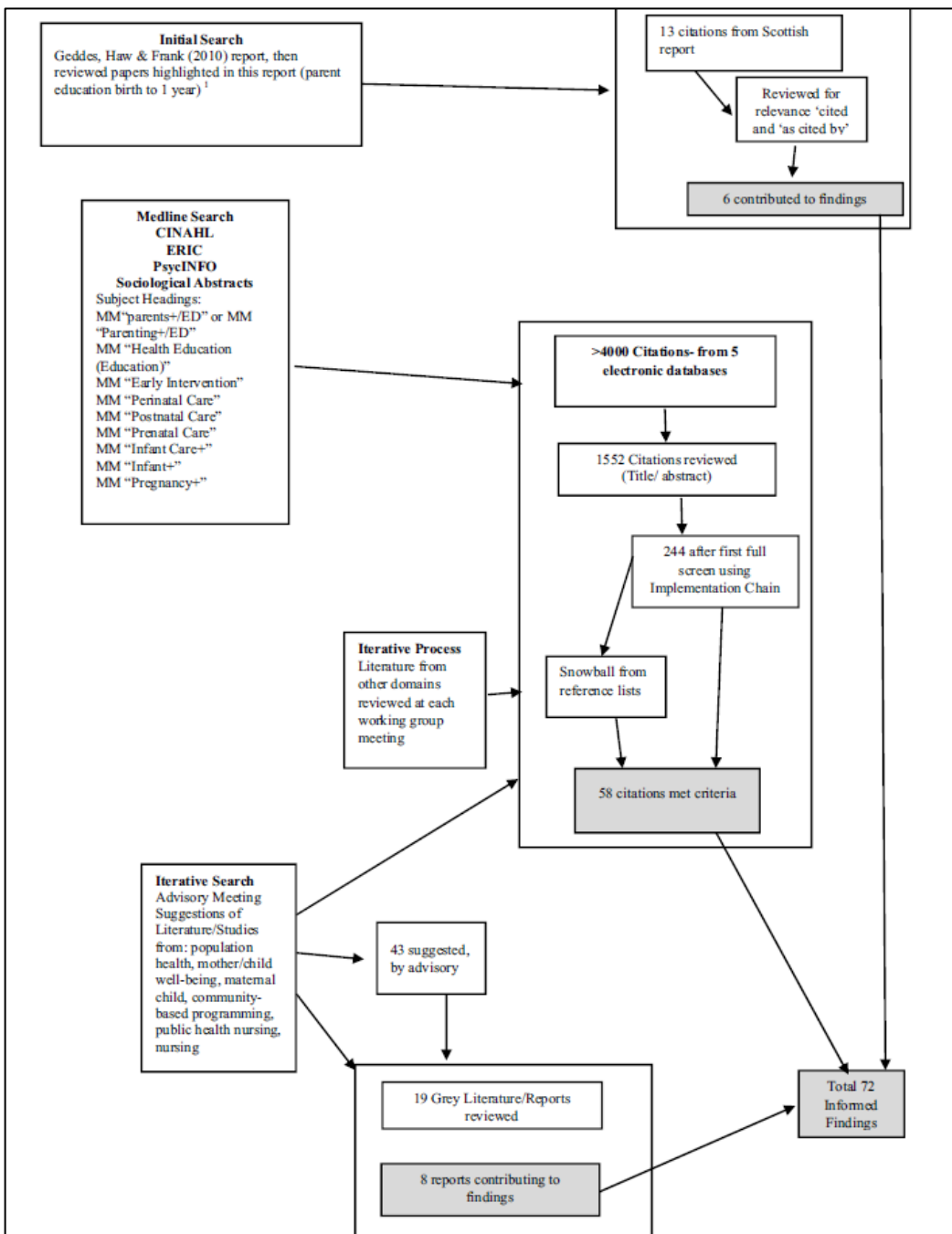
- Computer Science (computing)
- Educational research abstracts (education)
- Embase
- ERIC (education)
- IEEE Xplore (electrical engineering, computer science, and electronics)
- Medline/PubMed (health and biomedicine, PubMed is free access to Medline and includes some extra citations)
- ProQuest (multidisciplinary)
- PsycINFO (psychology and psychiatry)
- SAGE Journals (multidisciplinary)
- Scopus (multidisciplinary and citation index)
- Sociological abstracts (social science, formally Sciofile)
- SPORTDiscus (sports, fitness and sports medicine)
- Trials registers and trials results registers
 - ClinicalTrials.gov (US site listing clinical trials in the US and other countries-including Australia)
 - WHO International Clinical Trials Registry Platform (ICTRP) portal
 - International Clinical Trials Registry Platform (clinical trials being undertaken worldwide-including Australia)
 - Australian New Zealand Clinical Trials Registry (ANZCTR) (Clinical trials being undertaken in Australia and New Zealand)
 - Cochrane Central Register of Controlled Trials (CENTRAL) (randomised trials on health issues)
- Potential databases to search for grey literature:
 - **Subscribed databases** such as Scopus and Web of Science index conference papers, technical and other reports. ProQuest indexes dissertations and theses, conference papers and proceedings. Informit (an Australian database) indexes conference papers and many government documents.
 - **Websites** of key organisations in your research area are useful to search or browse. These may include: government agencies, academic or research institutes, professional associations, and advocacy groups.
 - **Grey literature databases** including specialised databases, such as [Open Grey](#), [GreyNet International](#) and [MedNar](#) that index grey literature in a number of subject areas.
 - [Trove](#) is an overarching search interface to search the content of most Australian libraries as well as archives and repositories.
 - **Search engines** such as Google are useful when searching for grey literature. A simple search for your keywords is often the best approach. To restrict the search results, you can limit to particular domains (.org .gov) or by file type (pdf). e.g., vaccination rural Australia filetype:pdf or vaccination rural Australia site:org
- Potential places to search for books or theses:
 - **Library catalogues** index local, national and international books. Search these to locate relevant resources. Your institutional or public library may be able to obtain



items that are not held in their collections via inter-library loan. (Note: this does not apply to ebooks held in university libraries, which are covered by institutional licences).

- Use [Trove](#) for Australian books and theses and [WorldCat](#) for international material.
- **Digital theses** are indexed in a number of open access resources. These include institutional repositories (see [Australasian Open Access Repositories](#) for a list of research repositories), [WorldCat](#), [OAIster](#), the [Networked Digital Library of Theses and Dissertations](#) and the [British Libraries – EthOS e-theses online service](#).
- Within the search of realist reviews (compared to traditional systematic reviews), less emphasis is put on ‘key words’ in the search strategy but rather there is usually more of a focus on identifying context, mechanisms and outcomes (Context + mechanism = outcome) in order to build theory. Index headings and key words are still used, but there are some differences to more traditional systematic reviews:
 - Realist reviews are more likely to include ‘grey literature’ instead of solely including and searching peer-reviewed academic journals.
 - Generally, a wider range of empirical evidence may be regarded as relevant because realist reviews are focused on underpinning mechanisms, which may come from different sources of literature. Therefore, the key words are likely to change, rather than having a fixed set of search terms.
 - The search strategy in realist reviews is more iterative and usually involves more back and forth between the evidence retrieved and the research questions/programme theories, with evolving searches as understanding grows. A common approach used in the search process of realist review is a ‘snowballing’ approach, in which references are tracked by hand or by citation-tracking databases. This is done along with the conventional database searching.
- Consider and **set the threshold** for stopping the search. This is generally when theoretical saturation has been reached, with no more significant new findings evolving. Within realist reviews (unlike traditional systematic reviews), the purpose is generally not to capture all articles or evidence on a topic but rather carry out a purposive sample strategy with the aim of retrieving evidence purposively to attempt to answer specific questions or to test particular theories. With this aim, there could potentially be an infinite number of possibly relevant studies (depending on the question and theory). Therefore, a judgement must be made about not only which studies to include but also when to stop the search, which is generally when saturation has been reached, i.e., when there appears to be enough evidence collected to answer the questions or to meet the theoretical needs of the review. The process of determining saturation is done iteratively, with each new search or stage of the search asking if the literature had added any new knowledge, and if any further searching is expected to add any new knowledge.
- It is still important to ensure the process is transparent and to explain (and justify) how judgements were made about including and excluding data from documents, as well as keep a record of the process of study selection, potentially with a flow chat of the review search/study selection process. See Figure 4 for an example flow diagram illustrating a search process.

FIGURE 4 AN EXAMPLE - FLOW DIAGRAM ILLUSTRATING AN ITERATIVE SEARCH PROCESS RELATED TO A REALIST REVIEW ON PARENTING EDUCATION INTERVENTIONS (SOURCE: GILMER ET AL., 2016)



RESOURCES

- Hunter R, Gorely T, Beattie M, Harris K. (2022) Realist review. *International Review of Sport and Exercise Psychology*. 15(1):242-65.
- Pawson R, Greenhalgh T, Harvey G, Walshe K. (2004). *Realist synthesis: An introduction*. Manchester, UK: ESRC Research Methods Program.
- Pawson R, Greenhalgh T, Harvey G, Walshe K. (2005). Realist review-a new method of systematic review designed for complex policy interventions. *Journal of Health Services Research & Policy*. 10(1_suppl):21-34.



Wong G, Greenhalgh T, Westhorp G, Pawson R. (2014). 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. *Health Service Delivery Research*. 2(30). DOI 10.3310/hsdr02300

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Step 3: Appraise evidence and extract data

3A: Appraise the evidence: Test relevance and rigour of the evidence

Evidence included in realist reviews is commonly appraised utilising the researchers' judgements alongside formal checklists. The researcher/s may judge if the evidence should be included based on its relevance, rigour, and richness to determine if it is 'fit for purpose'.

- Realist reviews explore complex areas and may include diverse evidence and subject matter. Therefore, appraisal checklists commonly are not used due to the potentially complex nature of realist reviews. This is because there could be quite varied evidence including not only conventional qualitative and quantitative research designs, but potentially also policy documents, impact evaluations, administrative records, surveys, personal testimonies, legislative analysis etc. Further, unlike traditional systematic reviews full studies may not be included but rather elements or components of a primary study to test the link between context, mechanism, and outcome. An empirical study should meet the researcher's judgement criteria of rigour and relevance, but the study overall may be included or excluded based on an appraisal checklist if relevant.
- The realist review may make a judgement immediately on a potential source of evidence, but more often (similar to the search strategy) quality appraisal is an iterative process and can occur in stages.
- In appraising the evidence within a realist review it is important to test the **relevance** by considering; *"Does the research address the theory under test?"*
 - Relevance is not about whether the evidence covered a certain topic, but if the evidence addressed the theory under consideration.
- It is also important to test the **rigour** of the evidence by considering; *"Does the research support the conclusion drawn from it by the original researchers?"*
 - Rigour considers if the inferences and conclusions from the evidence made by the original researcher had adequate support to make a plausible and methodological sound contribution to the test a certain intervention theory.
- Overall, there should be a judgement of 'fit for purpose' for the realist review and a particular synthesis. It is also important to consider and weigh up the relative contribution of each source compared to each other. This may occur when bringing the synthesis together, such as being cautious of the results from one source of evidence in light of the results from another. Figure 5 provides an example of a rigour and relevant assessment for realist reviews.

FIGURE 5 AN EXAMPLE - A RIGOUR AND RELEVANCE ASSESSMENT FROM A REALIST REVIEW ABOUT PARTICIPATION OF CHILDREN WITH DISABILITIES IN SCHOOL. (SOURCE: MACIVER ET AL., 2019)

<p>Is the paper relevant enough? (relevance)</p> <hr/> <ol style="list-style-type: none">1. Do the questions/aims refer to participation of children with disabilities in the school context?2. If not, do they focus on related concepts (e.g. engagement, friendships, school work, activities, or roles?) and are the findings relevant to the review?3. If the sample mean does not include children aged 4–12 are the findings generalizable/transferable to the 4–12 age range?4. Does the study provide any insights about how children's participation can be supported in school through interventions?5. Does the study provide insights about which factors (child or environment) are most important for school participation and why? <hr/> <p>Is the paper good enough? (rigour)</p> <hr/> <ol style="list-style-type: none">1. Is the design appropriate?2. Is the context or setting adequately described?3. Is the sample adequate to explore the range of subjects and settings, and has it been drawn from an appropriate population?4. Was the data collection or review method adequately described and rigorously conducted?5. Was there evidence that the data analysis was rigorously conducted?6. Do any claims to generalisability follow logically, theoretically and statistically from the data? <hr/>
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3B: Extract data: Collate relevant information

Data extraction forms or templates should be developed, piloted and then used to extract data to populate the evaluative framework with evidence. Within the final report (and within the protocol), describe which data or information will be/has been extracted from the included evidence/documents, with justification for this selection.

- As with the other steps, data extraction is an iterative process that can be varied depending on the purpose of the review. Bespoke data extraction forms or templates should be created and then piloted by the review team. The data extraction forms can help with sorting, shifting, and collating the primary source material. Figure 6 shows an example of a data extraction summary table.
- Different templates/forms may be required to extract data from different evidence sources/different studies and different sections of the forms may be completed for different sources.
- Data extraction of some primary source material in a realist review may involve more of a note-taking and annotation method rather than 'extracting data'. However, the usage and non-usage of the primary material should be recorded with respect to particular theories.
- This process can be iterative, particularly when theory tracking to build potential pathways of the intervention's theories. The notes should be recorded, revised, and potentially amended during the process. Therefore, this process is not linear, and evidence may need to be returned to multiple times to extract particular components.



FIGURE 6 AN EXAMPLE - A DATA EXTRACTION SUMMARY TABLE FROM A REALIST REVIEW ABOUT PARENT EDUCATION INTERVENTIONS DESIGNED TO SUPPORT THE TRANSITION TO PARENTHOOD. (SOURCE: GILMER ET AL., 2016)

Document extraction.			
Citation	Summary of findings from each article	Country	Informed findings
<i>Systematic, literature, and realist reviews and meta-analyses</i> Bryanton and Beck (2010)	-“the benefits of education programmes to participants and their newborns remain unclear” (p. 2) -education on enhancing sleep potentially increases mothers knowledge -some link to improving sleep noted	Canada	A
DeHaven et al. (2004)	-indication that faith-based programmes can improve health outcomes	USA	A, C
Engle et al. (2011)	-early childhood most effective and cost effective time to support child development -studies on disadvantaged populations show some links to improving child development outcomes -home visiting programmes linked to positive outcomes for parents	USA USA	A, C, D
Gagnon and Sandall (2011)	-no evidence for efficacy of birth to one year time period parent education -no consistent effect of prenatal education on any relevant childbirth outcome -some increased knowledge only	USA	F
Gardner and Deatrick (2006)	-coping, role adaptation and caregiving skills increased with group intervention in high risk populations -groups held in primary care setting less effective -had no effect on maternal sense of competence, perceive social support, self-esteem or depression in high risk mothers -improve maternal knowledge of infant cues, increase maternal confidence, increase maternal sensitivity, increase mother–infant interaction skills	USA	B, C, D
Kane et al. (2007)	-increase positive maternal perception of infant at 1 month -reviewed programmes for parents whose children demonstrate behaviour problems	UK	C, D
Law et al. (2009)	-some benefit to peer to peer support for mothers with mental health issues -need of well-trained practitioners – some success with incentives i.e. transportation, child care -need for parent-centred education	UK	A, C
Schrader MacMillan et al. (2009)	-need multipronged approach to breastfeeding group, support, media -mixed reviews of impact on antenatal classes on health promotion behaviours -massage and music therapy positively affect PPMD -transition to parenthood classes increase confidence, well-being and satisfaction relationship mom/dad/babe -men only prenatal classes help	USA	A, B, C, D
Mercer and Walker (2006)	-more intensive longer term interventions better; cultural sensitivity increases uptake -programmes increased knowledge but did little to increase self-definition or attachment -some reported improvement in maternal knowledge of infant cues, minimal increase maternal confidence, maternal sensitivity, increase mother–infant interaction skills	USA	A, B, D
Petch and Halford (2008)	-increase positive maternal perception of infant at 1 month -self-administered home programmes did show some success	Australia	A, C, D
Pinquart and Teubert (2010)	-6 months optimal time for intervention -importance of professional facilitation	Germany	C
Sandler et al. (2011)	-paucity of evidence to support that processes used in parent education programming account for effects -authors suggest that theoretical processes should be identified a priori, outcomes should be measured, and intervention should improve parenting -need to show connection between changes in outcomes	USA	A, B, E
Schrader-MacMillan, Barlow and Redshaw	-antenatal education on health promotion activities minimal evidence of improving -no evidence of preventing depression; evidence of improvement in high risk -transition to parenthood some evidence of well-being, confidence, satisfaction -fathers benefit men only sections	UK	A, B, D

RESOURCES

Hunter R, Gorely T, Beattie M, Harris K. (2022) Realist review. *International Review of Sport and Exercise Psychology*. 15(1):242-65.

Pawson R, Greenhalgh T, Harvey G, Walshe K. (2004). *Realist synthesis: An introduction*. Manchester, UK: ESRC Research Methods Program.



- Pawson R, Greenhalgh T, Harvey G, Walshe K. (2005). Realist review-a new method of systematic review designed for complex policy interventions. *Journal of Health Services Research & Policy*. 10(1_suppl):21-34.
- Wong G, Greenhalgh T, Westhorp G, Pawson R. (2014). 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. *Health Service Delivery Research*. 2(30). DOI 10.3310/hsdr02300

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Step 4: Formulate a synthesis: Collate, compare, contrast, and summarise the results

In formulating a synthesis, it is necessary to compare and contrast the findings from the included evidence and then use the findings from the evidence in order to address the purpose/s of the review. Both confirmatory and contradictory findings should be incorporated. Then, in light of the evidence, the programme theories should be refined looking to generate context, mechanism and outcome structures to attempt to establish what works for whom, how and under what circumstances.

- The task of forming a synthesis in a realist review is about refining theory. A realist review should start with an initial understanding and a theory. It should then seek to refine this theory by collating empirical evidence and use the initial theory map to then end with a more refined theory. Within the synthesis, there should ideally be a refining and fine-tuning of how the intervention works.
- Overall, the synthesis should consider:
 - WHAT is it about this kind of intervention that works, for WHOM, in what CIRCUMSTANCES, in what RESPECTS and WHY?
- In forming the synthesis, it would be worth going back to the initial purpose of the review (See Step 1C) and forming the synthesis to address that particular purpose:
 - Theory integrity – does the intervention work as predicted?
 - Within this approach, it could be important to consider what the usual weak points and stumbling blocks are in implementing the intervention.
 - Theory adjudication – which theories about the intervention seem to fit best?
 - This approach would seek to refine the understanding of how a certain intervention may work through using evidence to adjudicate between rival theories.
 - Comparison – how does the intervention work in different settings, for different groups?
 - Within this synthesis approach, determine how certain programme theories work in some setting but not others, and attempt to determine which.
 - Reality testing – how does the policy intent of the intervention translate into practice?
 - This approach would aim to form a comparison regarding what might be the ‘official’ intervention theory and then what goes on in practice. This is a useful approach if the intervention has legislative or regulative guidelines.
- The synthesis of a realist review can take various approaches. However, all approaches typically focus on the programme theory as opposed to the primary studies, with the aim to interrogate and refine the theory as the synthesis develops, and overall, considers:
 - WHAT is it about this kind of intervention that works, for WHOM, in what CIRCUMSTANCES, in what RESPECTS and WHY?
- Figures 8 to 11 illustrate examples of tabular and diagrammatic ways to present summaries of the information.



FIGURE 7 AN EXAMPLE - PART OF THE TABULATED SYNTHESIS OF RESULTS OF A CONCEPTUAL FRAMEWORK FOR SCHOOL-BASED PHYSICAL ACITIVITY INTERVENTIONS IN SCHOOL AGED CHILDERN OF PROGRAM THEORIES WITH CONTEXT-MECHANISM-OUTCOME (SOURCE: DEFEVER ET AL., 2018).

Table 1. Individual level (child) of a conceptual framework for school-based physical activity interventions in children aged 7–11 years of program theories (context-mechanism-outcome).

Context	Mechanism	Outcome	Supporting Evidence
If pedometers are used to set whole class targets (goal setting) and a celebration event is provided.	Then pedometers encourage inter-class competition and create social support.	Positive influence on individual behavior and leads to increased daily step count.	Gorely et al. [25] Oliver et al. [62]
If pedometers are used as a self-monitoring device (individual goal setting).	Then pedometers provide a physical activity currency, which is popular especially for those children with low initial physical activity as it motivates children.	Raised awareness of physical activity and increased step count. But, there is a ceiling effect for children with high baseline physical activity.	Duncan et al. [60] Gorely et al. [25] Kang and Brinthaup [47]
If pedometers are used without a rewarding system.	Then younger children resent the burden and do not understand goal setting.	Ineffective individual behavior change and no increase in physical activity.	Burns et al. [54]

FIGURE 8 AN EXAMPLE - SUMMARY OF RESULTS OF MECHANISMS REPRESENTING PSYCHOSOCIAL ISSUES AND THE CHILD'S EXPERIENCES (SOURCE: MACIVER ET AL., 2019).

Category	Mechanisms	Mechanism aspects	Supporting evidence
Identity	Preferences	Interests; perceived enjoyment; attraction to activities	[14, 24, 42–46, 46–52]
	Perceptions of self	Self-esteem; self-efficacy; confidence; perceived competence	[24, 46, 48–58]
	Meaningfulness	Willingness; perceptions of satisfaction	[14, 21, 24, 45, 50, 51, 59, 60]
	Internalization & perception of roles	Understanding & knowledge of roles; feeling like a 'legitimate' participant; feeling included; feeling membership & school identity	[56, 57, 61]
	Internalization of habits & routines	Familiarity, knowledge, preparedness, and automaticity of habits and routines	[44, 53, 62–64]
Competence	Making choices	Showing initiative; being proactive; acting on interests	[14, 24, 44, 52, 53, 65–68]
	Persistence	Working towards goals; perseverance; independence; self-reliance; being committed	[45, 47, 51–53, 57, 68–72]
	Meeting role expectations	Following rules and norms; fulfilling role expectations; routine performance in school and other roles	[57, 61, 70, 71, 73]
	Meeting habit & routine expectations	Having routines; following routines; having habits; doing what's expected	[55, 62]
	Organisation & planning skills	Sequencing; concentration; memory; organization skills	[35, 46, 49, 51, 52, 55, 56, 63, 70, 72, 74]
	Motor skills	Gross and fine motor skills	[8, 14, 49, 51, 52, 55, 58, 70–72, 74–80]
	Communication skills	Expressive/receptive language; social communication skills	[14, 15, 42, 49, 51–53, 67, 72, 74]
Experience of mind and body (symptoms)	Pain	Cognitions; catastrophizing; withdrawal	[8, 14, 52, 71, 75, 79, 81–83]
	Fatigue	Energy level; fluctuating symptoms; sleep disturbance; withdrawal	[14, 46, 58, 71, 80, 84–86]
	Anxiety	Fear; frustration; anger; aggression; withdrawal	[46, 51, 53, 58, 60, 71, 80, 87–89]
	Mood	Sadness; depression; withdrawal	[13, 52, 71, 80, 81, 84, 89]



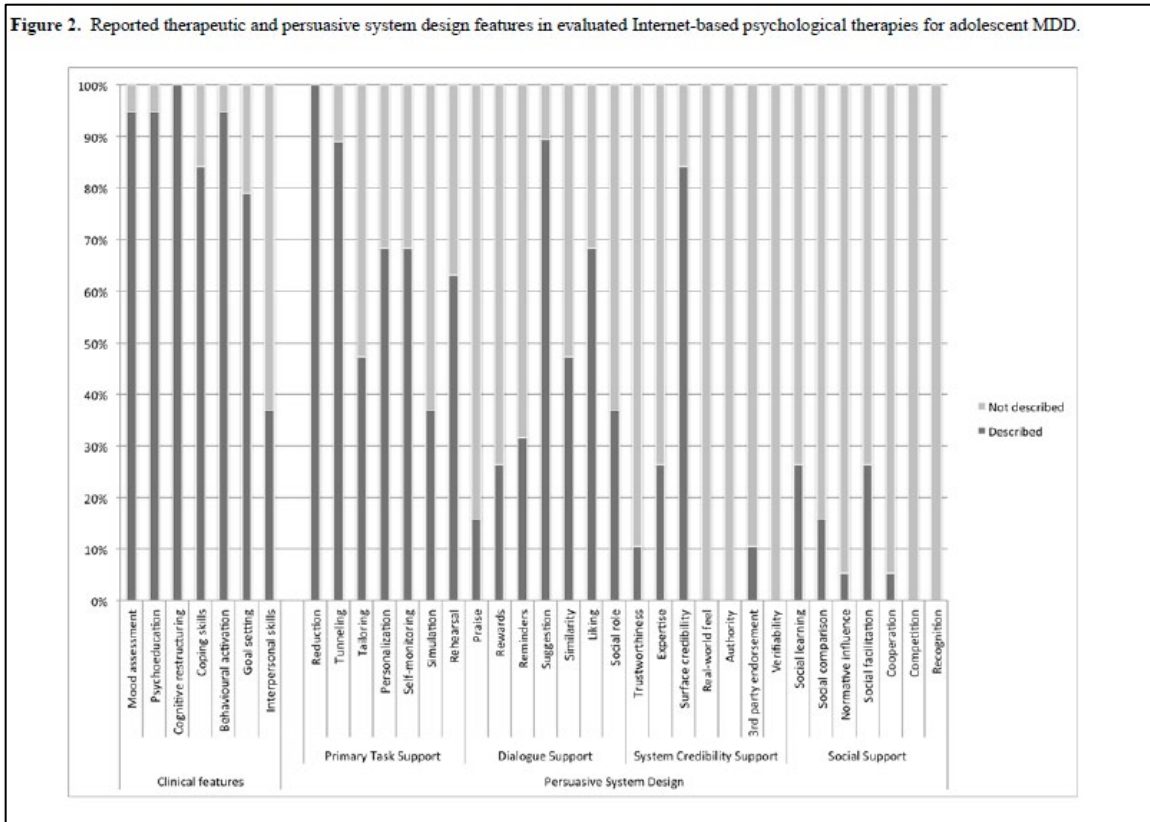
FIGURE 9 AN EXAMPLE - A SYNTHESIS TABLE WITHIN A REALIST REVIEW ON SOCIAL PEDIATRIC INITIATIVES (SOURCE: TYLER ET AL., 2019).

Table 1 Summary of included Social Pediatric Initiatives (SPI), demonstrating health equity, provider integration and community embeddedness, including SPI family of articles, activities and reported outcomes

Program name	Author, year	Study type/ Method	Location	Population/ Practitioner	Activities	Outcomes
Early explorers	Barlow and Coe (2013)	Qualitative; semi-structured interviews	Outpatient baby clinics, England	Low-income families (children under the age of 5)/health practitioner and ^b ECP	^b ECPs engaging parents in common clinic play area allowing for the opportunity to identify vulnerable families that required referrals	Enhanced service provided within traditional child health clinics (qualitative report)
	Coe and Barlow (2010)	Descriptive				Increased access to hard-to-reach patients (qualitative report)
Keeping Infants Nourished and Developing (KIND)	Beck et al. (2014)	Quantitative/ time series analysis and descriptive statistics	Hospital medical center, USA	Food-insecure families with infants attending clinic/pediatricians, pediatric residents, and medical students	Collaboration linking food-insecure families to supplementary infant formula, education materials, clinic and community resources or public benefit programs	Increased lead test and developmental screen
	Burkhardt et al. (2012)	Quantitative; chart review				Increased referrals to social work or medical legal partnership
DentCare	Diamond et al. (2003)	Process evaluation; interview and observation	Harlem and Washington Heights Neighbourhoods, USA	Children in low-income neighborhoods/ Columbia University's School of Oral and Dental Surgery	Provided preventive dental services in schools through collaboration of medical clinics and community-based organizations	Identify major modifications to program required to raise community service to the same priority as education
	Albert et al. (2005)	Descriptive				Need for different implementation strategies in different communities
WE CARE	Garg et al. (2007)	Quantitative; randomized control trial	Outpatient clinic, USA	Low-income families (2 months to 10 years)/pediatric residents	Patient self-administered screening tool and provider community resource book	Collaboration with community clinics for community linkage
						Greater number of psychosocial issues discussed
Responsive, Interdisciplinary Child-Community Health Education and Research (RICHER) initiative	Wong et al. (2012)	Mixed; Patient interview and survey	Downtown Eastside neighbourhood, Canada	Residents of one of Canada's lowest income areas/ health-care providers	Interdisciplinary collaboration to facilitate access to programs that affect ^a SDOH	Received more referrals
	Lynam et al. (2012)	Qualitative; participant observations				Greater likelihood of contacting a community resource
	Lynam et al. (2010)	Qualitative; interviews				Provider interpersonal style associated with parent reported empowerment scores
Early Childhood Oral Health Program	Maher et al. (2012)	Evaluation; document review, surveys, interviews	Australia	Infants, young children and their parents/child health professionals	Shared responsibility for oral health, involving a partnership between child health professionals, oral health professionals, and parents of young children	Recommendations on fostering engagement and use of indigenous knowledge
						Illustrate interdisciplinary partnerships enabling clinicians to provide supports to address ^a SDOH
						Models of shared responsibility between parents, health professionals and oral health professionals can facilitate primary prevention (routine incorporation of oral health promotion and early identification)

^aSDOH social determinants of health
^bECP early childhood provider

FIGURE 10 AN EXAMPLE - A FIGURE OF THERAPEUTIC AND PERSUASIVE DESIGN FEATURES IN EVALUATED INTERNET-BASED PSYCHOLOGICAL THERAPIES FOR ADOLESCENCES (SOURCE: WOZNEY ET AL., 2017)



RESOURCES

- Hunter R, Gorely T, Beattie M, Harris K. (2022) Realist review. *International Review of Sport and Exercise Psychology*. 15(1):242-65.
- Pawson R, Greenhalgh T, Harvey G, Walshe K. (2004). *Realist synthesis: An introduction*. Manchester, UK: ESRC Research Methods Program.
- Pawson R, Greenhalgh T, Harvey G, Walshe K. (2005). Realist review-a new method of systematic review designed for complex policy interventions. *Journal of Health Services Research & Policy*. 10(1_suppl):21-34.
- Wong G, Greenhalgh T, Westhorp G, Pawson R. (2014). 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. *Health Service Delivery Research*. 2(30). DOI 10.3310/hsdr02300

REFERENCES

- Defever E, Jones M. (2021) Rapid realist review of school-based physical activity interventions in 7-to 11-year-old children. *Children*. 8(1):52.
- Maciver D, Rutherford M, Arakelyan S, Kramer JM, Richmond J, Todorova L, et al. (2019) Participation of children with disabilities in school: A realist systematic review of psychosocial and



environmental factors. PLoS One 14(1): e0210511.

<https://doi.org/10.1371/journal.pone.0210511>

Tyler I, Lynam J, O'Campo P, Manson H, Lynch M, Dashti B, Turner N, Feller A, Ford-Jones EL, Makin S, Loock C. (2019) It takes a village: a realist synthesis of social pediatrics program. *International Journal of Public Health*. 64(5):691-701.

Wozney L, Huguet A, Bennett K, Radomski AD, Hartling L, Dyson M, McGrath PJ, Newton AS. How do eHealth Programs for Adolescents With Depression Work? A Realist Review of Persuasive System Design Components in Internet-Based Psychological Therapies. *Journal of Medical Internet Research*. 2017;19(8):e266



Step 5: Write a report: Put everything together, draw conclusions and make recommendations

When putting the report together, consider involving review commissioners/decision makers in the review of findings. Within this stage, draft and test out recommendations and conclusions based on findings with key stakeholders.

- The report should be a synthesis, combining the theoretical components and the empirical evidence. The report generally focuses on describing how the intervention works in a way that ensures decision makers and end-users can make use of this understanding and therefore can apply the findings within their own contexts.
- To answer the review question/s, articulate key theories and create overall meaningful findings and recommendations, there should be input from practitioners and policy makers. It is the questions, assumptions, and input from the end-users about how the world works that can assist in focusing the analysis and can add rich context to the review.
- The findings of the review should be contextualised and should make recommendations with the programme implementers in mind, specifically in reference to certain contextual issues for particular policy makers and end-users at particular times, including what considerations are needed for the interventions in question (e.g., pitfalls to avoid).

Quality reporting can be supported through use of the relevant publication standards (i.e., the RAMESES [Realist and Meta-narrative Evidence Syntheses: Evolving Standards] publication standards, Wong et al., 2013).

- Title (Identify the document as a realist synthesis or review)
- Abstract

Introduction

- Rationale for review
- Objective and focus of review

Methods

- Changes in the review process
 - Any changes made to the review process compared to the review protocol described and justified
- Rationale for using a realist synthesis
- Scoping the literature
 - Describe and justify the initial process of exploratory scoping of the literature
- Search process
 - Rationale for how the iterative searching will be done including databases, search terms, dates etc.
- Selection and appraisal of documents
- Data extraction
- Analysis and synthesis processes

Results



- Document flow diagram
- Document characteristics
- Main findings

Discussion

- Summary of findings
- Strengths, limitations, and future research directions
- Comparison with existing literature
- Conclusions and recommendations
- Funding

RESOURCES

- Hunter R, Gorely T, Beattie M, Harris K. (2022) Realist review. *International Review of Sport and Exercise Psychology*. 15(1):242-65.
- Pawson R, Greenhalgh T, Harvey G, Walshe K. (2004). Realist synthesis: An introduction. ESRC Res Methods Program.
- Pawson R, Greenhalgh T, Harvey G, Walshe K. (2005). Realist review-a new method of systematic review designed for complex policy interventions. *Journal of Health Services Research & Policy*. 10(1_suppl):21-34.
- Wong G, Greenhalgh T, Westhorp G, Pawson R. (2014). 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. *Health Serv Deliv Res*. 2(30).



Step 6: Disseminate, implement, and evaluate

6A. Make academic community aware of the findings

It is often useful to disseminate review findings, conclusions and recommendations by publishing the review in an academic journal.

When choosing a journal, consider the scope and aims of the journal, where it is indexed (i.e., whether other researchers will be able to easily find the review), its relative standing in the field, and the requirements of the journal (check the author guidelines for requirements).

- Scimago Journal & Country Rank (<https://www.scimagojr.com/journalrank.php>) can help search for journals and their impact JANE can help select a journal appropriate for topic.

6B. Consult with stakeholders for widest impact

- The report should be transparent and easily available to others. Also, it should clearly identify recommendations for stakeholders. End-user engagement can help the relevance and impact discussion.
 - Identify and prioritise key messages
 - Many journals require a brief description of “What do we already know? And what does this article add?” Answering these questions are key first steps to presenting key messages.
- Effective dissemination and knowledge translation requires thinking about who might want to use this information, creating useful information and putting it in the right place to allow those who might be interested to utilise the findings.
- To help dissemination of the review message, consider having a shorter, user-friendly summary, potentially with an infographic for social media, targeting potential users.
- Promote review to academic audiences
 - Presentations at conferences
 - Via social media
 - By direct email to key academics
 - Academic industry newsletters
- Ways to disseminate the information out to the broader community:
 - Involve end-users to guide best modes (having previously assisted with selecting key messages and how to word them)
 - Websites
 - Blog posts
 - Newsletters
 - Invitation seminars
 - Direct mailing to agencies
 - Social media
 - Press releases



6C. Help end-users apply the findings

If there is effective ‘dissemination’ and ‘implementation’, then there may be subtle shifts in the emphasis of the programme in one particular setting, development of the programme in another setting, and, potentially, discontinuation of the programme in a third setting. This would match with the purpose of realist reviews to attempt to determine what works, for whom, how, and in what circumstances. The findings of realist reviews may also influence the design of new programmes.

RESOURCES

Scimago Journal & Country Rank <https://www.scimagojr.com/journalrank.php>

JANE: <https://jane.biosemantics.org/>

Hunter R, Gorely T, Beattie M, Harris K. (2022) Realist review. *International Review of Sport and Exercise Psychology*. 15(1):242-65.



CONCLUDING COMMENTS

Realist reviews provide a structured yet iterative and creative process to synthesise evidence on more complex transdisciplinary interventions. Realist reviews focus not only on what works but how and why it works, and within context. This approach attempts to integrate theory and not to judge but to explain concepts. The conclusions are more likely to be relevant to policy and practice.

Transdisciplinary realist reviews can therefore provide an important mechanism for not only aiding in transdisciplinary understanding of complex issues, but for creating evidence summaries that are relevant to end-user needs, supporting informed decision-making by those with the vision of a digital world that benefits children.



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