

# Balancing realist review outputs with the needs of policymakers and practitioners

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## Abstract

A realist review is a theory-driven approach to synthesizing evidence based on the realist philosophy of science. Realist reviews are conducted to provide the policy and practice community with a rich, detailed and practical understanding of complex social interventions that will likely be of much more use to them when planning and implementing programmes. Robust realist reviews must balance philosophical engagement, methodological rigour and relevance to practice. Nevertheless, they have been criticized for being more philosophically inclined and less methodologically robust, with findings that have little implication for practice. Using the philosophy/epistemology → methodology → theory → practice concept flow, we report how we balanced philosophical principles and practical insights in a recently conducted realist review on participatory practices that impact the benefits of non-communicable disease research and interventions in low- and middle-income countries. If realist reviews are not comprehensible enough for these practitioners, their utility and relevance may suffer from being limited to a specialist cohort of academics. We propose that realist review findings and outputs must be framed and communicated to meaningfully engage practitioners without undertaking translational efforts.

**Keywords:** Realist review, philosophical position, practical implications

## Key messages

- Realist reviews are increasingly becoming integral to health policy and systems research, offering a unique and invaluable approach to understanding and working with complex social interventions or programmes within complex social systems.
- The strength of realist reviews is their unique ability to seamlessly combine realist philosophical tenets and empirical evidence to explain the intricate relationship between the context in which the intervention is applied, the mechanisms by which it works and the outcomes produced.
- Despite its clear agenda to support policymaking and improve practice, authors often fail to balance the methodological purity and practical applicability of the theories obtained from realist reviews. We filled this gap by discussing our experiences with achieving such balance in a recent realist review we conducted.

## Introduction

It is increasingly acknowledged that empirical research should be grounded on philosophical foundations (Allana and Clark,

2018). Realist review is a theory-driven interpretive approach to secondary research designed to integrate empirical data with realist philosophical interpretation to inform evidence-based practice and explain social phenomena (Hinds and Dickson, 2021; Duddy and Wong, 2023). Despite their increasing adoption in health policy and systems research, realist reviews have faced criticism for their perceived philosophical inclination at the expense of methodological robustness and practical application of their findings (Hinds and Dickson, 2021).

While desirable, the philosophical undergird of realist methodologies presents challenges for those unfamiliar with the realist philosophy of science. These challenges highlight the need for a deeper understanding of how review methods are applied and the usefulness of their findings. To address these challenges, standards for reporting realist reviews, Realist And MEta-narrative Evidence Syntheses: Evolving Standards (RAMESES), have been established to ensure that authors report their reviews appropriately (Wong *et al.*, 2013; 2016). While the focus on methodological accuracy and reporting provides a helpful framework for conducting realist reviews, Hinds and Dickson (2021) argue that the RAMESES guidelines for reporting realist reviews

lean towards positivism, as it tends to simplify the nuanced review process instead of embracing the rich philosophical grounding.

When Pawson *et al.* (2005) proposed the realist review methodology, they suggested that realist reviews could address the practical realities and challenges of translating evidence into policy-making. Realist reviews can also provide easily adaptable evidence by offering explicit, empirically testable explanations of how context is linked to outcomes through mechanisms (Pawson *et al.*, 2010; Jagosh, 2019). Nevertheless, owing to the complexity of representing all the possible causal mechanisms and pathways to explain a social phenomenon or how a programme works (Jagosh, 2019), realist reviews tend to develop complex theories and findings of limited practical value for policymakers and practitioners. Consequently, adopting the findings from these reviews becomes less feasible, thus undermining their value.

Conducting realist reviews requires researchers to align with the realist ontology and epistemology, maintain methodological rigour and produce relatable and practically applicable results. Recent developments have focused on developing the methodological aspects of realist reviews based on their philosophical foundations (Jagosh, 2019; Dada *et al.*, 2023; Peters, 2024). Despite realist reviews' philosophical grounding and methodological congruence advantages, authors often fail to balance methodological purity and practical applicability (Mukumbang *et al.*, 2021). In this paper, we report on our experiences of achieving such balance in a recently conducted realist review to understand how and why engagement or participatory practices impact the benefits of non-communicable disease research and interventions in low- and middle-income countries (LMICs), drawing from our experiential knowledge (Klingberg *et al.*, 2021; 2024). We used the philosophy/epistemology → methodology → theory → practice flow concept (Figure 1) to examine how we can balance the nuanced and complex realist review outputs and the needs of policymakers and practitioners.

## Philosophical foundations

Realist reviews are based on the realist philosophy of science, which holds that reality exists whether we perceive it and is knowable, even though we may not always fully understand it. Two variants of realism, 'critical realism' and 'scientific realism', are argued to have contributed substantially to developing the foundations of realist reviews (Mukumbang *et al.*, 2023). While these two forms of realism focus on different aspects of realist ontology and epistemology, they also share some common tenets. Our realist review was anchored on four realist ontological and epistemological principles shared by these two forms of realism: stratified ontology, mechanism-based causality, emergence and open systems.

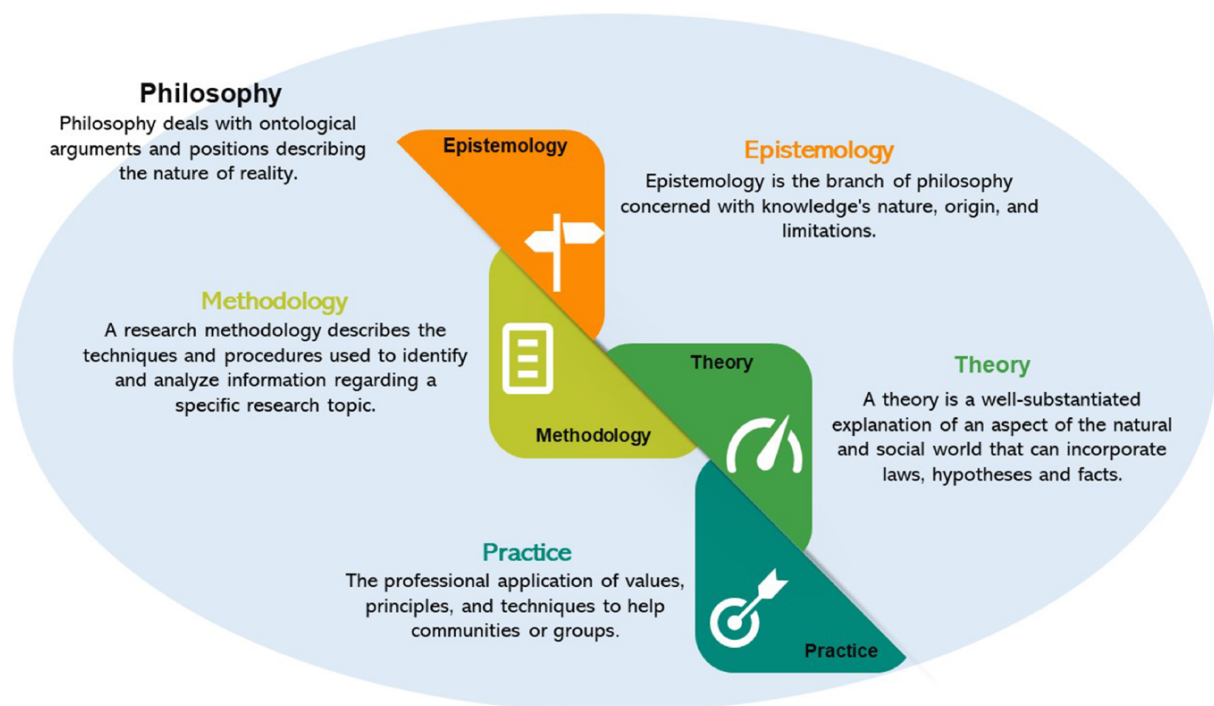
Bhaskar (1975) identified three levels of reality, 'empirical', 'actual' and 'real'. Realist review activities strive to synthesize evidence from studies that capture those events or outcomes experienced at the 'empirical' level. These outcomes captured at the empirical level are based on events situated at the next level, the 'actual', which were experienced. These events occur due to the interactions of entities found at the 'real' level. These entities identified as mechanisms and structures possess causal powers, which can generate an outcome (event) when activated. This ontological understanding was relevant

in our review process. The goal of selecting evidence was to obtain papers describing the impacts or effects of interventions, research activities and events and how they relate to community engagement. The experiences and perspectives of the implementers and participants in community engagement activities can also be obtained from the 'empirical' level. This information was useful for investigating the underlying mechanisms and structures at the level of the 'real' that orchestrated the identified events.

Implementation of health policies and interventions occurs in open systems, which include the activities of actors (thoughts and actions) interacting within structures (organized social institutions like healthcare facilities and patterns of institutionalized relationships). The notions of open systems and emergence in the realist philosophy of science underpin the concepts of complexity and adaptations. These adaptations occur as the actors' actions, thoughts and activities, and their interactions with structures give rise to behaviours as outcomes. We found this feat important for understanding how and why communities react to the introduction of non-communicable disease interventions and research programmes and how their thoughts and perceptions affect their behaviour.

In his book '*The Possibility of Naturalism*', Bhaskar (2014) described emergence as the complex, interactive and changing domain of society and its agents. He explains that emergence occurs when causal entities (mechanisms and structures) combine in different ways, depending on other conditions and interactions, to form new outcomes. Sayer (2000) explains that social phenomena (like community engagement) emerge from the interactions between entities at the biological level, which emerge from chemical and physical levels. Mechanisms at lower levels can create conditions for mechanisms at higher levels. While mechanisms may emerge from lower levels, they cannot be reduced to those levels. Therefore, they need to be studied in the specific strata where they operate to understand how they work. Therefore, understanding the mechanisms operating during community engagement entails studying the community engagement processes at the psychological, interpersonal and cultural levels.

What happens in open systems is unpredictable because causal entities within them can combine in different ways for new outcomes to 'emerge' depending on other conditions and interactions. Emergence is characteristic of open systems, where structures, mechanisms and entities interact continuously. For instance, people might react differently to a community engagement activity based on their previous experiences with community engagements, cultural values and personal preferences. The emerging outcomes are not the sum of the parts of the interacting entities; thus, these outcomes cannot be reduced to the entities that combined to form them. Implementing different non-communicable disease interventions or research strategies will only sometimes achieve the expected outcomes. The unexpected outcomes emanating from community engagement activities that did not align with researchers' expectations are described as emergent. The concept of emergence in open systems is a philosophical tenet that would translate as the unpredictability of intervention in policy terms and practice and inform the knowledge synthesis process (epistemological groundings) in realist methods.



**Figure 1.** The continuum from philosophy to practice (authors' version)

## Epistemological groundings

Epistemologically, realist methodologies start and end with theories. Developing a programme theory is based on the premise that policies and programmes are theory incarnate. A programme theory is a framework that describes what a programme (or policy) is and how it is expected to work (Sharpe, 2011). The realist reviews' findings are presented in context-mechanism-outcome configuration (CMOC) that addresses the questions, 'what works, for whom, under what circumstances and how'. A CMOC explains the inner functioning of a programme or policy by elucidating the causal relationship between a specific aspect of the context and how it triggers a mechanism to produce the intended or unintended outcomes. Realist synthesis entails iterative and interrogative methods of examining research outputs with a particular lens of CMOCs (Pawson *et al.*, 2005).

In realist conceptualization, context refers to the background of interventions or research. This conceptualization includes the relationship between researchers and community members, prior research or interventions (engagement history), demands, cultural practice and population dynamics. These contextual characteristics can influence or alter the nature of a mechanism. Mechanisms are the agents of change, and they are often hidden. They are considered the underlying processes or entities that generate outcomes in each context. For instance, in the context of the tepid progress of an implementation or a programme (Context I) in a highly corrupt health system (Context II), addressing an interest (Mechanism I) of a critical decision-maker (policymaker) may expedite the process (outcome). In this case, addressing the interests of a policymaker, e.g. through incentivization (often hidden as a mechanism), works beneath the seemingly expedited implementation. In this way, translating these findings into policy terms can simplify the realist syntax presented in CMOCs.

## Methodology

Our evidence selection process was guided by the criteria of relevance [the content relating to Non-communicable diseases (NCD)] prevention, prioritizing descriptions of community-based interventions), richness (identifiable contributions to potential theories) and rigour (the trustworthiness of sources) (Dada *et al.*, 2023). These constructs align with the philosophical goal of obtaining robust evidence to provide insights into community engagement at the 'empirical' level to understand the events ('actual') and, consequently, the mechanisms and structures of the 'real'.

When examining the volume of research outputs and reiterative attempts to configure them into theories, we used an interpretative analysis with layers of abstraction. The layers are analogous to onion rings. Based on our original interpretation, we reflect on the layered concept of realist review using an analogy of a traditional window in Nepal (Figure 2). We identified a parallel between the onion-like structure and a traditional window in Nepal that layers the frames outer to the inner world with a reality hidden beneath the deep aperture. We interpret that the core within such a frame may only allude to the presence of an inner world imperceptible through this lens. In realist synthesis, the frame used may offer only interpretative findings confined to the boundaries and landscape of the aperture (study scope). At the same time, the inner world of its functioning may completely differ or lie beyond its reach. In other words, the interpretative leeway offered by the inner aperture in synthesizing realist configurations is subject to the extent of abstraction and often can vary. The concept of abstraction, in this case, would need a policy translation. For instance, an outer layer of reality in a study may generate general hesitation in a female health worker to work in a particular health centre, while at a further depth, it could be the power differentials and exploitation with the health



**Figure 2.** *Desemadujhya*, an ancient *Newari* architectural window design in Nepal. The multiple frames from the outer layer led to the inner aperture

centre chief. A step further into the layered approach, the female health worker's interpersonal conflict and psychological trauma may underscore the hesitation and may lie beyond the scope of a study or the aperture. Such a level of policy translation is often difficult to elucidate when realist reviewers' findings are often presented in their terms and syntax.

One way to improve realist reviews and strengthen developing theories is to test their practical and policy relevance; stakeholder engagement is recommended to achieve this (Hunter *et al.*, 2022). Stakeholder engagement aims to refine and test theories with input from individuals with hands-on knowledge of the subject and a vested interest in the findings and application of realist outputs in policy and implementation (such as evaluations and reviews). Nonetheless, efforts towards making realist findings relevant for policy and translation through stakeholder engagement have limitations. During our realist review on community engagement and participatory approaches to research, we realized that our participant sample was limited. We only included five interview participants, with three being researchers and two representing community perspectives. This concern was also raised during the peer review process, but we justified our choice based on the participant's ability to provide input on specific aspects of our theorizing (Manzano, 2016; 2022). Because abstraction is integral to realist synthesis, the abstracted constructs and middle-range theories advance the concepts that inform the primary studies. Such abstraction and theorizing may be an academic exercise. Nonetheless, for these constructs and theories to be of practical relevance, we attempt to simplify them with practical policy examples among our interview participants to test, confirm, verify and challenge our emerging micro-theories.

Our iterative analytic approach was informed by retroductive theorizing, which entails uncovering structures and

mechanisms that would account for the phenomenon under consideration if they were to exist and act as postulated (Mukumbang, 2023). In our application of retroduction, we extracted the Context-Mechanism-Outcomes (CMO) by identifying the different outcomes of community engagement and then the triggered mechanisms with different community-related context conditions (Mukumbang *et al.*, 2021). By coding for dyads and triad combination of the constructs in the CMO heuristic tool (Jackson and Kolla, 2012; Gilmore *et al.*, 2019), we identified three types of themes: experiential, inferential and dispositional (Wiltshire and Ronkainen, 2021). Retroduced micro-theories were collated through abstraction to formulate middle-range theories. These intricate concepts of theory building in realist terms could be translated in policy and practice as a process of burrowing bits of lessons and combining them as a 'sense-making exercise' to explain how a particular intervention may function in a given context. Articulating the relationships between specific contexts and mechanisms and the specific outcomes can contribute to understanding how and why certain policies or interventions may succeed or fail under certain context conditions and which mechanisms should be targeted to achieve desired outcomes.

### Realist middle-range theories

'Nothing so practical as a good theory' is an expression first coined by Kurt Lewin (McCain, 2015). Still, various spin-offs have been used to highlight the value of theories in informing our understanding of social phenomena and the observed outcomes of various health interventions and programmes. Lewin defined a theory as an explanation with ideas about how something works and explained that the practical application of a good theory could be invaluable (Tonges, 2016). According to Yorks, 'Robust answers to problems grounded in

well thought out and rigorous theories tested in the crucibles of research and practice can go far in helping practitioners in both worlds make their case with powerful stakeholders' (Yorks, 2005, p. 113).

Theories derived from realist reviews are typically classified as middle-range theories (Ajjawi and Kent, 2022). In this paper, the term 'middle-range theory' is used to describe the level of abstraction of a theory rather than being another category or type of theory. Middle-range theories aim to explain the components that make up the whole rather than explaining the entirety in a single theory (Pawson, 2000). While middle-range theories are narrower in scope and less abstract than grand theories, they are also less specific to a particular context, although specific contexts inform them. To ensure that the theories apply to the specific context, the concept of demi-regularities could be useful as they could explain the nuances within the middle-range theories. Demi-regularities are 'frequently reproduced behaviors or patterns that get seen in human activity and can emerge in the setting of a realist review as theme-type things seen across different studies' (Phillips, 2016). Middle-range theories can be formulated by consolidating previously separate hypotheses and empirical demi-regularities (Merton, 1968). For example, in our review, we integrated a realist synthesis of empirical evidence with realist interviews with stakeholders to develop the following middle-range theory to understand how and why engagement or participatory practices affect the benefits of non-communicable disease research and interventions in LMICs (Figure 3).

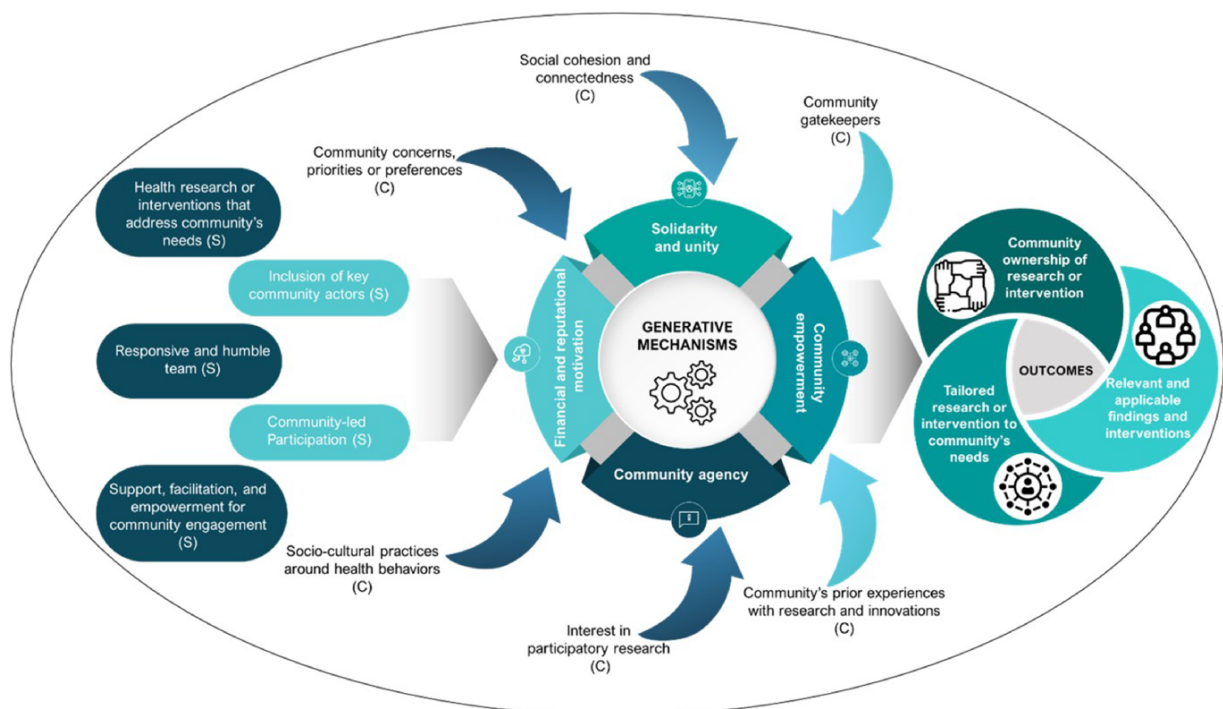
Middle-range theories should exhibit three characteristics: (1) sufficient abstraction, (2) logical derivation and (3) adaptive and cumulative explanations. Merton referred to a 'sufficient' level of abstraction in his definition of middle-range theory. Due to the ambiguous nature of 'abstraction', it is

considered a practical or heuristic tool for theory building. Middle-range theories take the form of CMOCs. They should be written at a middle level of abstraction: specific enough to clearly explain the phenomenon and general enough to apply across cases of the same type.

### Practical application of outputs from realist synthesis

By attempting to capture the complex nature of policies and programmes and the systems within which they are implemented, realist outputs (middle-range theories) tend to be complex and less informative to the policymaker and practitioner. To this end, dissemination of the findings of realist reviews is predominantly achieved through peer-reviewed publications. Dissemination challenges of realist review outputs through other avenues to reach policymakers and practitioners are related to the fact that realist reviews provide excessive and speculative complexity-framed ideas around context or do not recognize the need to align the messages with the goals and thinking of policymakers and practitioners. McVeigh *et al.* (2016) confirm that realist review outputs mostly provide 'broad recommendations for successful policy-related leadership and governance rather than offer a strict formula, which would fail to recognize the diversity and complexity of specific national, regional and local contexts'.

One method to see how such findings resonate with field practitioners is to explore how and in what terms the middle-range theories make sense, including the modifications and adaptations needed. Nonetheless, such engagement can often become another layer of conceptual overload for practitioners. In such circumstances, the difference in knowledge hierarchy can render a perceived sense of inferiority and intimidation to engagement practitioners. Thus,



**Figure 3.** Middle-range community engagement theory in non-communicable disease research and interventions in LMICs

**Table 1.** Mechanism-based middle-range theories of NCD research and intervention adoption in LMIC settings (Klingberg *et al.*, 2024)

| Theories explicating enhanced intervention adoption                                                                                                                                                                           |                                                                                               |                                                                                            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| (1) Community members’ agency to contribute meaningfully is realized<br><i>IF a community with preferences for research or an intervention (C), works with research teams that consider and welcome their views,</i>          | THEN research or interventions that better suit the community’s needs will be implemented (O) | BECAUSE community members’ agency to influence research or interventions is realized (M).  |
| (2) Shared understanding of the benefits of health promotion<br><i>IF a community is unfamiliar with certain forms of health promotion (C),</i><br>BUT community engagement provides opportunities for dialogue and learning, | THEN the community adopts health promotion efforts (O)                                        | BECAUSE there is a shared understanding of the purpose and benefits of the activities (M). |
| (3) Community feels empowered<br><i>IF there are barriers to healthful behaviours (C),</i><br>BUT facilitated community groups to support collective action,                                                                  | THEN the community can participate in activities (O)                                          | BECAUSE they feel empowered (M).                                                           |
| (4) Community members feel solidarity and unity<br><i>IF there are NCD-related stress and stigma (C), for which facilitated community groups develop their solutions,</i>                                                     | THEN stigma and stress are reduced (O)                                                        | BECAUSE community members feel solidarity and unity (M).                                   |

the preconceived theories and synthesis presented may lead to acquiescence. Such acquiescence can perpetuate epistemological injustice and is often compounded by broader barriers such as linguistic difficulties, conceptual heterogeneities, power differences and relational dynamics. In addition, theoretically built abstracted concepts may supersede practice-informed local knowledge and social and cultural concepts.

One of the ways to translate the realist concept is by using more practical syntaxes. For instance, the ‘IF...THEN...BECAUSE’ phraseology is used as a simple way to represent realist middle-range communication theories to policymakers and implementers. In these statements, IF...THEN...BECAUSE correspond to context (C), outcome (O) and mechanism (M), respectively. Through literature-based realist synthesis and stakeholder consultations using realist interviews, we reintroduced theories on community engagement and participatory research in simple phrases. The CMOCs were also used to develop conditional statements or a valuable model for a theory-building exercise with a mid-range scope. The study presents the middle-range theory, which identifies the mechanisms and context conditions necessary for the (non) adoption of NCD promotion research initiatives or interventions in [Table 1](#).

The strapline ‘What works, for whom and under what circumstances?’ underpins the *raison d’être* of reviews ([Pawson \*et al.\*, 2005](#)). At the same time, most realist reviews indicate their intention to provide information on what works, for whom and under what circumstances, but the findings are hardly presented in a straightforward and practically friendly manner. For instance, using a realist review, [Hunter \*et al.\* \(2023\)](#) unpacked what works, for whom and under what circumstances by examining how and why a mobile app might help a person self-manage chronic lower back pain. This study is a valuable example of presenting the findings from the realist review in a simple and intelligible way to policymakers and practitioners.

### Discussion

While [Pawson \*et al.\* \(2005\)](#) explicitly underpin realist reviews in scientific realism to explain how objective reality is shaped

by social, historical, and cultural factors, we note that realist reviews like realist evaluation are informed by two forms of realism: critical realism and scientific realism ([Mukumbang \*et al.\*, 2023](#)). These two forms of realism share their focus on ‘mechanisms’ and how they generate expected and unexpected outcomes. Based on their focus on emergence and open systems, findings from realist reviews are less likely to inform policymakers or managers in a dichotomy of whether something works or not. However, they are designed to provide the policy and practice community with a rich, detailed and highly practical understanding of complex social interventions that will likely be of much more use to them when planning and implementing national, regional or local programmes ([Pawson \*et al.\*, 2005](#)). To achieve this, realist reviews strive to formulate middle-range theories based on multiple settings and programmes.

Given the focus on theorizing, other researchers, especially those with experience in realist theorizing, become the most natural stakeholders for theoretical input. These stakeholders include actors such as internationally experienced policymakers or programme evaluators. However, this approach incurs selection bias and overlooks the stakeholders who can offer practical insights. The lack of representation of ‘local’ experts loses the reviewer’s relevance when community representatives’ involvement becomes less noticeable when there is no specific community from which representation is necessary for the synthesized theories. In practice, we targeted countries and projects represented in the synthesis but are yet to claim to have covered every perspective regarding specific settings or interventions.

It has also been argued that, including ‘local’ and community-oriented participants from each setting, their input may not truly represent the communities involved in the specific studies or interventions of interest. We also know that seeking input from community engagement practitioners for an ontologically sophisticated method and synthesis could be a complex exchange, limiting meaningful engagement or being seen as an unnecessary burden ([Adhikari \*et al.\*, 2020](#)). We also recognize that we could have gathered valuable data from a more comprehensive sample of participants. Nevertheless, interview participants in realist reviews play the

role of a reflection surface rather than the main source of evidence, as is the case of realist evaluation. The realist reviewers should use these conversations to pretest or validate themes and findings through translation and interpretation, as these concepts could be foreign.

While conceptualization at theoretical levels may echo the local knowledge, their epistemological dominance may obscure the opportunity to expound the community-based knowledge system relevant to the local social and cultural context (Mishra *et al.*, 2022). The solution to such adversities is decoding the constructs and theoretical underpinnings of realist synthesis and presenting them in practice-related terms. Knowledge translation is dedicated to exploring the techniques and approaches to increase the use of evidence within policy and practice decision-making contexts (Armstrong *et al.*, 2013). An essential step to improving the adoption of evidence is providing evidence summaries and additional individualized support, such as tailored messages (Armstrong *et al.*, 2013). Therefore, irrespective of how philosophically dense and methodologically rigorous the research (including realist reviews) is, an important aspect of improving the adoption of evidence is to present the findings in a way that they are digestible to policymakers and implementers.

## Conclusion

Underlying tension can persist when attempting to represent realist review findings for practical relevance while remaining faithful to their epistemological foundations. Topics such as ‘community engagement’ require sharing the findings in clear and concise ways that will be valuable to policymakers and practitioners, possibly translated into bite-sized information for community engagement practitioners. If realist review findings are not comprehensible enough for these practitioners, their utility and relevance may suffer from being limited to a specialist cohort of academics. We argue that realist review findings must be framed and communicated appropriately to engage practitioners without undertaking translational efforts as was originally intended. One method to balance could be synthesizing findings in lay terms alongside their theoretical summaries.

## Data availability

This paper is informed by a realist review conducted by the authors (available at <https://doi.org/10.1136/bmjgh-2023-013712>).

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## Author contributions

F.C.M., S.K. and B.A. were involved in all aspects of the conceptualization, drafting, critical revision and final approval of the version to be submitted.

## Reflexivity statement

The authors include one woman and two men with varying experiences in applying realist methods in public health and health policy research. The two men are from the Global South, and the woman is from the Global North, but the Global South researchers are more senior in their academic careers than the Global North researchers. This methodological paper benefitted greatly from the varying expertise of the authors and the blend of community engagement and realist methodologies.

**Ethical approval.** The paper is based on a study conducted using secondary data. There were no ethical approval requirements.

**Conflict of interest:** None declared.

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