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Chapter Author(s): Lindsey Pope, Helen Reid, Nigel Hart, Kay Leedham-Green, Emily Owen and Sophie Park

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## 4

# Researching generalism

Lindsey Pope, Helen Reid, Nigel Hart, Kay Leedham-Green, Emily Owen and Sophie Park

## Introduction

This chapter examines a range of research approaches that maximise how we make visible generalist knowledge in healthcare and education research. We critically explore some of the dominant research paradigms in healthcare and use an example to advocate for the validity of a more expansive research base that is particular to clinical generalism. We include a range of practices to help prospective scholars enhance and reshape their research and consider ways this might inform exploration of generalist practice, teaching and learning.

How and what we research limits what it is possible to know. Perceptions vary about what evidence is useful and relevant to produce, access and utilise. These are conditional upon how we conceptualise professional practice (for example, as something fixed and standardised, or as something distributed and flexible) and the sorts of knowledge and interactions which become framed as legitimate or acceptable. Research is often assumed to ‘uncover’ existing truths or facts. This positions research as a detached process, free of influence from a researcher’s values. Most research is in fact more complicated. It is a careful and lengthy negotiated process, constructing how and why we can claim ‘to know’ certain things, and the values that underpin what we choose to research. How we think about the ‘thing’ we want to research shapes how and what we can produce as a ‘result’ or ‘knowledge claim’. Familiar research approaches used in clinical practice (for example, randomised controlled trials), tend to shape (and limit) the ways in which knowledge is formalised, codified and made explicit. These tend to compartmentalise and objectify knowledge and researchers, often positioning teaching, learning and clinical care as

'interventions' and research as measurement or comparison of their effectiveness. These approaches have focused, but inevitably constrained, what we are able to make visible, claim or 'know' about clinical practice and learning. These research preferences shape what and how it is possible to examine generalism at any one time and to what extent characteristic elements are made visible through the research process.

Let us consider how we can think about professional practice. One commonly held ideal for professional practice, espoused by the Australian Council of Professions, is that it is based upon a body of knowledge, agreed, codified, made explicit and practised by a 'disciplined group of individuals ... who are prepared to apply this knowledge and exercise these skills in the interest of others' (1). This suggests a discrete and fixed set of knowledge, which can then be implemented in predetermined ways. This lends itself well to methods which compartmentalise and measure professional practice as something separate or discrete from the context in which it is done.

If we think about generalist professional practice differently, then relevant professional knowledge changes: utilising additional knowledge of people, places, context and use of ever-evolving theories of behaviour, cognition, values, psychology or social interactions. These would not be made visible using, for example, a randomised controlled trial, where context and human volition is perceived as a 'contaminator' (2). Wide-ranging knowledge forms are often more challenging to codify, particularly if applied in a variety of ways to adjust to local needs and contexts. These more expansive and distributed knowledge forms require a broad range of research methodologies. While it is desirable that a body of knowledge underpinning health professional practice should itself be built upon a credible and applicable evidence base, how an evidence base is built and curated matters. The evidence we produce to make the rich and detailed knowledge of generalism visible and explicit needs to reflect its complexity; be varied in nature; and attend to the breadth of possibilities for clinical practice and learning. Before continuing, we invite you to read the [Example 4.1](#) and to use it to frame some of the abstract concepts that we introduce.

### **Example 4.1: Dr Ali (becoming a generalist researcher)**

Medical school had taught Dr Ali to use evidence-based approaches to clinical decision-making and to make 'conscientious, explicit, and judicious use of the best evidence in making decisions about the care of individual patients'. On entering academic GP training, she

joined a unit researching gender-based violence. Dr Ali wanted her research to provide evidence to help GPs in identifying people at risk of domestic violence during clinical consultations. Her initial plan was to conduct a robust randomised controlled trial, comparing two approaches to see which identified more cases: explicitly asking everyone in an 'at risk' category versus current practice (unknown).

Dr Ali's supervisors explored with her some of the potential pitfalls of this approach. What were its underlying assumptions, might there be unintended consequences, and how would any findings change future clinical practice or improve patient outcomes? They explored with her whether other types of knowledge, ways of knowing and methodological approaches might help her to take forward her research interests and address the knowledge gaps for approaches in clinical practice.

At her next supervisory meeting, Dr Ali discussed a recent patient encounter. The patient had initially brought symptoms of anxiety but on further exploration disclosed that they were experiencing domestic violence. Dr Ali was able to provide access to a crisis centre which provided emergency support and accommodation. Reflecting on this, she wondered how she, as a GP, could develop her skills to identify and support people better. Her supervisor suggested she go to this crisis centre and spend some time attentively listening and engaging with the staff and residents there to gain access to a diversity of views and perspectives. Dr Ali heard many heartbreaking narratives of attempted disclosures that had been ignored, but also inspirational stories where clinicians had spotted subtle signs and gone out of their way to help. She worked with them to create a research question that mattered to them, relating to barriers and facilitators to disclosure in primary care settings. After receiving the necessary approvals, she conducted a series of workshops for people with lived experience of domestic violence to articulate and reflect on stories of disclosure, and to collaboratively co-create future-oriented implications for practitioners. She shared and honed their recommendations at a local best practice meeting and worked with her clinical colleagues to implement and evaluate their recommendations in practice. She shared her findings at a national conference and was invited to create a training and evaluation pack to enhance a national safeguarding course. This wider evaluation demonstrated that GPs were indeed picking up more cases, and perhaps more importantly, that patients felt safe and heard when they disclosed.

## Sharing and producing generalist knowledge

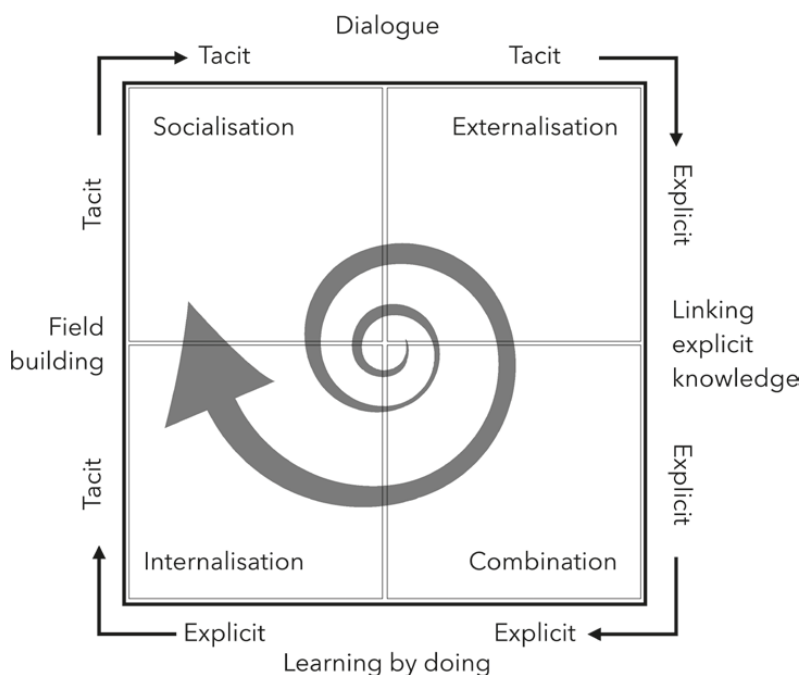
Dr Ali's final project involved making visible the tacit knowledge of people with lived experience of domestic violence. By aggregating, interpreting and sharing their knowledge, and combining it with the knowledge of practitioners, Dr Ali was able to create, evaluate and disseminate theoretically informed new practices that were adopted or adapted by other practitioners. We invite you to consider this as an example of how generalist knowledge is shared and produced more generally.

In real-world clinical practice, knowledge is often tacit or implicit (unspoken or indirectly implied). It may be that generalist clinical practice embodies knowledge and ways of doing that are more implicit than explicit. While tacit or implicit knowledge is not without value in an applied professional context, it requires the profession to embrace a broader range of knowledge approaches to enhance understanding of practice. The Nonaka-Takeuchi model (Figure 4.1) from the world of business provides an insight into how tacit knowledge can be converted to explicit knowledge, or vice versa, and how cycles of sharing and transferring knowledge help to create new knowledge (3). The Nonaka-Takeuchi model postulates four different modes of knowledge conversion:

- from tacit knowledge to tacit knowledge, through socialisation;
- from tacit knowledge to explicit knowledge, through externalisation;
- from explicit knowledge to explicit knowledge, by combination or synthesis; and
- from explicit knowledge to tacit knowledge, through internalisation.

This model illustrates the two-way links between tacit and explicit knowledge. Aligning with sociocultural learning theories, recognising that professional practice and learning does not occur in a vacuum, it proposes that knowledge can be enhanced and expanded through spaces for sharing, converting and creating knowledge (both explicit and tacit). Rather than knowledge being handed down from researchers to practitioners, it acknowledges that professional knowledge is often exchanged in more complex and sophisticated ways.

In generalist practice, dialogue between colleagues or between a teacher and learner might, for example, share 'how I did this and why'. This is the exchange of tacit knowledge through interaction (socialisation). This conversation might lead to the production of a case report or a practice standard operating procedure (SOP) which makes explicit how something is done (externalisation). A team, perhaps from a clinical or academic organisation, might then work to combine case studies



**Figure 4.1** Exchange of tacit and explicit organisational knowledge.  
 © Sophie Park and Kay Leedham-Green, adapted from the SECI model of knowledge dimensions (Nonaka and Takeuchi 1995)

and reports to form a collective document or consensus statement about how something can or even should be done (combination). This document is then shared, used and adapted to inform new tacit practices (internalisation).

Research about generalism therefore becomes more interesting, inclusive and expansive if it not only examines exchange of explicit knowledge, but also attends to how knowledge is shared, exchanged and implemented in the workplace.

## Paradigms of research

There is a wide range of approaches to research, summarised in [Table 4.1](#). Each ‘paradigm’ has different assumptions about reality (ontology, what is knowable), knowledge (epistemology, how knowledge is created) and values (axiology, what ‘good’ research is). We are not positioning one paradigm over another, as each has advantages and challenges in different contexts and for different types of research questions. We do,

**Table 4.1** Research paradigms

<p>Positivism</p> <ul style="list-style-type: none"> <li>• Nature exists</li> <li>• Knowledge is objective, testable and generalisable</li> <li>• Experimental research, data tests hypotheses</li> <li>• Quality = p values, confidence intervals, reliability, validity</li> </ul> <p><i>'Is learning to wash hands by e-learning as effective as face-to-face learning?'</i></p>
<p>Realism – post-positivism / constructivism</p> <ul style="list-style-type: none"> <li>• A real world exists, independent of how an individual perceives or constructs it (mind-independent reality)</li> <li>• Knowledge of a phenomenon will always remain partial, fallible and incomplete</li> <li>• An ongoing process of theory-building and testing is crucial for extending existing knowledge and advancing scientific research</li> <li>• Mixed methods (methodological eclecticism)</li> <li>• Quality = multiple perspectives, ontological depth, generative causation, explanatory insight, rigour, trustworthiness, transferability</li> </ul> <p><i>'The use of e-learning in handwashing training: what works; for whom; and in what contexts?'</i></p>
<p>Pragmatism</p> <ul style="list-style-type: none"> <li>• It does not really matter whether nature exists or not</li> <li>• Knowledge is what you need to make an informed decision, context dependent</li> <li>• Action research, real-world imperfections in data</li> <li>• Quality = try and see if it works</li> </ul> <p><i>'If I switch to e-learning handwashing training, do infection rates go up or down on my ward?'</i></p>
<p>Social constructivism / interpretivism</p> <ul style="list-style-type: none"> <li>• Nature exists through our perception, and is influenced by our sociocultural perspective</li> <li>• Knowledge is socially constructed (e.g. through interactions) and dynamic</li> <li>• Interpretive, qualitative methodologies, data is theory-generating</li> <li>• Quality = rigour, trustworthiness, resonance</li> </ul> <p><i>'What are the factors influencing healthcare professionals' handwashing decisions?'</i></p>

(continued)

**Table 4.1** (Cont.)

Critical theory
<ul style="list-style-type: none"><li>• Nature exists through our perception, and is influenced by our sociocultural perspective</li><li>• Knowledge construction is dominated by powerful elites at the expense of workers / women / minorities / environment, etc.</li><li>• Research is about disrupting and challenging the status quo</li><li>• Quality = impact, change</li></ul> <p><i>'The move from face-to-face to e-learning in handwashing training: in whose interests is this? managers, practitioners or patients?'</i></p>

however, invite the reader to move beyond simple experimental designs when considering how to research complex social phenomena such as generalist education, interactions, systems and outcomes.

Positivist approaches assume a single reality that is objectively measurable, and researchers tend to adopt quasi-experimental designs. The legitimacy of the researcher is established through evidencing their detachment from the research process. Claims about rigour are made in relation to a researcher's objectivity, or absence of impact on data or analysis. This might be appropriate when comparing the impact of two drugs on a measurable outcome such as blood pressure. Within this approach, we assume that the outcomes that matter are objectively and reliably measurable. Measuring more complex constructs (anything that is shaped by human subjectivity, volition, reasoning and choice), however, is less straightforward. For example, if Dr Ali wanted to compare case findings in the two arms of her study, how might the research environment, the words that researchers use, their identity or subjective interpretations of 'violence' affect the results?

Realist approaches acknowledge imperfections in the objectivity of data. Within realist research, findings in one context are unlikely to be generalisable to all contexts (4). Realists ask research questions such as 'what is it about X that leads to Y?' and 'how does an intervention work, for whom, and in which circumstances?' (generative causation). Realists tend to combine data collection methods from qualitative and quantitative research approaches to explore a phenomenon across diverse contexts and from different perspectives (5). Transferability (rather than generalisability) is advocated in realism as this acknowledges the highly complex, dynamic and diverse influences of context. Although theories and findings may be relevant now, they may not be applicable (to interventions) in the future. Realist knowledge will need



to be retested in different social, political and economic contexts and modified accordingly. An example of a realist approach might be comparing different types of domestic violence records for the same area (for example, clinical, police and crisis centre) to identify how different demographic groups disclose, followed by interviews to explore the underlying reasons why.

Social constructivism is a type of interpretivist discourse. This suggests that knowledge is constructed through social interactions and is therefore inherently subjective. Different constructions of the world might therefore elicit different responses and behaviours. Differences might emerge, for example, with research participants in different contexts, or in the ways researcher and participant interact. An example of a constructivist approach might be Dr Ali inviting residents at crisis centres to discuss their experiences of disclosing domestic violence as a group and to collectively make sense of their experiences and construct potential ways forward.

When using an interpretivist approach, 'critical reflexivity' becomes a core part of the research process and related knowledge claims. Reflexivity has been described by Gouldner (cited in (6)) as the 'analytic attention to the researcher's role in qualitative research'. It is both a process and a concept, embracing the positionality of the researcher and their ways of understanding the world. A helpful starting point, but also a false binary, is the concept of 'insider' versus 'outsider' research. A naïve assumption might be that to enhance rigour we simply ensure that an outsider is conducting the proposed study. This assumption suggests that positionality is simply defined by virtue of having (or not) a particular characteristic – e.g. being a GP or not being a GP. As a researcher, we may share some features with our participants, but be quite different in other ways. Both insiders and outsiders bring different values to the research being conducted. While an 'outsider' may bring a fresh curiosity and insights, an 'insider' may bring a more nuanced understanding or be more readily trusted by participants. Reflexivity, through its aforementioned 'analytical attention', requires the researcher to question and reflect on the inevitable relationship between them and their research. The rigour of the research is not established through the researcher's disconnectedness, but rather through their ability to reflect on and share insights about how their position shaped the production of the research findings.

If we are explicit and open about the range of possibilities for doing research, it becomes much easier to exchange conversations about the opportunities and challenges of using particular methods. Rather than these being hidden from view, they become part of a critical conversation

about what particular studies are able to ‘make visible’, and how additional research might complement this to examine a topic or process from a different perspective, or in a different context. This moves our expectations of research from production of definitive ‘facts’, towards a more dialogic and iterative process of knowledge production and exchange, conditional upon the constraints of production and context of research implementation. In the words of Hafferty, such academic endeavours are often dynamic and contested, coming and going in ‘windless waves of understanding’ (7).

Cribb and Bignold argue that positivist discourses frame and justify research that tends to objectify, whereas interpretivist discourses focus more on humanising (8). Neither is right or wrong, but they forefront and limit how and what we can research in different ways. Clinical medicine and much of clinical education have tended to draw upon the same objectifying discourses that are helpful when researching biomedical sciences. This may cause dissonance when they are used to research what are essentially social practices: generalist practice and learning. Positivism positions elements of practice and learning as objects, minimising the ways in which we can understand or appreciate these as part of a vital, dynamic or interactive system. Interpretivist approaches, in contrast, focus much more on human and social aspects of practice, or the nature and value of interactions between people. In positivist research, counting or measuring is important to support research claims. In other paradigms, one instance of a story can form the central basis of an analysis. Here, it is not important to represent the views of all participants. Rather, analysis seeks to produce a new or contrasting idea, concept or perspective.

We are not asking readers to value one approach over another. Rather, we invite you to consider the limitations of every research approach and the need for multiple perspectives in research to understand and improve clinical practice and education.

Historically, we have a very limited empirical base for generalist practice, because of the dominance to date of positivist methods in this field. Increasingly, a wider range of methodologies has helped to make visible new insights and knowledge about how generalism is done and learned. Deciding on what to research, and how to research it, is a values-based process. In [Chapter 5](#) our colleagues assert that how we research, limits what it is possible to know – that is, research can only answer the question(s) the study is designed to answer. In what may appear to be a paradox, it works both ways. We need also to consider ‘what is knowable?’ as that can constrain, or open, opportunities around what and how we research. A broader research paradigm opens up research avenues that may not be discretely

packageable, but are nonetheless important to people and impact on their ability to participate in society. This might include researching the quality and experience of care for marginalised groups, health promotion, patient and carer engagement, strategies for self-care, collaborative working, and personalised and sustainable approaches to care.

## Knowledge hierarchies and the challenge for generalism

The ‘hierarchy of evidence’ has become a heuristic that is embedded in the narrative underpinning decision-making for clinical practice. In 1995, Guyatt and colleagues wrote a paper in which they provided a ‘method for grading health care recommendations’ (9). The principle of appraising, ranking and applying evidence to clinical practice became well known through the 1990s and was soon embedded in clinical curricula and policy. This ranking of evidence led to descriptions of hierarchies and, through the work of organisations such as the Cochrane Collaboration, meta-analyses of randomised controlled trials found their way to the top of the hierarchy. Along the way, case reports, in-depth case studies and other forms of evidence lost currency and became devalued by the medical community.

In their influential 1996 editorial (10), Sackett and colleagues set out to describe evidence-based medicine – ‘what it is and what it isn’t’. They wrote that ‘Evidence-based medicine is the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients.’ Helpfully, they expanded on this to say that ‘The practice of evidence-based medicine means integrating individual clinical expertise with the best available external clinical evidence from systematic research.’ However, the integration of individual clinical expertise has often been neglected along the way, alongside the recognition of the value of researching personalised patient-centred care.

This hierarchy of evidence became further enshrined through the establishment of guideline organisations. Around the turn of the millennium the GRADE (Grading of Recommendations Assessment, Development and Evaluation) approach was established by Guyatt and colleagues (11) and international guideline organisations started to evaluate and report on the quality and strength of evidence underpinning recommendations for healthcare interventions. GRADE would rate papers for their assessed validity of ‘effect’. High-quality studies were those where there was ‘a lot of confidence that the true effect lies close to that of the estimated effect’. Building on this, economic evaluations were added by some organisations further refining what was defined as best

practice. This produces, however, a narrow view about both evidence and quality (see also [Chapter 5](#)).

The evidence hierarchy paradigm and the resultant guidelines, under the banner of evidence-based medicine (EBM), became the dominant arbiter of clinical practice, later referred to as evidence-based clinical practice (EBCP). ‘Effect size’, ‘cost’ and ‘quality’ (by virtue of position on the hierarchy) relating to a limited set of clinical conditions meant that other forms of evidence had limited legitimacy. Regrettably, the value of the integration of ‘individual clinical expertise’ heralded by Sackett and colleagues appeared to become mostly lost along the way. However, there was something of a departure from this dogma of guidelines being the ultimate arbiter of unquestionable best practice with the maxim ‘Guidelines are guidelines not tramlines’, a quote attributed to Sir Michael Rawlins, the first Chair of the UK’s guideline organisation, NICE (as cited in [\(12\)](#)).

The development of EBCP and clinical guidelines (discussed further in [Chapter 5](#)) is not in itself problematic for generalism. Guidelines provide useful reference points for discussing a differential diagnosis or management action plan. The problem relates to the devaluing and, at worst, dismissal of research findings that do not find their way to the top of the hierarchy. Generalism, with its integrative, situated and holistic approach, risks losing connection with an evidence base that is relevant to its practices. A re-reading of the 1996 editorial of Sackett and colleagues ([10](#)) would suggest that the EBM movement led to an unintended consequence. As they state, ‘Evidence based medicine is not restricted to randomised trials and meta-analyses. It involves tracking down the best external evidence with which to answer our clinical questions.’

As a result of the narrow range of research approaches dominating EBM, generalism has been relatively under-researched. Although many clinical decisions benefit from randomised controlled trials, there is an increasing acknowledgement that a broader range of methods is also necessary to inform the evidence base underpinning clinical practice. The increasing complexity of healthcare delivery requires multiple ways of knowing. Qualitative methods such as interviews, focus groups and observation, and methods that combine qualitative and quantitative approaches are therefore growing in popularity ([13](#)).

## Quality considerations for generalist research

We argue that some widely held beliefs about research quality are situated in a positivist paradigm of knowledge and are not suited to the

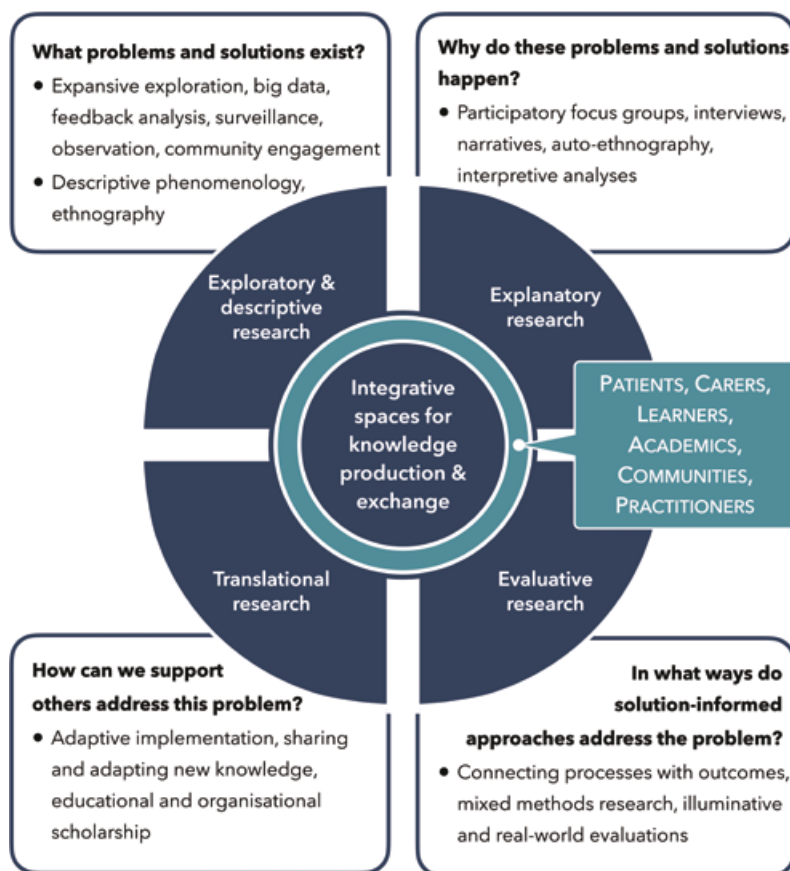
situated complexity of generalism. When these criteria are applied to generalist forms of research, dissonances can arise. For example, the concept of generalisability, or the extent to which findings of a study can be applied to other situations, is often mentioned when critiquing research findings. This term assumes that rigorous research findings reflect a universal truth – for example, claiming that findings from a study are rigorous if the results are replicable across different cultural and healthcare contexts, or that large studies must be conducted to root out contextual factors. Recently, our understanding of generalisability has become more nuanced, with consideration being given to how situated knowledge might be relevant to others beyond the particular circumstances researched (14). This could be through production of reusable insights or concepts, rather than specific or repeatable elements of practice. If the researcher provides sufficient contextual detail, the reader can select elements or concepts that might apply to their own contextualised practice. As a result, research can make visible situated ways of thinking or doing, enabling readers to engage in a critical and reflexive exploration of how things are, and how their own practice might shift or change.

There are many established quality criteria for clinical research, some of which depend on the researcher's paradigm and methodological approach. Such criteria include reliability, validity, trustworthiness, rigour and applicability. There are also ethical considerations relating to intentions, confidentiality, informed choice, minimisation of harms and maximisation of benefits. In addition to these, we argue that generalist research efforts aim to be:

- **participatory:** designed and conducted in collaboration with the intended beneficiaries and other stakeholders;
- **equitable and socially just:** paying active attention to whose voices are heard and ensuring decisions are made in ways that are fair and open;
- **reflexive:** so that external research agendas and the impacts of the researcher's identity, beliefs and positionality are made visible;
- **congruent:** so that the ways of thinking about research (methodologies) and the methods for collecting and analysing data are appropriate for the situational complexity of generalism and the knowledge claims being made;
- **oriented to generalism:** addressing an important generalist problem or unknown;
- **impactful:** insights produced have the potential to enhance generalist forms of care.

## Research for generalism

Rather than explain every type of clinical research, we propose a set of research practices that are particularly suited to generalism. Unsurprisingly, these build on the philosophy and practices of generalism articulated in [Chapter 1](#). Generalism is a complex and situated practice that connects multiple sources and types of knowledge, that values and needs participatory and collaborative approaches, and that implements knowledge in ways that are adaptive. These underlying principles invite approaches to research that are responsive to context, that are participatory and directed towards patient and public agendas, that give holistic attention to patient and population outcomes, and that pay attention to how new knowledge is integrated and adapted for future practice. We propose a set of research approaches that builds on these principles ([Figure 4.2](#)).



**Figure 4.2** Generalist research approaches. © Sophie Park and Kay Leedham-Green

## Exploratory and descriptive studies

Exploratory and descriptive studies help to ensure relevance to patient and population needs and are sometimes used to justify more focused explanatory or interventional studies. Exploratory approaches include exploring public health datasets to identify geographical or demographic clustering of risk factors or diseases, or archives of patient feedback to identify areas of practice that are working well or less well. Descriptive approaches might include describing a care pathway or system from the perspective of service users, or describing a phenomenon such as postnatal depression from the perspectives of the people it affects.

Within exploratory research, descriptive approaches are sometimes used as a precursor to quantitative methods – for example, to describe a phenomenon in depth before creating an instrument to explore its prevalence across different groups. An in-depth qualitative description of the characteristics of postnatal depression, for example, might be used to create and validate an instrument to identify and categorise cases. This instrument can then be used to explore regional and demographic variations.

The quantitative methodologies associated with this type of research include cross-sectional or cohort studies – for example, to determine the uptake of vaccines in an at-risk group, or regional variations in prescribing practices. Qualitative methodologies include ethnographic and phenomenographic studies – for example, to explore the culture and practices of a multidisciplinary healthcare team, or to characterise ‘a good consultation’ from the perspective of patients and carers. Survey, case study and narrative methods might be used to identify potential areas of excellence or concern – for example, through interviews or patient feedback. More statistical approaches might include using a validated measure to explore the association of a construct, such as ‘feeling heard’, with an outcome, such as adherence to treatment plans.

## Explanatory research

Explanatory research might be conducted to explain the findings from a previous exploratory study – for example, to explain why certain demographics have different vaccine uptake rates, or to explain why higher levels of patient activation are associated with fewer hospitalisations. It can also be used to explain anomalous findings such as unusual or outlying results. Explanatory studies might also be conducted in conjunction with

an interventional study, either beforehand to ensure the intervention is grounded in theoretical understanding, or afterwards to explain why the intervention did or did not provide value to its intended beneficiaries.

Theory generation through interpretation is a core aspect of explanatory research, and this is what makes it distinct from descriptive research. Explanatory research tries to answer questions such as ‘why?’ or ‘how?’ and therefore tends to have an interpretive emphasis. It is through a theoretical understanding of why or how something happens that interventions can be specifically targeted to address associated factors. Higgins and Moore describe how theory can be generated at multiple levels (15). Micro theory might explain why something happened during a specific instance – for example, identifying causal factors in a critical incident review and using these to theorise about wider implications. Meso theory integrates findings on a broader level to generate theory around a specific phenomenon – for example, why people who have survived a heart attack do not always take preventive medicines. This might involve, for example, interpreting from a thematic analysis across multiple case studies, documents, narratives, interviews or focus groups. Grand theory aims to build understanding that can be abstracted beyond a specific area of practice and that can be applied more generally – for example, behaviour-change theory or illness-perception theory – and often employs literature-based methodologies such as narrative synthesis and meta-ethnography. Charmaz describes approaches for building from data (16).

## Evaluative research

Generalist approaches to interventional research are not only about ‘proving the efficacy’ of a particular medicine or intervention. Although quasi-experimental approaches are important, they are not included here as they are not specific to generalism. Because generalism is grounded in holistic approaches to patient and population outcomes and the complex link between approaches to care and those outcomes, generalist approaches to evaluative research tend to be more complex and to include ‘real-world’ and ‘illuminative’ approaches (17,18). A real-world evaluation of an intervention might include factors such as patient preference and the feasibility and acceptability of an intervention. An example of a real-world study might be evaluating the impacts of a diabetes intervention by looking at longitudinal data from wearable devices and comparing this to self-reported adherence to



the intervention. Illuminative approaches focus on making processes as well as outcomes visible – for example, evaluating the factors that impact on engagement with the intervention. Illuminative approaches also aim to identify unintended consequences as well as intended outcomes. Such an approach might pick up the additional burden of an intervention, or indeed of benefits beyond the intended outcomes – for example, feelings of validation and belonging experienced by people attending a group intervention. Generalist evaluations are often mixed-methods, partly because not all outcomes that matter to people are countable, but also as a form of additional or complementary exploration or explanation. Are the identified outcomes related to the intervention or to some other factor?

Generalism invites participatory approaches to evaluation that take into consideration structural inequalities. Focusing on the outcomes that matter to people is important. For example, an evaluation of an intervention supporting engagement with people's families and communities. Or an evaluation focusing on sustainability, comparing the human, carbon and economic resource implications of two effective clinical pathways.

## Translational research

The focus of generalism on holistic patient and population outcomes means that the creation of new knowledge is not the end point of research: research impact is enhanced through efforts to translate findings into tangible improvements to people's lives. Generalism is not a static practice, but constantly evolving in response to patient and population needs; therefore, practitioners need opportunities to absorb and learn from research efforts. Efforts to disseminate knowledge and translate knowledge into action might be written up into project reports and shared at conferences or in journals, and these reports are used to create meta-knowledge about how knowledge is effectively shared and translated. Translational research is closely related to organisational and educational scholarship, and includes innovation and improvement methodologies, implementation science, behavioural and cognitive science, and theories of leadership, teamworking, change and action. These are discussed further in [Chapter 5](#) (implementing generalist knowledge), [Chapter 6](#) (educational approaches), [Chapter 13](#) (sustainable healthcare) and [Chapter 14](#) (quality improvement and innovation).

## Strengthening the generalist evidence base

The previous sections have set out perspectives on ways of knowing and of producing knowledge and the dominance associated with particular lenses and knowledge hierarchies informing and directing clinical practice. [Example 4.1](#) (Dr Ali) shows how the dominant hierarchy of EBM might not maximise the visibility of generalist knowledge. Reflecting on the knowledge and perspectives needed to meet the challenges of a day's caseload in clinical generalism offers up many insights into the tacit and implicit knowledge being called upon and the inadequacies of the dominant hierarchies in providing or exchanging this. How should a clinical generalist approach meeting the needs of a grieving mother whose son has died by suicide, or school refusal in a 13-year-old male with an autistic spectrum diagnosis who is navigating the emotional turbulence of puberty, or how to identify those at risk of homelessness to facilitate a morbidity-reducing harm prevention, or a clinical consultation about symptoms that are likely to originate from poly-substance use in managing pain? While many of these examples may, at face value, appear isolated and unique, it is likely that many clinical generalists can relate to these clinical dilemmas, and empirical examination (for example, through ethnography or mixed-methods approaches) could identify some useful principles or insights to inform practice elsewhere, or enhance generalist learning.

Many clinical generalists may have, through experience, arrived at a bespoke and personal tacit knowledge base that orientates their approach with such clinical dilemmas, but this knowledge may not have been made explicit for the benefit of other clinicians or learners. Arguably, this knowledge can and should be made explicit, shared and built upon in order to contribute to evidence gaps that characterise a generalist approach. Selecting the tools to do this well, however, requires careful and expansive thought. For the generalist base to strengthen, structural factors around funding and ethics also need to be addressed so that interpretivist discourses are included in addition to hypothetic-deductive research approaches.

## Acknowledging the constraints and limitations of generalist research

Earlier in this chapter, and in [Chapter 5](#), we refer to the situated complexity of generalist approaches to care and, in turn, the evidence base

that is needed to underpin such approaches. Generalist research, however, also has limitations in being able to provide a concrete evidence base for many granular questions important in clinical practice – for example, which dose of drug A resolves the presence of condition B? The integrative complexity of the evidence base it would seek to establish constrains its suitability for synopsis into explicit guidelines, certainly of the style and form that is typical in the current EBM guideline paradigm. However, it is perhaps because such an evidence base is absent that guidelines fail to embrace the affordances of generalist knowledge. It will perhaps only be when generalist approaches to evidence generation gain greater recognition that the affordances are seen as equal in measure to the constraints and limitations. Learners and clinicians can then integrate and move between these knowledge forms to support practice.

## Conclusion

It is hoped that, through reading this chapter, you have been challenged to think expansively and creatively when considering how to produce knowledge that is relevant to generalist practice. We have presented our view that to explore generalist practice we need to recognise and embrace a broad range of methods as legitimate. In so doing, we aim not for reproducibility but for useful insights about how and why we might choose to work with a patient or a system in a particular way.

Research paradigms such as realism, constructivism and critical theory can provide new ‘entry points’ to examining generalist practice, producing evidence to support learners’ reading, use and creation of generalist knowledge. This chapter has included a range of examples to enhance and reshape future research about generalist teaching and learning. It is equally important to consider how study design and research questions constrain what can be known as a result of a particular study. With research recognised as production of new knowledge or insights, it is beholden on every researcher to consider both the strengths and limitations of their work and how their knowledge might impact on clinical practice. Furthermore, to meet future population needs, we need further investment in the academic discipline of generalism alongside research funding aligned with generalist practice and priorities.

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