Enhancing equity-oriented evidence-based practice in speech and language therapy

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Contents

Abstract

Background

Evidence-based practice (EBP) is a commonly adopted framework for guiding health professionals' clinical decision-making, urging the incorporation of scientific evidence, patient preferences and clinical expertise. There are many barriers to EBP, and the mainstream research processes underpinning it are not infallible. Notably, traditional approaches to EBP seldom apply an equity lens, which risks perpetuating harmful practices and inequities.

Aims

The primary aim of the thesis is to draw together seven prior publications and explicate their role in enhancing research processes, to facilitate EBP. Simultaneously, it aims to demonstrate how these enhancements can support an equity-oriented EBP.

Methods

Responding to research questions which connect the seven publications and guide this thesis, a grounded theory approach is applied to produce a critical synthesis. Collaborative research priority-setting projects and leveraging of routinely collected data are explored with regards to their capacity to facilitate EBP.

Findings

The grounded theory highlights that avenues for dialogue between EBP stakeholders may promote the production of meaningful (and equity-oriented) evidence more suited to transfer into practice. The seven studies present two such avenues: (1) co-producing research agendas with those with lived experience of a clinical need, to ensure clinical evidence gaps are filled and (2) leveraging practice-based, routinely collected data, to augment and supplement traditional research approaches, and optimise their relevance for practice.

Discussion

Systemically embedding *dialogic pathways* (including co-produced research priorities and use of routinely collected data) between EBP stakeholders is proposed to enhance research and facilitate EBP. This work highlights a new concept: *Equity-oriented Dialogic Evidence-Based Praxis* (ED-EBP). A radical shift in existing dynamics between researchers, practitioners and service users is required, to collaboratively create evidence that is equity-oriented, and suitable for practice. Further work is required to scrutinise how *dialogic pathways* can be embedded, and the challenges to doing so mitigated.

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Declarations

All the works included in this thesis are co-authored peer-reviewed journal articles. My authorship in each aligns with the International Committee of Medical Journal Editors authorship criteria. I have declared my specific role and contribution to each of these works within the ‘Synopsis’ section of the thesis.

Conflict of Interest

There are no conflicts of interest to declare.

1. Introduction

1.1. Overview

This thesis begins with an introduction to the evidence-based practice (EBP) framework, including key concepts, associated challenges, corresponding solutions, and a summary of contemporary critical debates. Knowledge and understanding of EBP is then applied in the field of speech and language therapy (SLT), providing ample context for the seven peer-reviewed papers which form this PhD by prior publication. Thesis-level, retrospective research questions are outlined, followed by a synopsis of the papers. A critical evaluation of the methodologies applied throughout each is subsequently provided. A grounded theory-informed synthesis of the papers in response to the research questions follows, highlighting novel insights and their implications. The limitations are discussed, which is followed by a conclusion reinforcing the contribution to the field. Critical learning insights from my research career are interwoven throughout the thesis.

1.2. The Evidence-Based Practice Framework

Evidence-based practice (EBP) is a widely adopted framework in Western/ised health care guiding practitioners' decision-making, centred on achieving optimum outcomes for the individuals in which they are supporting (Dusin, Melanson and Mische-Lawson, 2023). EBP has evolved from evidence-based medicine (EBM), a concept put forth by medical scholars largely in the 1960s, though has had a series of re-conceptualisations since (see Smith and Rennie, 2014, for an oral history). Though used synonymously with EBM, in this thesis I refer solely to EBP, aligning with its focus on health rather than medicine. I use EBP to

describe both the concept, and its application— being the actions taken by a practitioner that are considered optimal for individuals in their care.

EBP is seated in positivistic epistemology— the valuing of objective and quantifiable data (Park, Konge and Artino, 2020)— being developed from Western and European medicine and associated worldviews, which emphasise that treatment decisions should be guided strictly by what systematic evaluations of the best available evidence shows to be most effective (Guyatt, 1991; Chalmers, Dickersin and Chalmers, 1992). Publications in the 1990s attempted to extend this view of EBP, to be more pragmatic and inclusive of other types of evidence (Haynes *et al.*, 1996, 1997; Sackett *et al.*, 1996; Sackett, 1997). These led to the most widely understood and adopted concept of EBP which necessitates integration of three types of evidence (Straus *et al.*, 2019). These three aspects of EBP are conceptualised variously, as: a *triad* (Phillips, Vaarwerk and Morgan, 2022; Tringale *et al.*, 2022), a *triangle* (American Speech-Language-Hearing Association, no date), a three-fold *Venn diagram* (Satterfield *et al.*, 2009; Yonkaitis and Maughan, 2018) or as *three pillars* (Schlegl, Ducournau and Ruof, 2017; Szajewska, 2018). In whichever way they are discussed, the three components essentially refer to: (1) scientific evidence, (2) clinician expertise and (3) preferences and priorities of the individual requiring healthcare and/or their family and carers (collectively referred to herein as 'service users'). I adopt the term *pillars* when referring to these three components, throughout the thesis.

EBP remains central to clinical practice in the United Kingdom (UK) and beyond, across a range of health professions. Regulatory and professional bodies worldwide stipulate the application of EBP as a standard of proficiency (see, for example, in the context of speech and language therapy: American Speech-Language-Hearing Association, 2005; Speech Pathology Australia, 2021; Health and Care Professions Council, 2023). This widespread

adoption of EBP as convention has served as a general proxy for agreement on its value, at least in Western and European contexts. This is not without reason: there is evidence demonstrating that enhancing EBP in health settings is linked to improved service user outcomes (Connor *et al.*, 2023)— undoubtedly the goal of health care.

1.3. Barriers to EBP: The Transfer of Evidence-to-Practice

Despite its hegemony, there are many debates about the impact of EBP. Much research has been published on the barriers to EBP within and across health systems and professions (Sadeghi-Bazargani, Tabrizi and Azami-Aghdash, 2014). This section explores key challenges, with some proposed solutions, judged to be most pertinent to this thesis.

1.3.1. Favoured forms of evidence to inform practice

As EBP (underpinned by positivistic beliefs) encourages the use of "best available external clinical evidence from systematic research" (Sackett *et al.*, 1996, p.71) (henceforth, *pillar one* of EBP), making judgements on research quality is fundamental. Traditionally, this has been guided by the hierarchy of evidence (Burns, Rohrich and Chung, 2011) which ranks the quality of quantitative research designs. Within this paradigm, randomised controlled trials (RCTs) are hailed as being the highest quality, gold standard, form of clinical research due to the controlled environments, low risk-of-bias and potential for uncontaminated causal analysis, embedded within their design (Wallace *et al.*, 2022). Without doubt, RCTs are uniquely valuable in this regard. This section intends to illustrate the impact of an over-favouring of RCTs, relative to other approaches, observed within common EBP discourse (for an extended commentary, see Greenhalgh, Howick and Maskrey, 2014).

Specifically, in relation to EBP, the hierarchy and championing of RCTs manifest their influence through appraisal frameworks developed as aids for judging the quality of studies, regarding their trustworthiness for informing practice. For example, the GRADE (Grading of Recommendations Assessment, Development, and Evaluation) framework (Guyatt, Oxman, Kunz, *et al.*, 2008; Guyatt, Oxman, Vist, *et al.*, 2008)— a globally-adopted approach guiding the development of clinical practice guidelines, including by the World Health Organisation (WHO) (Elias *et al.*, 2013; De Leo, Bloxsome and Bayes, 2023; National Institute for Health and Care Excellence, 2024)— by default, initially credits any RCTs with providing quality evidence with the utmost confidence. This signifies a widespread, often uncritical, acceptance of RCTs as the pinnacle of evidence to inform practice. Within the traditional hierarchies, other quantitative research designs are positioned lower down, and neither qualitative nor mixed-methods research are acknowledged.

Medicine and certain areas of health care may be arguably well-suited to being guided by RCTs— surgical protocols and drug efficacy represent two areas where interventional protocols and outcomes are usually well-defined and controlled, enabling causal understanding through seemingly meaningful RCTs. Optimising the chance of an 'uncontaminated' study, RCTs typically seek to systematically remove or reduce the effects of extraneous variables which may contribute to effects of intervention through stringent sampling criteria or by applying statistical adjustments to examine singular outcomes (Wallace *et al.*, 2022). Other areas of health care do not have such neat parameters. In particular, therapeutic and rehabilitative contexts involve interventions which are complex and foundationally relational, where participants are highly heterogeneous with a range of interpersonal factors that may relate to intervention outcomes, which may vary between individuals (Davies, 2022). This natural complexity often conflicts with the goals of RCTs,

where it is simply not possible to always attribute causal effect (Schmitz and Meyer-Feil, 2024). Regarding speech and language therapy interventions specifically (the practice of which is elaborated on later in this thesis), scholars have previously argued that the imperative to focus on the RCTs in this field is misguided for these reasons: they offer little value when therapies are often ill-defined, and population groups not clearly understood (Carding and Hillman, 2001; Pring, 2004).

Positively, there has been a growing acknowledgement of the value of qualitative research in recent decades. For example, more inclusive hierarchies have been posed (Daly *et al.*, 2007), and a GRADE framework for qualitative research has been published (Lewin *et al.*, 2018). Wang *et al.*, (2020) evidences the impact of this shift, identifying that eighty-six percent of clinical guidelines published between 2011 and 2020 used qualitative research to support their recommendations. Other methodological alternatives to understanding the effectiveness of care approaches, which somewhat counter the traditional philosophies, have gained legitimacy. An example is critical realist evaluations, which examine outcomes from an implemented programme, in association with the processes and contexts involved in doing so (Mukumbang, De Souza and Eastwood, 2023). Typical critical realist evaluations lead to a programme theory, which explicate the conditions in which the intervention may or may not be successful, providing information invaluable for EBP (Greenhalgh and Manzano, 2022; Renmans and Castellano Pleguezuelo, 2023). This approach directly responds to the challenge of healthcare complexity, which RCTs largely fail to do (Porter and O'Halloran, 2012).

To re-iterate, it is not the value of RCTs directly that is challenged here, rather, the impact of an over-emphasis on this singular form of evidence in facilitating EBP, which— as is explored— are not, infallible. Further emphasising the growing contentions with RCT

idolisation, scholars are publishing critiques challenging their standing (Stone and Pocock, 2010; Steen and Dager, 2013; Kostis and Dobrzynski, 2020), as well as highlighting ethical, statistical and clinical concerns regarding them (Ahuja, 2019; Gerstman, 2023). Despite these forms of resistance, there is moderate evidence that the discourse hailing RCTs being the 'gold standard' form of evidence for EBP persists (Hariton and Locascio, 2018; Wallace *et al.*, 2022; Braga *et al.*, 2025), with their undertaking ever-increasing (Vinkers *et al.*, 2021). Thus, the strength of the RCT hegemony appears substantial.

The specific critique of RCTs most relevant to this thesis, is their limited external validity, which has significant ramifications of the transferability of research to practice. Commentary on how external validity relates to research transfer is not new, yet it remains, emphasising a long-standing, unresolved contention (Rothwell, 2005; Eldridge *et al.*, 2008; George, 2024). In particular, the representativeness of RCT samples of real-world populations is questionable (Kennedy-Martin *et al.*, 2015; Tan *et al.*, 2022). Many studies expose how population groups are often missing, including: those who are minority ethnic (Turner *et al.*, 2022), women and marginalised genders (Burgess *et al.*, 2025), and older people and more medically complex individuals (He, Morales and Guthrie, 2020). Overly strict inclusion and exclusion criteria may be a root cause. Illustrating the issue, Taipale *et al.*, (2022) applied commonly-used RCT eligibility criteria for participants with schizophrenia to a real-world dataset of patients. The study highlighted that a typical RCT sample would likely only represent one-fifth of this population, and that those who were excluded were most likely to be in greater need of support. Resultantly, RCT evidence about effective interventions, derived from highly invalid samples, renders itself obsolete for application in practice in many instances. Furthermore, often-cited barriers to research-to-practice transfer relate to mismatches between health care capabilities and culture, staff availability, and adequacy of facilities compared to what is

provided in a clinical trial context (Jabonete and Roxas, 2022; Smith and Johnson, 2023). Thus again, in significant ways, RCTs fail to provide evidence to truly support EBP, arising from significant challenges in replicating treatment or therapy regimes identified as effective, in the real world.

To summarise, despite incremental movements, the hegemony of RCTs as the best evidence for EBP has not only likely played a role in distorting attitudes towards recognising and valuing other forms of evidence, paradoxically it has created hurdles to achieving EBP itself. Primarily, the over-privileging of RCTs had led to mass creation of evidence with magnitudes of difference to real-world clinical needs, which that cannot be translated into practice. It is perhaps unsurprising that the transfer of research-to-practice is often cited as taking seventeen years (Green, 2008; Morris, Wooding and Grant, 2011), by which point, its relevance may be questioned. These challenges signal potentially fundamental issues in the ways in which research is produced, which need addressing, to optimise EBP.

1.3.2. Innovations to aid research-to-practice transfer

One approach aimed at aiding research-to-practice transfer is producing 'evidence-based' practice guidelines. Typically, practice guidelines are produced by an appointed panel of clinical and research experts, and comprise recommendations for practice, which are the result of a synthesis and critical appraisal of scientific evidence (De Leo, Bloxsome and Bayes, 2023). The intention is to facilitate EBP by performing the complex tasks a practitioner may otherwise need to do, i.e. locate, read, appraise and synthesise research in a given clinical area (Greenhalgh, 2019). However, the literature reveals profound challenges in implementing practice guidelines, including the substantial amount of work required to disseminate them, the capacities to educate the workforce about them, and services'

capabilities to drive change (Davis and Taylor-Vaisey, 1997; Francke *et al.*, 2008; Pereira *et al.*, 2022; Wang *et al.*, 2023). Thus, while unarguably valuable, practice guidelines alone do not seem to wholly support the transfer of research-to-practice, and thus EBP.

Other innovations aimed at bolstering research-to-practice transfer are the emerging fields of implementation science and knowledge translation or mobilisation theory. These are new and related concepts, dedicated to closing the gap between research and practice (Rycroft-Malone *et al.*, 2015; Douglas and Burshnic, 2019; Wensing and Grol, 2019; Minogue *et al.*, 2021; Zullig *et al.*, 2024). Knowledge translation and mobilisation theory broadly relate to the systematic consideration of contextual factors (such as local capabilities) and stakeholders involved (such as service users, clinicians, managers and policy-makers) when implementing a piece of research, which facilitate its tailoring for use in practice (Straus, Tetroe and Graham, 2009; Rycroft-Malone *et al.*, 2015). Implementation science instead places greater focus on interventions within trial methodology, which embed evaluations of practice-related concerns such as adoptability, implementability and sustainability (Bauer and Kirchner, 2020; Zullig *et al.*, 2024; Reardon *et al.*, 2025). However, these fields are not without critique: Westerlund, Nilsen and Sundberg (2019) comment on the "Research-Practice Gap Paradox" (p. 332), describing how these emerging fields create new layers of more research that still remains too distant from practice. Thus, the feasibility of EBP is once more challenged and again, whilst valuable, these solutions alone do not appear to solve the problem.

1.3.3. Widening the scope of intervention

Notably, the challenges and solutions outlined above concentrate on issues associated closely with *pillar one* of EBP (scientific evidence), and despite targeted solutions being proposed, EBP remains a challenge. Based on the arguments given, it is fair to surmise that

interventions targeting research-to-practice transfer from *pillar one* alone are not sufficient to facilitate EBP. Notably, there is scope to broaden the strategy. An alternative is to consider whether EBP — and the production of meaningful evidence for practice— could be facilitated instead by the other *two pillars*.

This thesis puts forth that utilising evidence from clinical practice (*pillar two)* and service users (*pillar three*) to tactfully and powerfully influence the production of research (*pillar one),* can lead to creation of more impactful and relevant evidence which can more seamlessly be applied to practice. This idea forms the basis of this thesis; the *three pillars* will be referred to and revisited throughout.

1.4. Critical Debates and Contemporary Perspectives on EBP

In recent years, there has been a much-needed recognition by society broadly about the various ways in which inequities are produced, including in health, care and research, and thus, EBP. Whilst it is beyond the scope of this thesis to explore these all in detail, this section attempts to introduce some key considerations and explore their implications for EBP. Here, I have adopted the phrase/s *process/es of inequity* to capture singular and collective 'ways' in which inequity may be produced by the existing conventions related to health, care, research, and EBP. Specifically, this includes the examination of methodological privileging in health research, the application of historical models of disease, and their consequences in relation to global health and inequity. These are discussed in turn, below.

1.4.1. Methodological privileging in health research

As introduced earlier, there is a pervading legacy of Eurocentric and Western positivistic worldviews and their associated methodologies in clinical research— and thus EBP— and this has been associated with sustaining harmful inequities. Central to this argument is the often-uncritical acceptance that evidence arising from empirical research entrenched in these paradigms equates to truth; simultaneously, other traditional, cultural, spiritual, or otherwise, forms of knowledge are regarded as illegitimate (Lim, 2025). Disrupting this status quo and adopting radically different approaches to health research has been identified as a vital task for society (Lucero, 2011; Hussain *et al.*, 2023; Ramani, Whyle and Kagwanja, 2023). In this context, epistemological and methodological privileging can be argued as a process of inequity, with direct associations with EBP.

One response to this has been greater emphasis on the use of decolonising methodologies, which embody approaches to knowledge creation which resist the dominating research principles and the forms of knowledge produced by adhering to them (Tuhiwai Smith, 2021). Rather, the importance is on empowering indigenous peoples (or other oppressed groups) to set agendas and establish methodologies which incorporate their worldviews, and social and cultural protocols (Russell-Mundine, 2012; Tuhiwai Smith, 2021). Typically, these utilise more qualitative and participatory approaches, and stress the value of experiential knowledge (Omodan and Dastile, 2023). Decolonising methodologies thereby oppose traditional perspectives on what constitutes quality evidence for EBP. Embracing these approaches are considered essential for equity-oriented health research (Ramani, Whyle and Kagwanja, 2023). Yet, I have found little evidence of discussions explicitly associating decolonising methodologies with EBP, with the exception of some emergent reports from the Australian context (Luke *et al.*, 2022).

Further rejecting the methodological privileging underpinned by positivism, is the pursuit of epistemological pluralism, that is, appreciating and acknowledging varied forms of understanding the world (see Kirmayer, 2012, for an examination of pluralism in EBP). Valuing lived experience and associated knowledge is one facilitator of this. The "nothing about us, without us" (Charlton, 1998, p.16) disability justice movement from the 1990s has significantly contributed to these efforts. Evidence of the movement's success in the UK at least, is that health services and research are expected to be designed and produced *with* the individuals who seek to benefit from them, broadly captured as 'patient and public involvement' (PPI) (National Institute for Health and Care Research, 2024). These debates raise important considerations regarding influences and interactions between scientific evidence (*pillar one)* and service user preferences (*pillar two),* which are not discussed in the traditional conceptualisations of EBP.

1.4.2. Models of disease, disability and identity

Conceptual frameworks of disease and disability underpin health care research and practice, including treatments and therapies. Below, I discuss how these have been more critically considered, and how such frameworks have the potential to be a process of inequity, with implications for EBP.

1.4.2.1. The biomedical model, rooted in positivistic worldviews

The biomedical model of disease and disability is premised on ill-health or disability being a pathology, i.e. a characteristic that represents a divergence from a physiological and psychological norm (Larson, 1999). From this purview, disease and disability are impairments or deficits in need of remedying (Zaks, 2024) and represent an absence of

"bodily perfection" (Barnes, 1996, p. 24) describing the non-impaired or non-disabled body. Though there has been shifts in practice (and research) towards understanding disease more holistically— vis-à-vis the 'bio-psycho-social' framework encapsulated in the WHO's International Classification of Functioning (World Health Organisation, 2007)— it can be argued that conventional research paradigms (and thus EBP) are still largely rooted in the biomedical framing, explained herein.

Aligning with its central tenets, the biomedical model carries positivistic undertones with its focus on control, decontamination, classification, systematisation and objective measurement of characteristics, clinical manifestations or behaviours, and evaluations of the effectiveness of interventions unto them (Park, Konge and Artino, 2020). In practice, this manifests through 'evidence-based' tools such as standardised tests, where an individual's characteristics or aptitude are measured and compared to a control (read, *normal*) group. Often, the results of such tests guide treatment decisions, where a reduction in the prevalence of symptoms, to align with the norm, becomes the target (Nair, Farah and Cushing, 2023). Whilst undisputedly valuable in many clinical areas (e.g. measuring levels of cell types before and after a treatment to see if a cancer has been eradicated, i.e. returning to normal levels), unselective application of this framing may be rendered amoral and unethical: likely the most significant illustration of this point is the pathologisation of non-heterosexuality (Spurlin, 2023). Given the direct association between models of disease and disability, with treatment and therapy decisions, their use remains critical when considering EBP.

1.4.2.2. Alternatives to the biomedical model

Critical disability studies offer alternatives to the biomedical, positivistic models and their implications for EBP; the neurodiversity paradigm and associated field of study serve as a

good illustration. Neurodiversity (I choose to attribute the original coinage to the online community of autistic people, as reported in Botha *et al.*, 2024) describes the existence of natural variation in neurological composition, where individuals' neurotypes are considered simply as different to one another. To use a common example, through this lens, someone diagnosed with autistic spectrum disorder (within the biomedical framework) is, rather, understood as an individual with their own unique neurotype. Opposing mainstream views, the paradigm rejects that difference equates to disorder or deficit (Rosqvist, Chown and Stenning, 2020). That said, the associated framing of neurodivergent*,* popularised by the paradigm, paradoxically implies some positioning away from a cultural construction of normal, and as such requires further theorisation (Stenning and Rosqvist, 2021).

Research and practice undertaken through the commonly-termed neurodiversity-affirming lens is emerging (Najeeb and Quadt, 2024; Zaks, 2025). Indicative evidence suggests that this framing influences equity-oriented research: Bottini *et al.* (2024) found that autism research which used neurodiversity-affirming language was more likely than research that does not use it to be focused on issues related to diversity, equity and inclusion. Thus, the neurodiversity paradigm highlights how, when changes to our conceptualisations of disability and disease are made, equity-oriented research and EBP may be more likely.

1.4.2.3. Intersectionality and its application in EBP

In parallel to the emergent reframing of disease and disability, the application of intersectionality theory (Crenshaw, 1991) has gained traction in health care practice and research (Green, Evans and Subramanian, 2017; Homan, Brown and King, 2021; Qureshi *et al.*, 2022; Sabatello *et al.*, 2023). Intersectionality, a sociological perspective, emphasises one's requirement to understand individuals and their experiences, vis-à-vis the various and

intersecting identities they may hold. Importantly, this is within the context of the relative and cultural-specific levels of oppression, disadvantage and power imbalances produced and sustained by mainstream society, and thus a valuable tool to examine processes of inequity (Kapilashrami and Hankivsky, 2018; Scottish Government, 2022).

Applying intersectionality in EBP may have specific implications for how *pillar three* is considered. Taking an intersectional approach would (in the least) require clinicians to critically engage with the historic and contemporary socio-cultural-political processes that may shape an individuals' or a community's engagement in health care, and their preferences and priorities for treatment. Despite this clear application, I have been unable to locate discourse that directly links intersectionality to EBP explicitly.

Stimulated by the health care experiences of Black women reported in Washington and Randall (2023), a fictional scenario may help illustrate the point: a practitioner applying intersectionality in their EBP would be cognizant of how historic and systemic racism, targeted misogyny, generationally-transmitted mistrust and experiences of racism may shape a Black woman's decision to take a medicine— considered the best evidence by predominantly White-male medical professionals— or not. Following such reflection, the practitioner may adapt their approach in their clinical decision-making. Exploring clinical expertise (*pillar two)* and scientific evidence (*pillar one)* through an intersectional lens may also reveal further shortfalls, echoing the arguments above that the current models of EBP may be too simplified to respond to these contemporary considerations.

1.4.3. Health inequalities and the global health context

Applicability of EBP has been further critiqued through its links to health inequalities, arising from the ineptitude of clinical research to have relevance for marginalised populations, related to their exclusion from studies, and the generalisability of evidence to a global context (Lee, Fitzpatrick and Baik, 2013). In particular, arguments against EBP have been made in relation to its feasibility in lower-income, global majority contexts where clinical practice is constrained by multiple other critical factors, particularly the lack of resources, which is the most frequently identified barrier to implementing EBP (see Whitehorn *et al.*, 2021 for a review). For practice contexts where there is inadequate research that reflects feasible service delivery models and resources, or where population health interventions are a higher priority than individualised care, implementation of EBP is especially challenging (Yapa and Bärnighausen, 2018) and thus serves as a process of inequity. These issues emphasise the need for greater socio-political, economic and cultural considerations to be embedded within research design and EBP conceptualisations.

The concerns mentioned above resonate with the '10/90 gap'— which signals the misallocation of health research spending globally, where less than 10% is spent on diseases that account for 90% of the global disease burden— and goes some way to characterise issues with global health research coverage (Global Forum for Health Research and World Health Organization, 2002; Patel, 2007). Equity of access to evidence-based care must be dependent on the availability of research undertaken in different contexts. Thus, where this is lacking, EBP fails to be an adequate model for practice and implementing it therefore may contribute to, rather than abate, health inequality.

1.4.4. Course correction for a contemporary EBP

The implications of these processes of inequity and the associated shifts to address them further highlight that EBP needs to be critically considered. The ways we approach, and assign value to, evidence production processes, the fundamental models about health and ill-health upon which research is premised, and the applicability of EBP to global health and its associations with inequalities must be examined. EBP in its traditional form appears inadequate in this contemporary context. The counter-concept of an equity-oriented EBP will be revisited throughout this thesis, again through examinations of how interactions between its *three pillars,* to enhance clinical research, can steer this agenda.

1.5. The Speech and Language Therapy (SLT) Context

Against the backdrop of the arguments made in health more broadly, this section introduces the context of this thesis, which is speech and language therapy (SLT) and speech and language therapists (SLTs). SLTs have professional expertise to assess and provide interventions for individuals with speech, language, communication and swallowing difficulties across the lifespan. SLT is recognised and regulated globally, although diversely, but in many contexts EBP forms a central tenet of practice (e.g. see Health and Care Professions Council, 2023). Nonetheless, issues pervade the application of EBP in SLT (Dodd, 2007; Greenwell and Walsh, 2021; Hall-Mills et al., 2023). Various studies specifically highlight barriers to EBP including a paucity of research relevant to the field, challenges accessing research, education to understand research, and time and resource restraints (O'Connor and Pettigrew, 2009; Foster et al., 2015; McCurtin and Clifford, 2015; Greenwell and Walsh, 2021).

Scholars have, in response, remodelled EBP for the profession. Dollaghan presents E^3BP (Dollaghan, 2007), an important distinction from EBP being its reframing of clinical expertise not as a pillar, but as a central focus, replacing this pillar with "evidence internal to clinical practice" (Dollaghan, 2007, p.2). Also unique to E^3BP is a practical approach to incorporating patient preferences (*pillar three)* with scientific evidence (*pillar one)*: the "Checklist for Appraising Evidence on Patient Preferences" (Dollaghan, 2007, p.128). Other practical models that have been proposed include McCurtin, Murphy and Roddam's (2019) Total Evidence and Knowledge Approach (TEKA). TEKA guides SLTs' collation of information (across all three *pillars*, recognising them as equally valid knowledge forms) when making treatment decisions. These models, to some extent, address SLTs' challenge of putting less-than-ideal scientific evidence (*pillar one*) into practice (inherent in the traditional EBP model) by widening focus to the evidence from *pillars two* (clinical expertise) and *three* (service user preferences), and aiding integration of these distinct forms.

Yet, E^3BP and TEKA do little to challenge the ways in which research evidence (*pillar one*) is produced initially. Rather, their models place onus on the practitioner to compensate for its shortcomings. Furthermore, these models are limited in addressing the equity-oriented issues highlighted above. For example, TEKA maintains an emphasis on treatment efficacy and treatment decisions, illustrating its proximity to the biomedical model. E^3BP is conceptually narrow regarding patient preferences, being those on a very individualised basis, unacknowledging of the implications of any wider social and institutional processes at play. Neither model attends to how their EBP might be enacted if there is no research relevant for a given national context or population.

Recent modifications to SLT EBP have emerged which more successfully address these contemporary critiques. As articulated in Box 1, a critical learning incident from my role as

an educator of SLT has been pivotal to my own re-evaluation of EBP in this regard. Though not alluding to EBP specifically, Abrahams et al. (2019) present an exploration of SLT professionalism in the context of South Africa, where the legacies of apartheid and colonialism persist. In their discussion, professionalism is closely associated with how knowledge is produced and recognised, and hence directly relevant to EBP. The authors explicitly highlight the Eurocentricity of the profession and associate its reliance on positivist science as evidence of its colonial nature. In so doing, they propose alternative frameworks to guide practice. Prominently, this emphasises closer criticality of research in relation to socio-cultural-political contexts and structures, and a shift away from individualised practice towards a population health approach. In subsequent works, this discourse is furthered, explicating the need for a radical change in the profession's "value system", which may be achieved via epistemological and ideological shifts resisting the "traditional framing" of research and practice (Abrahams et al., 2023, p.6) — thus directly resonating with EBP.

Box 1. Critical learning insight (1)

As an educator for pre-registration SLT students— leading and teaching modules related to EBP— my interactions with students have provided profound learning moments which have shaped this thesis.

I have become increasingly critical of the adequacy of what I understood to 'be' EBP, through inquisitive learners' questions. As a facilitator of transformative enquiry (Khedkar and Nair, 2016), students are invited to interrogate and reflect on taught content. They raised a fundamental question to me: if, as SLTs, we are expected to put research into practice,

> *but the research is often biased toward benefiting already-privileged populations, are we being complicit in perpetuating health inequities? I felt honoured to witness the future professions' critical and holistic enquiry.*
>
> *Their reflections resonated with the increasing conflict I was experiencing as a professional: upholding principles of EBP, as expected of me, but also with a gnawing understanding of the inadequacy of much of the research in the field. The students' enquiry provided legitimacy for me to consider innovations in the conceptualisation of EBP, that align more with social justice.*
>
> *The debates about research and EBP that I have had with my students have left me with increased confidence in pursuing this thesis through the lens of equity, reaffirming the need for a close examination of how research is produced and translated in practice, which values equity and inclusion.*

More specifically in relation to EBP, Khamis-Dakwar and Randazzo (2021) propose a model for EBP which "is integrated with culturally responsive practice through all three pillars" (p.141). In harmony with E^3BP, TEKA and Abraham and colleagues' arguments, they urge for greater plurality among and wider scope of each EBP *pillar*. For Khamis-Dakwar and Randazzo, this includes: (1) equal valuing of qualitative and quantitative research in *pillar one,* (2) reframing *pillar two* (clinician expertise) as practice-based evidence, which includes practice-based data, (3) incorporating meso- and macro- factors that contribute to service user preferences and priorities in *pillar three* (such as community-level norms and expectations, or global-level influences, like home nation precarity or violence).

Overall, this model seems to best align with conventional understandings and responds to the equity considerations. Yet, some limitations remain. Though Khamis-Dakwar and Randazzo argue for more equal recognition of methodologies, it still fails to address the inherent shortcomings of conventional clinical research approaches. Its comprehensiveness may also be its downfall. Despite presenting the *pillars* as overlapping, the authors do not explicate the nature of how they interact or illustrate how to integrate them. Given that the other models (E^3BP and TEKA) emphasised practical guidance for practitioners on how to approach integration of three, more simplistic *pillars*, one might argue that the number of factors to be considered in Khamis-Dakwar and Randazzo's model makes this process even more challenging. Therefore, although seemingly improved from an equity perspective, this model still maintains reliance on traditional research production and inadequately explores its practicality.

This thesis intends to address the shortcomings of the various EBP conceptualisations, by outlining specific ways in which *pillar one* (scientific evidence) could be targeted by the other *two pillars,* at the stage of evidence production rather than just at application, and ultimately how equity-oriented EBP can be facilitated. Appendix 1 summarises the traditional model of EBP (Appendix 1.1.), sites where modified versions and methodological interventions aimed at enhancing EBP are located (Appendix 1.2.), as well as potential sites for proposed novel interventions (Appendix 1.3), which this thesis explores further.

1.6. Knowledge Gaps in EBP: Context of Prior Publications

As this introduction has highlighted, conventional conceptualisations of EBP and its application are associated with a myriad of challenges which remain largely unresolved. There are knowledge gaps regarding:

(1) Effective and practical solutions to overcome the documented challenges in the production of meaningful evidence with greatest potential for research-to-practice transfer, and thus, EBP

(2) How to reconcile EBP with contemporary, critical debates related to equity

Furthermore, to address SLTs' typical challenge of applying often incompatible and varied forms of evidence in their clinical decision-making, evidence production processes especially need to be considered, though in association with evidence transfer processes. Importantly, there is a gap in how to overcome both issues, in a way which does not place extensive onus on practitioners to overcome the shortfalls of the evidence produced. Thus, there is much reason to re-examine current approaches to and conventional processes involved in EBP and reframe it for contemporary SLT practice. This thesis brings together seven previously published papers which individually and collectively address these enduring research gaps, which is further outlined below.

The primary way this is addressed is through the exploration and illustration of two specific practical solutions to enhance clinical research and the production of meaningful evidence for practice. The first approach to this is via collaborative research priority-setting projects. These projects involve amplification of often-marginalised voices from *pillar two* (clinical expertise) and *pillar three* (service user preferences) to articulate and prioritise research topics to be addressed (traditionally 'via' *pillar one).* Collaborative research priority-setting projects aim to directly mitigate the barrier to EBP in SLT regarding the paucity of relevant and meaningful research that reflects SLTs' real-world contexts and populations. Rather, these projects intend to optimise EBP through directing the production of research on aspects that can truly guide SLTs' decisions, which also reflect service user priorities. The second

approach is through systematic collection and exploration of practice-based routinely collected data (RCD), which leverages clinical expertise *(pillar two)* to influence new avenues of, and provide meaningful context for, scientific evidence (*pillar one).* By informing on real-world populations and routinely implemented treatments, this approach can promote production of research with real-world legitimacy. Use of RCD can similarly thereby facilitate EBP, through prompting research which has much greater resonance with real-world practice.

Further to this, a collective synthesis of all seven papers, using a grounded theory approach, offers a critique of mainstream EBP and its underpinning processes. These concepts are reconfigured to argue for a novel, critical, reframing of equity-oriented EBP which better responds to the contemporary landscape of SLT, and considers a redistribution of responsibility in evidence production processes.

1.7. Ontological Shifts and Epistemological Positioning

This thesis is premised on the vitality of *dialogue* in evidence production and application processes. My emphasis on this is inspired by ongoing discussions in decolonial theory, especially more recent critical explorations of such theorising. Here, I provide a brief reflection on the foundational shifts— both in my ontological and epistemological beliefs— that underpin the process of my thesis building. As Moosavi (2023) indicates in his residual thinking: *"The purpose of decolonial reflexivity is… to revisit our analyses, theories, concepts, research and teaching with a frankness that will enable us to build on existing attempts to decolonise*" (p.139). Pertinently, revisiting and critically reflecting on key shifts in my world views during the course of producing this thesis, I seek to provide an account of key junctures which have invoked cycles of dismantling (Schöpf *et al.*, 2025), reassembling and self-repairing of my ontological and epistemological beliefs (Catala, 2025).

This thesis culminates with an argument for *dialogue* in evidence (knowledge) production processes in healthcare, as a central tenet for the realisation of epistemic pluralism and social justice. This contrasts sharply with the dominant views perpetuated throughout my UK education and training, where I came to regard the paradigm of positivism and its assumptions as *the only* viewpoint which I could engage in sense-making (a wide-spread experience— see Paton *et al.*, 2020), in pursuit of a singular truth, with implications (as introduced above) on my practice. As I began the works reported hereafter, particularly in setting research priorities, the belief that there is one reality that can be measured and identified as 'the truth' no longer fits with what I came to understand. I understood other truths, which were complex, intertwined, and equally valid, catalysing an ontological shift in my thinking. Paired with interpersonal shifts in my identity as neurodivergent, the conflict of being an Other-er (as a researcher and a practitioner), an Other (as a service user or research participant) and a DisOther (who is "*problematically different*") (Kathard *et al.*, 2004, p. 4) catalysed further re-evaluation. Markedly, these junctures ensured I paid due attention to emergent calls for a radical reimagining of theories of knowledge in health and research (Ramani, Whyle and Kagwanja, 2023) and specifically, speech and language therapy (Pillay *et al.*, 2023; Nair, Brea and Yu, 2024).

Purposive engagement with social theory aided investigation of how my ontological shifts were articulated with epistemological possibilities. I recognised that *dialogue* as a key concept resonated with de- and post- colonial theory (see "decolonial dialogues" as in Bhambra, 2014). The importance of dialogue was also highlighted in critical disability approaches (see the adoption of Bakhtin's *dialogism* in disability research, e.g. Mazher and Kang, 2010; Teachman *et al.*, 2018) and feminist epistemologies (see "dialogical epistemology" as in Yuval-Davis, 2012). The cyclical process of (re)building my worldview

through continued engagement with such theory, through *dialogue,* is both an imperative and a privilege.

2. Thesis-level Research Questions

2.1. Primary Research Question

In what ways can clinical research be enhanced to facilitate EBP in SLT?

2.2. Secondary Research Question

How can these enhancements to clinical research processes support equity-oriented EBP in SLT?

2.3. Alignment of Publications with Research Questions

Table 1 (below) illustrates how the seven publications (papers a-g, outlined in Section 3) in this thesis contribute to the primary research question by mapping each to one of two strategies, which are explored hereafter. The primary and secondary research questions are also addressed uniquely through the synthesis of these publications, provided later in the thesis.

Table 1.

Papers	In what ways can clinical research be enhanced to facilitate EBP in SLT?	
	Strategy 1) Co-producing research priorities	Strategy 2) Utilising routinely collected data
Paper a: 'Research priorities to improve the health of children and adults with dysphagia: a National Institute of Health Research and Royal College of Speech and Language Therapists research priority setting partnership' (Pagnamenta et al., 2022).	x	
Paper b: 'Research priorities relating to communication and swallowing for people with learning disabilities across the lifespan' (Chadd et al., 2022)	x	
Paper c: 'Editorial Perspective: Speaking up for developmental language disorder – the top 10 priorities for research' (Kulkarni et al., 2022)	x	
Paper d: 'Involving Individuals with Developmental Language Disorder and their Parents/Carers in Research Priority Setting' (Chadd et al., 2020)	x	
Paper e: 'Outcome measurement in speech and language therapy: a digital journey' (Moyse et al., 2020)		x
Paper f: 'Impact of COVID-19 on the Speech and Language Therapy Profession and Their Patients' (Chadd, Moyse and Enderby, 2021)		x
Paper g: 'Operationalising routinely collected patient data in research to further the pursuit of social justice and health equity: a team-based scoping review' (Chadd et al., 2025)		x

Table 1. Alignment of papers with contribution to the primary research question.

3. Synopsis of Prior Publications

This synopsis of the prior publications has been presented in an order aiming to support the coherence of the thesis and therefore do not follow a chronology.

3.1. Paper a: 'Research priorities to improve the health of children and adults with dysphagia: a National Institute of Health Research and Royal College of Speech and Language Therapists research priority setting partnership' (Pagnamenta et al., 2022).

3.1.1. Summary of originality and research contribution

This study is the first in a series of collaborative research priority-setting projects for the SLT profession in the UK, aiming to establish a research agenda for dysphagia (eating, drinking and swallowing difficulties). The study culminates in prioritised lists of research questions for further exploration, which were developed collaboratively by clinical experts *(pillar two)* and service users with dysphagia (*pillar three)*. This was the first national priority-setting project on this topic, signalling its originality, and was conducted by the Royal College of Speech and Language Therapists (RCSLT), where I became employed part way through the project. The purpose of the research priorities was to encourage conduct of meaningful research (via *pillar one*) that will facilitate EBP in dysphagia management, whilst illustrating the critical roles of EBP *pillars two* (clinician expertise) and *three* (service user preferences) in doing so. The study has been incorporated in the Global Report on Children with Developmental Disabilities: From the Margins to the Mainstream (WHO and UNICEF, 2023). The work has also informed National Institute of Health Research (NIHR) funding calls related to dysphagia (National Institute for Health and Care Research, 2025a, 2025b).

3.1.2. Author's contribution and learning

In this study, I held supporting roles in the project management and governance and worked closely with a colleague on the descriptive analysis of the final survey. I made substantive

contributions to the manuscript, including editing the paper, and creating many of the tables and figures. The findings were interpreted collaboratively with a project steering group, which I facilitated. In line with the substantive contributions, I am fourth author on this publication. Our analysis informed the three 'top ten' lists of research priorities.

Pivotal learning from this study included my appreciation and recognition of the importance of a well-considered recruitment strategy, survey design, and survey tool to optimise engagement. We aimed to recruit participants from across stakeholder groups, including service users, to the survey. It was distributed online and in paper form to maximise engagement. However, our analysis revealed participation to be heavily skewed toward healthcare professionals, with service users under-represented. On reflection, the recruitment strategy and accessibility of the survey for service users were insufficient, implicating the validity of the results, which may more truly represent the priorities of SLTs rather than service users. From this experience, I identified two actions for the subsequent priority-setting projects: 1) to create a comprehensive recruitment strategy for targeting service user involvement in surveys, 2) to research and appraise survey approaches, formats and platforms, to be more appealing and accessible.

3.2. Paper b: 'Research priorities relating to communication and swallowing for people with learning disabilities across the lifespan' (Chadd et al., 2022)'

3.2.1. Summary of originality and research contribution

This study served as the second RCSLT collaborative research priority-setting project focusing on SLT related to individuals with a learning disability. Like paper a, this was achieved by co-producing a prioritised list of research topics for further exploration with

practitioners and service users with lived experience of learning disabilities. This was also the first national priority-setting project on this topic, signalling its originality. The purpose of the research priorities remained the same as with paper a, aiming to produce research that will facilitate EBP in learning disabilities.

3.2.2. Author's contribution and learning

I am one of the two first co-authors, and corresponding author, on this paper, reflecting the significant contribution I made to this study. My responsibilities were more advanced than in paper a, and included leading the quantitative data design, collection and analysis, while also supporting PPI activities, and sharing lead authorship of the paper.

Applying my learning from that described in paper a, I led the survey design, aiming to optimise the validity of findings through better representation of our target populations in the sample. I searched for and appraised survey tools, resulting in my selection of an interactive platform for our data collection, which was a digital 'card-sorting' activity. This was considered more accessible to stakeholders, including service users, than a survey and received positive feedback from the project governance groups. This intervention had a modest impact on the representation of survey participants who had non-professionals roles, compared with the project described in paper a, with an increase to 10% from 6%.

Moreover, involvement in this study was instrumental in developing my knowledge and application of the principles of PPI. Prior to this study, I had a basic, theoretical understanding of what PPI was, but no experience in implementing activities. However, in this study, which became an official test-bed for the UK Public Involvement Standards pilot (UK Public Involvement Standards Development Partnership, 2018), I learnt much more and

collaborated with the team to embed PPI. One aspect of this was the introduction of a novel step in the priority-setting process: the 'theme rating exercise'. This exercise was carried out with people with learning disabilities, and served to leverage their influence on deciding the research priorities.

3.3. Paper c: 'Editorial Perspective: Speaking up for developmental language disorder – the top 10 priorities for research' (Kulkarni et al., 2022)

3.3.1. Summary of originality and research contribution

Following papers a and b, this study was the final in the series of the RCSLT collaborative research priority-setting projects, which aimed to co-produce research priorities to promote the production of research that will facilitate EBP, in this instance for the clinical area of developmental language disorder (DLD).

3.3.2. Author's contribution and learning

I am the second author on this publication, reflecting my substantial roles in this study, which enabled me to advance my research experiences from papers a and b. This study provided more opportunities for me to lead on the quantitative data collection and analysis. I substantially shaped the research design by developing a triangulation protocol (reported specifically in paper d and developed further from that reported in paper b) and provided extensive support in the writing and editing of the manuscript.

Critical learning for me during the undertaking of this project was a significant shift in my leadership responsibilities, particularly in relation to the research design. This process

enabled me to begin developing my own identity as a clinical researcher through being given greater scope to make decisions and judgements about our approach and being responsible for its implementation. For example, for this study, I conducted an informal literature review to collate recommendations on how to meaningfully engage children with communication difficulties (*pillar three)* in the research, as well as learning more about participatory action research (PAR) (Cornish *et al.*, 2023). This research emphasised the idea of children as researchers and how this approach can mitigate power imbalances and researcher/participant effects (Thomas, 2017), but also how to empower members of a community (in this case, SLTs, i.e. *pillar two*) to engage in the research process (described further in Methods section 4.1.2.). Bringing this learning to the team was fundamental in influencing the design of this study. As a result, I consider that the research priorities identified in this project, compared to those highlighted in paper a and b, to have a greater sense of authenticity and validity, having been substantially shaped by service users.

3.4. Paper d: 'Involving Individuals with Developmental Language Disorder and their Parents/Carers in Research Priority Setting' (Chadd et al., 2020)

3.4.1. Summary of originality and research contribution

This methodology paper more specifically describes the novel protocol I developed and implemented to involve children with DLD, and their parents, in research priority-setting. The protocol introduces two new stages into the conventional research priority-setting approach, which helped privilege service user preferences *(pillar three)* in two ways: (1) ensuring that only what is prioritised by service users is even considered by the other stakeholders in the subsequent exercises, and (2) weighting the results to reflect the service user preferences most significantly. These innovations, it is hoped, can contribute to the wider

notions of involving children, or children with communication difficulties, in research as well as service user voice in priority-setting more broadly. Notably, the paper is augmented by an accompanying video tutorial on how to implement the protocol.

3.4.2. Author's contribution and learning

I am first author of this study. In addition to leading the writing process, my main contribution was helping to develop the PPI activity, including independently creating the "data transformation process" (Chadd *et al.,* 2020, p. 4). This process triangulates disparate sets of quantitative ranking data to privilege the influence of service users (*pillar three)* over professionals. The result of the process was that areas highly ranked by service users were more heavily weighted, influencing their prioritisation. This paper was the first publication I had led and acted as corresponding author, and as such was the first experience of navigating the journal selection, submission and peer-review process.

The main challenge I experienced was developing resilience and reflexivity in responding to reviewers' comments. In the first round of comments, I found I was responding defensively to feedback that identified a weakness, even if the reviewers provided reasonable, constructive steps to improve it. Through talking to academic peers and mentors about ways of dealing with reviewer comments, in the following review, I shifted my gaze to extract the advice and constructive points. I collated these into a table, critically evaluated the suggestions, and identified specific actions accordingly. I found this learning immensely beneficial in my development as a researcher and is an approach I continue to take in my publishing endeavours. I find that the strategy helps with the interpersonal aspects of peer-review, through creating distance between the reviewers and self, which enables me to engage with the points raised in a more measured way.

3.5. Paper e: 'Outcome measurement in speech and language therapy: a digital journey' (Moyse et al., 2020)

3.5.1. Summary of originality and research contribution

This paper outlines a co-production project between SLTs, software developers and researchers resulting in the development of a national SLT data collection tool and database (the 'ROOT'), supported by the RCSLT. The ROOT captures practice-based routinely collected data (RCD) about SLT provided to service users, their SLT-related difficulties, and their outcomes following intervention. As such, RCD reflects *pillar two* of EBP, being a quantified form of the application of clinical expertise. The ROOT remains to be the only nationwide, therapy-specific RCD database in the UK, indicating its originality and wider contribution. The expanse of the RCD collected via the ROOT has provided the RCSLT substantial leverage for influencing further research, policy and clinical practice. The RCD has been meaningfully exploited through several other pieces of research (Enderby and Sutton, 2020; Crocker, Titterington and Tennyson, 2024; Yoshimatsu *et al.*, 2024), and the RCSLT frequently leverage it in awareness campaigns and policy influencing. These examples signal the dynamic interactions across EBP pillars that are possible, specifically between *pillar two* and *pillar one.*

3.5.2. Author's contribution and learning

In this paper, I led two descriptive analyses of the practice-based routinely collected data (RCD), which included the data extraction, analysis and interpretation. I also contributed substantially to the writing, review and editing of the manuscript. My extended role in the work presented in this paper, was supporting SLTs to engage with and contribute their RCD

to the ROOT. This included facilitating the onboarding of SLT services and coordinating development requests. I worked in the team when the project was in the early-mid stages and therefore did not hold roles in its original design. As such, I am a co-author on this publication, being third author, reflective of my contributions.

A crucial aspect of my learning on this project, and the associated activities described in the paper, was understanding the principles and importance of co-design, and how to effectively achieve this. I had an instrumental role in facilitating dialogue between SLTs and software developers to improve the ROOT, ensuring it was fit-for-purpose. This typically involved making sense of the SLTs' requirements, understanding the modifications to the ROOT that would be needed to achieve them, and liaising with the developers to ascertain their feasibility. These experiences were essential to my development as a researcher, advancing my collaboration and co-production skills as well as cementing the importance of participatory design and action research. This learning was valuable to apply across other pieces of research and going forward in my career.

My responsibility associated with this work increased over time; my role became centred on utilising the RCD that was collected in the ROOT for producing new insights to inform EBP, evidenced in the paper f, as well as other works (e.g. Chadd, Harding, *et al.*, 2024). Now, I serve as a member of the project Steering Group and sit on the specialist committee guiding the use of ROOT RCD in research.

3.6. Paper f: 'Impact of COVID-19 on the Speech and Language Therapy Profession and Their Patients' (Chadd, Moyse and Enderby, 2021)

3.6.1. Summary of originality and research contribution

This paper presents a case of how RCD (*pillar two)* can be utilised in research as secondary data to respond to urgent research needs and provide vital evidence to inform practice. The context of this study is the COVID-19 pandemic, where conventional 'scientific evidence' (*pillar one)* processes were insufficient to produce required evidence to inform practice at pace. The study reports a two-stage analysis of the impact of COVID-19 on the SLT profession from the perspective of practitioners (via a survey) and through analysis of RCD from the ROOT. As one of the first empirical studies on COVID-19 and SLT, the study was highly original and contributed critical insights in a timely manner, spanning the topics of workforce, service design, presentation of COVID-19 and effective COVID-19 management. Focusing solely on the RCD component of this study, it serves as an example of how *pillar two* (clinical expertise), as RCD, can create powerful evidence that was immediately useful for EBP. It also highlighted research gaps, further signalling how *pillar two* can interact with *pillar one* (scientific evidence). The research was cited in the RCSLT's Written Evidence to the House of Lords Integration of Primary and Community Care Select Committee Enquiry, featuring in the Parliament Select Committee Publication (Royal College of Speech and Language Therapists, 2023).

3.6.2. Author's contribution and learning

I am first author on this publication and led on the RCD component. This involved setting the research questions, conducting data extraction, its analysis and interpretation, in collaboration

with the team. Furthermore, as first author, I led on the wider conceptualisation of the paper, which brought together two separate but related components (a survey and RCD), ensuring coherence.

The opportunity to contribute to the evidence base at a time of such uncertainty (COVID-19) remains a significant learning point for me, and in completing this study my attention was drawn exceptionally to the contention between practice-based RCD evidence (observational in nature) and conventional scholarly attitudes towards this. Vis-à-vis the traditional hierarchy of evidence, this study would likely be dismissed as having insufficient rigour to inform practice. Yet, I was able to witness, through the professional community, the value of having this research. The study, for the first time, highlighted the role SLTs have in improving outcomes for people with COVID-19. This real-world evidence could be used to support practice individually, but potentially also to inform service configuration in an unprecedentedly stressed and stretched health care landscape. Understanding that conventional research processes could not have achieved this was profound and highlighted the unique position of RCD in evidence production. Furthermore, through tracking the citations of this paper, I continue to appreciate its impact in relation to international research, as the context of the study has enabled and supported several cross-cultural and cross-context comparisons (Aueworakhunanan *et al.*, 2024; DeSouza *et al.*, 2024; Ensafi *et al.*, 2024).

3.7. Paper g: 'Operationalising routinely collected patient data in research to further the pursuit of social justice and health equity: a team-based scoping review' (Chadd et al., 2025)

3.7.1. Summary of originality and research contribution

This paper reports on a scoping review which maps studies that utilise practice-based routinely collected data (RCD) – a quantified form of clinical expertise *(pillar two*) - and the extent to which this form of evidence can address issues of social justice. It is the first study that brings these often-disparate concepts together. It contributes a novel and original synthesis of recommendations that challenge common paradigms of 'scientific evidence' (*pillar one)* vis-à-vis clinical evidence (*pillar two)* to support a greater focus on socially-just and equity-oriented EBP. The protocol for this scoping review was also published (Chadd, Caute, *et al.*, 2024).

3.7.2. Author's contribution and learning

I independently led this work, including conceptualisation and design of the study, research team composition, data collection, analysis, synthesis and the write-up. I conceived of this project whilst considering this thesis, where I designed it to bring together some of my emerging thoughts around conventional research paradigms and the potential for greater influence of RCD and expertise (*pillar two)* in EBP. Furthermore, it served to address my growing (and gnawing) desire to pay due attention to equity- and social justice- related concerns with EBP, and the profession and institution of which I was a part.

This study also provided an opportunity to apply learning from my earlier experiences. For example, when working with the ROOT database (papers e and f), I came to appreciate how quickly RCD can amass, but the meaningfulness of its analysis is influenced most by what data variables it contains, rather than volume. In this paper, I was curious to see what data was collected in RCD systems elsewhere, but particularly whether variables which could examine health inequities were incorporated. The study also provided a crucial opportunity for me to fully research methodological approaches to literature reviewing, build a team around me and design and lead a project through its lifetime, accordingly. As such, it was pivotal in my development as an independent researcher.

Prior to this project, I had contributed to a scoping review by screening papers and extracting data (see Gréaux *et al.*, 2025) and so, I had an elementary understanding of the methods. However, leading on this project gave me the opportunity to advance my knowledge of and skills in literature reviewing, including selecting the type of, and methods for, conducting one, which I achieved through careful research. This process enabled me to not only learn more about different review approaches, but also to develop my critical appraisal skills, aiding selection of the appropriate methodology. Since completing this work, I have been able to leverage this learning in my role as an educator, where I teach students about scoping review methodology, run group tutorials on its application, and supervise dissertations of students who choose to complete one. I am also currently supporting several students to publish their reviews.

4. Methods

The seven published works represent a range of methodologies and methods, which are detailed in the papers themselves and are therefore not duplicated here. Rather, this section

provides a critical discussion of the approaches taken and explores how the methods within each study collectively respond to the thesis-level research questions. This is discussed in two sections, the first addressing the collaborative research priority-setting projects (papers a-d) and the second, the papers discussing utilisation of RCD (papers e-g).

4.1. Collaborative Research Priority-Setting Projects: *Papers a-d*

The methodology applied in these projects was based on the James Lind Alliance (JLA) approach to partnership-led research priority-setting, which has been developed with and endorsed by the NIHR in the UK, though is applied globally (Partridge and Scadding, 2004; Petit-Zeman, Firkins and Scadding, 2010; James Lind Alliance, 2024). The JLA guidebook details the approach, which ultimately seeks to establish consensus on the most pressing research questions in a given area (James Lind Alliance, 2024). Distinctly, though the guidebook outlines core principles of involvement, inclusivity and transparency, it lacks discussion of its theoretical or methodological underpinning. Based on the JLA's aims to tackle real-world problems, and its principles of inclusive collaboration, it could justifiably be described as a form of action research (Bradbury, 2015). Yet, despite its increasing popularity (Nygaard *et al.*, 2019) and its endorsement by NIHR over other priority-setting methodologies (Yoshida, 2015), there appears to be a paucity of investigations into how it compares, and its methodological validity. Moreover, there are significant and well-documented challenges to carrying out the JLA approach, which predominantly relate to barriers to ensuring meaningfulness and relevance of the content for diverse service users (see e.g. Madden and Morley, 2016; Jongsma and Milota, 2022).

These challenges resonate with experiences of the projects outlined in papers a-d, where, despite concerted efforts to minimise over-representation and disproportionate influence of

clinical experts (*pillar two)* relative to service users *(pillar three),* challenges persisted, which may arguably question the validity of the findings. Nonetheless, over the series of the three projects in papers a-c and the methods described in paper d, the methodology evolved to specifically address this challenge, in three key ways: 1) by involving more service users, 2) by increasing the influence of service users and 3) use of communication-accessible methods to optimise validity. Box 2 illustrates some of the critical learning I experienced throughout the process.

Box 2. Critical learning insight (2)

The process of continually improving the methodology we used throughout these projects represented a critical personal learning experience as I progressed in my research career.

In paper a, I felt proud to be contributing to a study that involved service users, especially in writing the paper. Whilst still a meaningful achievement, as we moved into the learning disabilities project (paper b), I was prompted to reflect much more critically on whose voices were represented and importantly whose voices were absent within this. Personal and communication ability privileges of the dysphagic service users came into sharp focus when planning the PPI activities for adults with learning disabilities.

Learning the life stories of the service users involved in paper a highlighted that most were in some respect already linked to healthcare professionally

(e.g. former staff) or academia (e.g. former academics), and most did not have a communication disability. This sub-group of the dysphagic population collectively held much economic, social and cultural (and specifically, communicative) privilege. This was in sharp contrast to conversations we had planning the learning disabilities sessions, as in paper b. Here, discussions were based on navigating the impact of PPI remuneration on individuals' welfare eligibility, and communication supports for non-speaking individuals.

This experience emphasised the contention in PPI work of grappling with representativeness (discussed critically in Scholz et al., 2024), avoiding tokenism, and avoiding actions which "weaken the transformative potential of public participation, (re)producing health inequities" (de Freitas and Martin, 2015, p.31). An uncomfortable realisation that the findings reported in paper a, which methods may have failed to include voices of those outside a relatively privileged group, risked perpetuating research agendas that were not in alignment with the goal of social justice, evoked a commitment to course correction.

In the second and third studies (papers b-d) we modified the processes (described below) to respond to this.

How the methodology was modified and improved in these ways are discussed and appraised below:

4.1.1. Increasing the number of PPI representatives

Embarking on these projects, we were cognizant of the often-reported under-representation of and difficulties engaging with service users that represented our areas of focus. People with learning disabilities are reported to be chronically overlooked in all aspects of research, which is often attributed to the moral and ethical concerns regarding their vulnerability and mental capacity to provide informed consent (Goldsmith and Skirton, 2015). Similarly, challenges are frequently reported in involving children with communication difficulties or disabilities in research. These include difficulties navigating motivation and engagement, the requirement for flexible timeframes, and the need for individualised approaches (Feiler and Watson, 2011). Despite this awareness and intent to avoid common pitfalls, we still experienced similar challenges in our PPI.

Over time, we sought to address these, through seeking solutions in the literature (see Bailey *et al.*, 2015 for a useful systematic review outlining recommendations for involving children with disabilities in research) and applying our learning from prior projects. We embedded additional approaches to increase the number of PPI representatives (exemplifying *pillar three)* in the second and third projects, which included: working in partnership with existing service user groups whose members had previous experience of and willingness for engaging with research; recruiting and training learning disability and DLD specialist SLTs to conduct the PPI work; piloting the PPI approach to gain feedback and ascertain feasibility, and gaining funding approval for remuneration of PPI representatives.

Resulting from the iterative rounds of methodological improvement, the increase in PPI (i.e. influence of *pillar three*) over time was evident: in paper a, a few (n=5) service users were involved in a singular multi-stakeholder workshop; in paper b, this doubled, via conducting

two service user-specific workshops (n=10); and in the third project (papers c and d), we involved 42 service users through nine sessions (either focus groups or semi-structured interviews). It is pertinent to consider the effectiveness of each strategy. Whilst this was not something that we assessed in the studies themselves, upon re-evaluation, I consider that leveraging the expertise of clinicians (*pillar two)*— encompassing not just their knowledge and skills, but their access to and familiarity with service users, and ability to individualise activities— was the major facilitator in the second, but more so, the third iteration of the process.

Over subsequent projects, the pool of voices of those typically marginalised in research increased, which helps develop trust in and credibility of the findings being authentically community-driven. Yet, particularly pertinent to this thesis is to critically examine whether an increase in the number of PPI representatives truly equated to an increase in the diversity of voices. Despite the rise in number of service users involved, I would argue that in each study the diversity of the service users (in terms of, for example, ethnicity, cultural, socio-economic status and capital, gender and linguistic diversity as well as degree of disability experienced, and all the intersections of these) was poor, and ultimately unrepresentative of real populations. Through this equity-oriented lens, it may be inferred that despite methodological efforts, the research agendas created may not truly represent priorities of the diverse populations. In turn, there is a risk that the priorities may influence the production of research that may further alienate already-marginalised communities, and render EBP inequitable.

Validating the priorities with more diverse service user groups, including those from a range of cultural backgrounds, and individuals with more profound and multiple learning disabilities, would be valuable to explicate any differences in preferences. Whilst diversity in samples is important for all research, it may be argued that this is even more important when

setting the research agendas for topics covered in these studies. Debatably, these topics, relating to wide-ranging aspects including disability, education, and end-of-life care, may be especially vulnerable to a range of different social, religious and cultural preferences, attitudes and beliefs, as well as stigma. Strategies to meaningfully engage with a diversity of communities in priority-setting would include extended time and resources to develop connections and relationships to build the trust required to unveil the often-personal and sensitive perspectives (Pratt, 2021). Although, Ekezie *et al.* (2025) emphasise that even when research priority-setting projects are specifically tailored to be 'community-driven' and represent diverse populations, they often fail to truly do so. This does raise the— potentially uncomfortable— question of what lengths one can be reasonably expected to go to, to ensure all possible perspectives are included.

4.1.2. Enhancing the influence of PPI representatives

An additional methodological consideration was enhancing the levels of influence of service users (*pillar three)* in the process to strengthen the findings' validity and authenticity. Again, this evolved through the projects by inserting new stages where the service users' preferences influenced subsequent steps of the priority-setting process. I designed the process whereby if service users did not identify a topic as a priority, it was not even presented to professionals as an option to rank. Yet, an innovative approach to enable this was needed, as the team considered that technical research questions could be highly demanding of cognitive and linguistic abilities, especially for people with communication difficulties. This resonates with research highlighting poor communication of research terms in PPI as one of the biggest challenges (Agyei-Manu *et al.*, 2023). Attempting to overcome these difficulties and ensure service user influence was maximised, in the PPI activities reported in papers b-d, research priorities were discussed and ranked in terms of broader themes, rather than technical

research questions. Only the research questions associated with the prioritised themes were debated by practitioners or researchers. This diverges from the typical JLA approach, and was a strength of our studies, enabling greater power to service user voice through different means rather than just increasing the number of individuals involved.

Though not fully embedded in the paradigm, this step towards better redistribution of power and influence in research between service users (*pillar three)* and professionals (in this context, either *pillars one* or *two)* moves the projects more in line with PAR approaches. PAR works to resist typical power imbalances in research through embedding equal partnerships between researcher and 'participant', and leverages their emic perspective to guide the research processes (Cornish *et al.*, 2023). I've been grateful to have since developed my knowledge and skills in PAR further in my research career (see Chadd, Malik and Kapilashrami, 2025).

Whilst in principle this approach asserted greater control and power to service users, there are some limitations, and an absence of an evidence base to support its wider adoption. Importantly, it should be noted that the original areas of research considered to require further investigation (that were subsequently themed) came from a survey exclusively of SLTs; therefore, despite subsequent efforts to redistribute influence, inherently power originated with this stakeholder group. Secondly, the thematic approach adopted risks patronisation from over-simplification, as well as a dissonance between what the researchers (who produced the themes) meant and what the service user understood by a theme. For example, in paper b, one of the themes that was discussed in the PPI ranking activity was 'quality of life' (QoL).

QoL as a concept is variously understood: specifically, the literature outlines how it can be differently perceived and judged on between health care practitioners and people with disabilities (Edwards and Schippers, 2024; Memisevic and Ibralic, 2025). Moreover, judgements about QoL can have profound implications for individuals with disabilities, forming part of the decision-making process regarding the withdrawal or withholding of life-sustaining care (Tibballs, 2007). As such, the concept remains a tension in disability justice (Chen and McNamara, 2020; Ne'eman and DeMartino, 2023). From a social justice lens, the selection of this 'theme' appears reductionist (in the least), and was not sufficiently considered by our team. Basing PPI discussions on themes more broadly, contrary to its intentions, may have instead created a platform that silences reflexive discussion on pertinent and personal research priorities for the individuals concerned. It is possible that with a less restrictive and simplified approach, the influence of service users could have been greater, through the elicitation of more authentic and nuanced perspectives.

4.1.3. Using communication-accessible research methods

Though the JLA methodology is premised on inclusion and involvement, there is a critical knowledge gap of how to best achieve this with diverse service user groups: of most relevance here are people with communication difficulties. Conducting research with people with communication difficulties presents a set of challenges, from ensuring participants are fully informed and consenting, to legislative considerations concerning mental capacity. Killett *et al.* (2023, p.11) report more extensively on the nuances of this "medicolegal ethical problem" highlighting a tension among researchers who acknowledged that inclusion of adults with conditions which may affect capacity or communication ability in research was not just valuable, but a right, with the significant challenges of doing so practically.

We sought to optimise validity through using tailored methods which ensured the fair, moral and valid involvement of children and adults with learning and communication difficulties. The need for adapting the JLA approach responsive to the specific clinical needs of service user groups resonates with other priority-setting research: for example, Rowbotham *et al.*, (2019) were required to adapt the conventional methodology to mitigate the high infection risk of people with cystic fibrosis. In response, they embedded methods including videoconferencing and online workshops for their safe participation (Rowbotham *et al.*, 2019, 2023). For our studies, ensuring communication accessibility was paramount. Committed to this, visually supported methods were instrumental in informing service users about the research project, documenting consent, piloting our approach with them, and understanding their priorities for research.

This was most facilitated by the adoption of a 'Talking Mats' approach. Talking Mats® (see Talking Mats, 2013) is a popular framework used with people with communication difficulties in SLT and education to visually support communication, in particular, one's preferences and perceptions (Hayden *et al.*, 2024). Studies have shown it is an effective tool in qualitative research, including supporting adults with learning disabilities (Talking Mats, 2013; Bunning *et al.*, 2017; Killett *et al.*, 2023). With an evidence base and precedent for this approach in research, inclusion of this method was an enriching methodological choice. It facilitated meaningful interaction with service users, enhancing the validity and reliability of the priorities that were selected.

Embedded within the Talking Mats approach, was an informal visual rating scale, used for service users to report themes in order of priority, by placing visual 'theme cards' along a scale. The use of self-report scales in research involving individuals with learning disabilities is widespread and generally considered valuable, yet there is a significant need for careful

reports on their construction, as well as research validating them (Kooijmans *et al.*, 2022). Contrary to this, we neither articulated the construction of the self-report rating scale nor did we undertake any validation measures. This may raise questions about the integrity of our approach, as well as the psychometric soundness of the visual rating scale thus implicating its validity, reliability and overall credibility. Additionally, we could have used more enriching visually supported methods, which may have enhanced engagement and validity even further. For example, using photovoice (Chinn and Balota, 2023), another method I have since become familiar with applying (Chadd, Malik and Kapilashrami, 2025).

4.1.4. Adequacy of methods to respond to the research questions

Despite these limitations, overall, the approaches taken in these studies enabled their individual research questions to be addressed (i.e. identifying research priorities), as well as the thesis-level research questions. The methods described directly contribute new knowledge about innovative ways that clinical research can be enhanced to facilitate EBP in SLT, by demonstrating systematic and inclusive approaches to influence what research is conducted (via *pillar one*), at the earliest stage of the research process (via *pillars two,* but especially, *three)*. Evidence of the value of these methods, as documented earlier in the synopsis of paper a, is that in 2024-2025, the NIHR commissioned funding calls for research proposals in response to the priorities outlined. In principle, this should lead to the production of evidence that will inform specific decisions clinicians will make in practice, i.e. SLTs' EBP. Secondly, the communication-accessible methods and action research approaches taken, centring on inclusivity and involvement, offers an opportunity to enhance the production of research that better supports equity-oriented EBP. This may be achieved through the methods outlined for optimising meaningful engagement of service users often marginalised from research, going part way to influence the production of relevant and inclusive research.

4.2. Studies Utilising Routinely Collected Data (RCD): *Papers e-g*

The methodologies and methods adopted in this set of papers are more diverse than the previous set, yet similarities remain. They are synthesised and critically appraised via three thematic discussions below. This is followed by an examination of how the methods helped respond to the research questions.

4.2.1. Embedding partnership and collaboration

Consistent with the methodological focus on coproduction seen across papers a-d, the study reported in paper e, the RCD from which is examined in paper f, can also be argued to be in alignment with the principles of action research (Bradbury, 2015). Paper e adopted the 'Agile' methodology to product development, which incorporates a similar set of principles to action research. Agile is focused on continuous communication with, and refinement to products based on feedback from, the end user (in this case, SLTs) and is premised on reflexivity of the developers to drive improvement and create a product that is meaningful and relevant to their needs (Houston, 2021). Therefore, in significant ways, Agile mirrors key principles of action research.

While intrinsically pragmatic and in many ways valuable, my experiences emphasised Agile's limitations, including lengthy and unprecedented trouble-shooting periods, and a misinterpretation of needs and solutions. For example, I observed how SLTs would make requests for the ROOT to conduct an analysis of the RCD that would be impossible based on the data, which may be partially explained by healthcare professionals' limited competency in digital health (see e.g. Longhini, Rossettini and Palese, 2022). Nonetheless, it underscored the importance of embedding a mediator in the methodology– which comprised part of my

role— to facilitate dialogue between end users (SLTs) and software developers, signalling a strength of the study.

Similarly, the enhanced scoping review methodology adopted for paper g (Westphaln *et al.*, 2021) echoes some principles of co-production, through its operationalisation of a 'team-based' approach (inviting collaborators based on expertise), and the use of public consultations. We circulated drafts of the protocol and interim analysis on social media and to key contacts to gain feedback. However, the uptake of the opportunity was small, likely attributable to several limitations, including its advertisement, communicative accessibility (i.e. not written in plain English), and having no incentive offered for participating in the consultation. This breaches many of the recommendations on involving the public in research, and diverges from evidence-based guidance on achieving this in literature reviews (Cochrane, 2025). Furthermore, it is in contention with the learning about PPI outlined previously in relation to papers a-d. Although our collaborative approach could have been improved, public involvement in literature reviews by any means remains unconventional, though aspirational, for many (Zhou *et al.*, 2024). Thus, in some ways, embedding this small degree of public involvement in our literature review was a relative strength.

4.2.2. Reliability and validity

Reliability and validity of the RCD utilised in papers e and f are important considerations warranting interrogation. One way to examine this is vis-à-vis the variables included in the RCD, and thus the conclusions from its analysis. A previous study which informed the ROOT development involved a systematic review of clinical tools which measured SLT patient outcomes, and their psychometric properties (Powell and Lowenthal, 2014). Through a subsequent consensus-forming exercise among expert SLTs, the Therapy Outcome Measure

(TOM) (Enderby, John and Petherham, 1999; Enderby and John, 2015; Enderby, 2019) was selected as a 'best fit' tool to collate RCD across the profession (Powell, Ward and Lowenthal, 2015). This systematic and pragmatic process, which balanced rigour with clinical realities, enhances the external validity and credibility of findings gained from the RCD, and as such, the analyses in papers e and f. On the other hand, paper g emphasised that in other RCD systems, there was a lack of agreement on which measurement tools should be used even in the same clinical area, reducing the value of RCD internally, but also externally for cross-service comparisons. In this wider context, the novelty and significance of RCD in ROOT is elevated, further highlighting its contribution to the field.

There were also substantial efforts to ensure validity and reliability in the scoping review in paper g. This involved pilot testing the inclusion and exclusion criteria and data extraction framework, as well as the use of independent screeners, adding a strong degree of internal reliability and validity. One oversight, which may impact its external validity, is the risk of bias being introduced at the level the search strategy and the screening processes. This may have arisen from limited breadth of the research teams' professional background and knowledge (which was skewed in favour of SLT, with stark knowledge gaps in bio- and para-medical sciences). The team did not represent all health professions at the centre of investigation, risking the omission of studies using RCD that may have been relevant, which may limit the reliability and validity of its conclusions. Nonetheless, the methods in these papers collectively exemplify how RCD studies themselves have the potential to produce valid and reliable evidence, that can facilitate EBP.

4.2.3. Approaches to RCD analysis

RCD in the ROOT (i.e. the data used in papers e and f) is procured from SLT organisations which voluntarily contribute their data, thereby is neither a purposive nor stratified sample. As with much secondary observational data, justification for inferential causal analysis is limited by its non-random characteristics (Sterrantino, 2024). As such, our analyses in papers e and f are descriptive and exploratory, in both cases aiming to either describe the key characteristics of sub-samples, or make comparisons of therapy outcomes, either between-groups (as in paper e) or across cohorts (as in paper f). Nonetheless, a lack of inferential analysis does not render our results unhelpful. We enhanced our methods by use of bivariate analyses (see, for example, Figure 1 in paper e, Table 7 in paper f), adding greater nuance and value of the findings for clinical application. For example, in paper e, we highlight differences in average TOM scores following SLT, for people with the same communication difficulty but with different underlying medical causes. This was considered a powerful and important difference that has not yet been attended to in traditional research, signalling a distinctive strength of RCD and the methodological approach applied.

Nonetheless, some basic statistical operations could have enhanced papers e and f, which need not look at causal analysis. For example, in paper f, I examined the number of cases of patients presenting with selected neurological conditions at two different time points ('pre-COVID-19' and 'post-COVID-19') and reported a percentage change across these through a cross-tabulation. Whilst this presented interesting observations, based on independent learning on quantitative analysis since then, implementing a chi-square test for goodness-of-fit would have been a simple and appropriate way to evaluate whether the difference in the number of patients was significantly different at the two time points (Winter, 2018). Similar reflections can be applied to the analyses in paper e, examining the difference in TOM scores

between two groups of patients. Applying these tests would have enhanced our confidence that the results were likely to be showing a real pattern, and not due to chance. On reflection, not doing so was a missed opportunity, and impacts the robustness of the findings. This discussion also emphasises an omission from the data extraction tool developed in paper g, which did not capture how RCD was analysed in the studies. This would have unveiled common RCD analysis methods, which would also have presented a substantive learning opportunity.

4.2.4. Adequacy of methods to respond to the research questions

Regardless of the limited statistical analyses presented in papers e and f, the partnership working, validity of data selected for inclusion and the descriptive analyses provided, place the work in good stead, especially in the context of the findings from paper g. Collectively, the methods adopted adequately showcase how RCD can be leveraged as a step in the journey to enhancing research to facilitate EBP. The data extraction tool developed for paper g enabled clear support of this conclusion, unveiling that many RCD studies explicitly situated themselves as addressing research-to-practice gaps or an EBP challenge. Methodological choices in these studies have also enabled greater understanding of how utilising RCD can support equity-oriented EBP, for example, to examine change and inequalities in service delivery arising from a global pandemic (paper f). Furthermore, paper g unveiled more specific examples of leveraging RCD's analytic potential in this way, for example, by highlighting a RCD study that examined interactions between individuals' intersectional identities and suicide risk.

More, however, could have been embedded in the methodological aspects to confidently address the individual research questions, particularly in papers e and f. For example, there is

increasing guidance on inferential analytical approaches in RCD, particularly for bridging evidence gaps and enhancing clinical trials (Mc Cord *et al.*, 2018), which could have been considered. Further, since these papers were published, several pieces of guidance targeting the creation and use of RCD to meet policy-making requirements for 'decision grade evidence' have been published. Notably this includes the UK's National Institute for Health and Care Excellence (2022) 'real-world evidence framework'. Prominent publications also include Desai *et al.*'s (2024) guide on the testing and preparation of administrative data for inferential analysis, and Meurisse *et al.*'s (2023) framework for causal analysis of real-world data for intervention studies. Embedding these approaches in papers e-f, and charting analytical approaches in paper g, would have strengthened the argument for utilising RCD to enhance clinical research to facilitate equity-oriented EBP in SLT.

The studies in papers e-g largely consider use of RCD in isolation, though triangulation with mixed-methods survey data in paper f was partially achieved. Utilising (in papers e and f) and mapping (in paper g) the use of RCD as a component within a wider methodological design would have been beneficial to move the field toward approaches for more meaningful evidence production. Incorporation of RCD within other forms of health care evaluation methodologies may enrich analyses with real-world, real-time metrics. For example, in critical realist evaluations understanding the 'outcome' forms a core part of the conceptual framework, which also allows for programme modifications. RCD may be leveraged to provide key interim and periodic insights and trends into patient outcomes that could be integral to refining the theory for why a programme is or is not successful, from the clinical standpoint thus optimising the study's relevance for practice. This has been successfully adopted in some realist evaluations, for example, Harris and colleagues' realist evaluation of ward practices utilised RCD from a national patient safety registry during the period of

introducing the programme, which formed one data component of many within their investigation (Harris *et al.*, 2019). The scoping review reported in paper h could have added value by also considering studies whereby RCD formed a part to better understand its utilisation which would have aided its responsivity to the thesis-level research questions.

5. Synthesis

As illustrated, each paper individually signals a unique contribution to the field. Below, I present a theoretically informed synthesis to generate new insights, from the papers collectively. Extensive desk-research on this PhD pathway (for example, reviewing accepted theses via university repositories) emphasised a scholarly gap in approaches for robustly synthesising one's own body of research. Mostly, guiding principles and informal frameworks were found to be used to aid a thematic synthesis, for example, using annotated summary tables or spider diagrams. Regarding the specific body of research in papers a-g, these unconstrained approaches failed to support an adequately integrated synthesis beyond the two thematic categories of the papers already evident (collaborative research priority setting and utilisation of RCD). Subsequently, a solution was sought from approaches to literature reviewing commonly used in healthcare syntheses (Aveyard and Bradbury-Jones, 2019). Narrative reviews facilitate the bringing together of disparate topics and scope for critical appraisal, seemingly fitting to the purpose of this thesis; nonetheless, selecting a specific type of narrative review illuminated methodological disconnect. For example, a meta-ethnographic review focuses on qualitative studies only, and a critical review begins with a theoretical stance which was not uniformly evident across the works included (Sukhera, 2022).

In time, guidance was found from Smith (2015), based on Grant's (2011) critical reflections on completing a PhD by prior publication. In short, this advises developing connectivity in the synthesis by drawing iteratively on retrospective thesis-level research questions (see section 2), the literature within the included papers, a selected theoretical framework, the methodologies adopted in the papers (see section 4) and meta-inference, to create new insights that draw together the pieces of work (Grant, 2011; Smith, 2015).

Eventually, I have selected grounded theory (GT) (Glaser and Strauss, 1981) as a theoretical framework to guide this synthesis, whereby I use its principles to examine the connectedness of papers a-g. Though an unconventional application of the approach, in so doing, I also hope to strengthen the methodological grounding of this thesis and provide a novel contribution above that which is provided in the individual papers. More on this approach is detailed in the subsequent sections.

5.1. Theoretical Underpinning of the Synthesis

Grounded theory (GT), in its origin, is based on symbolic interactionism (Glaser and Strauss, 1981), which emphasises that meanings "emerge from our interactions" (DeGloma, Brekhus and Force, 2024, p.2) and thus are co-constructed through everyday realities. That is, actions are a product of the meaning humans attribute to "things" (Blumer, 1986, p.2), which are in turn derived from social interactions and one's interpretation of them (Blumer, 1986). Correspondingly, the GT approach— often sitting at the nexus of objectivist and constructivist paradigms (Taghipour, 2014)— enables theory to be developed through examining interactions between knowledge sets and "diverse phenomena" (Glaser and Strauss, 1981, p. 139), maintaining flexibility, whilst also providing structure (Chun Tie, Birks and Francis, 2019). The common threads uniting these papers, highlighting the place

for symbolic interactionism and GT in their synthesis, are: the emphasis on context being imperative to interpreting phenomena, the equal valuing of diverse and methodologically unconstrained knowledge sets (Glaser and Strauss, 1981), and the argument that "mere expertise in the use of scientific techniques" (Blumer, 1986, p. 51) is insufficient to understand peoples' perspectives and actions. Given the range of publications and disparate methodologies and insights included in this thesis, as well as the emphasis on the integration of the EBP *pillars*, a theoretical framework that allows for (and appreciates) this diversity is useful.

Specifically, GT's epistemological principles resonate with the arguments presented in the thesis regarding how different stakeholders (represented via the *pillars*) can influence the production of research based on their differing realities and meanings attributed to phenomena. For example, the meaning of 'research priorities' for service users (as in papers a-d) is co-constructed through their interactions with healthcare, their societal positioning and roles, their cultural norms and values, which will be different to practitioners, and to researchers. Similarly, the meaning and purpose of collecting RCD for clinicians (relevant to papers e-g) is co-constructed through their professional experiences, standards of conduct and interactions with service users. Furthermore, for this synthesis I sought an approach which aligned with my own emerging ontological and epistemological stances, which I found to strongly resist positivistic notions of a single, objective reality (Park, Konge and Artino, 2020), rather, aligning with general constructivist principles, acknowledging and valuing co-existing, unfixed multiple realities which are influenced by contextual factors (Damico and Ball, 2019). Constructivism has also been associated with the project of decolonisation (Stewart, 2009; Denscombe, 2025), adding greater appeal for its application in this synthesis, given the discussions presented.

Moreover, GT offers a clear analytical framework to apply to data (Corbin and Strauss, 1990), though it is applied here as an approach to synthesising the material in the seven publications. There is a precedent for applying GT in the conduct of literature reviews (Wolfswinkel, Furtmueller and Wilderom, 2013), which, though not an identical context, I have sought guidance from here. The selection and application of this approach served as a critical learning opportunity in my development, which is explicated in Box 3, overleaf.

Box 3. Critical learning insight (3).

Deciding how to develop the synthesis was a particularly challenging task, being unique in this type of PhD, and lacking in specific guidance. Identifying commonalities across the papers was not itself difficult, piecing them together to make a cohesive argument was.

It took time for me to read and learn about the ways in which I could achieve this. I read extensively on PhD by prior publication in the literature, I found example theses online, and I connected with two other scholars enrolled on PhD by prior publication programmes. One colleague, who was making post-viva thesis corrections, shared that an examiner's concern was the methodological strength of their published work, both individually and collectively. This resonated with some of my own reservations, which I wanted to address. Challenges in methodological soundness of these types of theses also echoed experiences reported in Smith (2015). Though here, I found an example of applying a unifying theory to bring together the papers.

I identified that for my thesis, I needed a methodical approach that was more meaningful than just 'joining the dots'. My developing understanding of epistemological perspectives and their methodological application, like symbolic interactionism and GT, helped provide a clearer route for me for this process. In the absence of a theory in this context, I considered it an exciting opportunity to use GT and my research, to try and synthesise one.

5.2. Development of the Synthesis

To develop a collective answer to the thesis-level research questions, I examined the published works using Corbin and Strauss' (1990) three-stage iterative coding process within GT, typically used for data analysis. This validated methodological procedure suited the task, and the authors provide highly explicit instruction on its application, which has also been used in literature synthesis (Wolfswinkel, Furtmueller and Wilderom, 2013). The well-defined guidance from both these perspectives was especially useful to partially circumvent the absence of an otherwise-defined approach for synthesising selective publications, required in a PhD by prior publication (Smith, 2015). To enhance the analysis, throughout each stage, 'meta-inference' was also used, describing continual to-ing and fro-ing across the seven papers, comparing and contrasting codes (Younas *et al.*, 2025). Corbin and Strauss' procedure begins initially with open coding, then axial coding, followed by selective coding, which involves developing the theory. Below, I describe my approach to these three stages.

5.2.1. Open coding

Open codes were developed by initially re-reading all seven papers for re-familiarisation. This was followed by a process of annotating them in relation to observed mechanisms that were discussed, that either positively or negatively affected research processes and/or application of EBP, aligning with the primary thesis-level research question. Codes were assigned to material in any section in the papers, whether in the background, methods, results or discussion. For example, ‘partnership working’ and ‘using consensus methods’ were open codes that related to facilitating research processes and EBP, whereas ‘paucity of research’ and ‘unrepresentative samples’ were associated with hindering it.

5.2.2. Axial coding

Open codes were organised in an Excel spreadsheet. Codes were grouped in columns where they were similar or associated (for example, ‘partnership working’ and ‘learning from lived experience / 'end users' were grouped as they both relate to the need to understand others’ experiences). Code clusters then became axial codes. To illustrate, these two examples were coded under the axis ‘Dialogue between a diversity of perspectives throughout the stages of research’.

5.2.3. Selective coding

Axial codes were reviewed and comparisons made across them to facilitate the identification of a unifying concept. This unifying concept became the root of the grounded theory, which was then tested against the categories again, making clarifying modifications and developments, until the theory was refined.

5.3. Building the Grounded Theory

A matrix of the open codes and their mapping across each paper can be found in Appendix (2), and Appendix (3) conveys the association between open and axial codes. Axial codes were related to three categories, which highlight mechanisms and considerations for enhancing clinical research to facilitate EBP and especially, equity-oriented EBP. Below, I briefly discuss these before presenting the grounded theory. To strengthen key points, I refer to the *three pillars* of EBP to draw specific inferences, which are relevant to the theoretical development.

5.3.1. Dialogue between a diversity of perspectives throughout the stages of research

All papers a-g in various ways emphasise the need for dialogue and exchange of information between a diversity of perspectives throughout the stages of research. This is centred as a requisite mechanism for producing meaningful clinical research which has the potential to enhance EBP. For example: in papers a-d there is a focus on embedding the perspectives of practitioners (*pillar two)* and service users (*pillar three*) to identify research questions and influence researchers (*pillar one*). In papers e and f, perspective sharing emerges through co-design of the RCD tool (the ROOT) by developers and end-users (*pillar two*), also vis-à-vis liaison with the researchers (*pillar one)*. Finally, in paper g, clinicians (*pillar two*) are highlighted as being central to the conduct and design of research itself, alongside working with academic researchers (*pillar one*).

Throughout all publications, the perspectives of the diverse groups are not static: they are in *dialogue*, information is shared, and it is collective knowledge that drives the (sometimes,

iterative) development of research questions, methods, tools, data collection or analysis. The axis indicates that it is not just that research can be enhanced by the mere involvement of diverse stakeholders (across *all pillars*), but rather, emphasises that it is when these perspectives can interact and influence each other that research can be enhanced to facilitate EBP.

5.3.2. Critique of conventional research practices and EBP

This category relates to the finding that across all papers a-g, explicit references and critical examination of existing, conventional processes of and interactions between current scientific evidence (*pillar one*) and clinical expertise (*pillar two*) are made. Acknowledging the concerns and responding to them with innovative solutions (collaborative research priority-setting projects and leveraging of RCD) therefore serve as a mechanism to enhance EBP. This category highlights, for example, the chronic paucity of research in clinical areas impeding the ability to 'do' EBP— as introduced earlier— providing the context for papers a-d especially, but also a theme in papers e-g. Furthermore, interrogation of the quality of clinical services and practice compared with 'evidence-based' practice guidelines was present across all papers (and especially prominent in paper g*)*.

This category symbolises how these papers collectively document and report on significant concerns with, and a pervasive requirement for interrogation of, current clinical research processes, and their ramifications for facilitating (or not) EBP. It emphasises a need for radical reconsideration of how evidence for clinical practice is produced and underscores a perceived inadequacy with conventional understandings of EBP. The two approaches which respond to these concerns— illustrated in the papers— offer some options for enhancing this. Contrary to much convention, the two strategies (coproduced research priorities and

leveraging RCD) are centred around *pillars two* and *three* rather than *pillar one*. They emphasise how EBP may be enhanced if these *pillars* can more strongly influence evidence production.

5.3.3. Disrupting conventional power and equity imbalances

The final category arising from the coding processes relates to issues, captured across papers a-g, with redressing power imbalances and promoting equity. This is signalled through the demonstrable resistance to positivistic and objectivist situatedness within the research carried out. Via conventional paradigms, the power for research design, analysis and interpretation lies with the objective scientific researcher (*pillar one*), who is multiply and necessarily distanced from the 'participant' (in the context, this may be either clinical experts (*pillar two)* or service users (*pillar three*)). Rather, across papers a-g, the scientific researcher becomes relatively less privileged and greater power is attributed to others (as in *pillars two and three*).

For example, in papers a-d, the personal perspectives and priorities of service users (*pillar three*) and practising clinicians (*pillar two*) are entrusted to guide the direction and design of clinical research (*pillar one*). In papers e-g the clinician (*pillar two*) has delegated responsibility for collecting data, which is based on their clinical judgement and expertise. Woven within this, and across all papers, is an emphasis on embedding a holistic and equity-oriented understanding of individuals within the research. This is evidenced prominently in papers e and f, which utilise RCD regarding one's social functioning and wellbeing, beyond a biomedical 'deficit', and through concerted efforts for inclusion (especially demonstrated via paper d). Indeed, it is not just the redistribution of power away from scientific researchers (*pillar one)* towards others that emerges from the papers: it is the allocation of power to those

typically marginalised and not usually afforded *any* power in research, such as people with learning or communication disabilities (papers a-d) (see Bishop *et al.*, 2024 for a discussion on this). These examples challenge the status quo in clinical research, balancing the power in favour of service users (*pillar three*) or practitioners (*pillar two*) in crucial research processes.

Particularly in paper g, equity and power are considered more explicitly, not just in terms of the purpose of and types of data explored in the research but also in who conducts the research. The analysis emphasises the need for a more nuanced, holistic understanding of who academic scholars (*pillar one*) are, cognizant of their socio-geo-cultural-political context, the forms of evidence they create and their implications on EBP. For example, paper g highlighted that RCD studies which targeted research-to-practice gaps related to systemic injustices were conducted by scholars who may represent those typically without relative power privileged to academics in Western/ised institutions. For example, they were from and/or researching within global majority contexts, they were scholars with disabilities, or who served to validate experiences of communities impacted by strong societal stigmatisation and discrimination.

5.4. Synthesised Grounded Theory

The selective coding emphasised a focus on enabling dialogue as a clear and unifying theme facilitating equity-oriented EBP. The relationships between each coding stage are illustrated in Appendix (4). The grounded theory developed based on this is:

> *Conventional conceptualisations of EBP and the underpinning research processes are inadequate for guiding equity-oriented, effective and meaningful clinical*

practice in SLT. To realise an equity-oriented EBP, established mechanisms of evidence production and application of evidence need to be radically reconsidered.

An essential shift in this process is the cultivation of inclusive, equitable, robust and systemically embedded pathways for dialogue between diverse stakeholder representatives across the three pillars of EBP, particularly to enhance evidence production. Clinical research which incorporates processes and pathways for this dialogue, and enables its iterative development, may generate new, integrated, forms of evidence.

Ultimately, this may have greater potential to yield more contextually relevant, equitable, inclusive and impactful evidence that can be more readily applied in (global) SLT practice.

The synthesis has highlighted that the absence of emphasis on the role of interactions across *pillars* (and mechanisms to facilitate this in research) in existing models of EBP necessitates that practitioners must continuously perform a highly complex integration of varied and diverse sets of knowledge to be 'enacting' EBP. Though the cognitive processes in formulating a decision about care may be understood as a capability necessarily embedded within one's professional scope, when the sets of information that a practitioner is to draw on to make those judgements are irreconcilable with one another— because they represent multiple (and often conflicting) ways of understanding a reality— EBP fails to meaningfully serve as an adequate framework to guide that clinician. Contrary to the intentions of EBP, efforts to apply it in contemporary practice may heighten the vulnerability of clinicians and service users in making decisions about care that are, at the least, less than optimal, and at the most, harmful. Instead, the theory emphasises the potential for greater interactions between

EBP *pillars* as a solution to this critical shortcoming, by facilitating a reconciliation of conflicts and the production of evidence with fewer contradictions.

Furthermore, continuing to operate on existing framings of EBP through conventional research approaches— which impacts clinical decision making, service design and global health delivery— poses a significant risk to the perpetuation of health inequities and injustices. The theory addresses this by suggesting that through greater integration of different perspectives, and *especially* perspectives not typically privileged in current frameworks, in the production of evidence, a much wider and more diverse body of evidence is created. This evidence base, with expanded relevance to more populations and contexts, in turn may extend to a more equity-oriented EBP.

This grounded theory lends weight to an argument to disassemble EBP and rebuild it, not as (yet) another framework for clinicians to utilise without addressing the underlying shortcomings of research processes, but rather as a shared roadmap for representatives of all three *pillars* for creating forms of evidence that are readily applicable in practice and relevant for all. Enabling pathways for evidence from service users (*pillar three)* and clinical expertise (*pillar two)* to influence research appears central to this, as shown throughout the thesis. Through systemically embedded and clear avenues to facilitate knowledge exchange across EBP *pillars*, relevant stakeholders can be brought into dialogue, critical tensions between knowledge sets can be confronted, and power can be redressed. This transformation resonates with epistemic pluralism, that is, the valuing of multiple ways of knowing, and its alignment with a decolonial lens to medicine, healthcare and education (Wong, Gishen and Lokugamage, 2021). Adopting pluralism within clinical research processes, via a new imagining of EBP, would potentially lead to the production of evidence which is much more valuable for all representative groups, across contexts and populations.

In practice, this most likely requires a considerable shift in traditional clinical research and EBP paradigms. Whilst the theory does not necessarily mean traditional research approaches, such as the RCT, need be disregarded, it does suggest that they may lose their standing as the 'gold-standard' way of producing evidence to inform practice. Rather, there may be much greater recognition and valuing of liberatory methods and critical studies, particularly participatory and 'real-world' research approaches to producing evidence. Furthermore, the grounded theory and associated arguments signal that EBP should not just be a framework to guide practitioners' actions. Rather, it reimagines EBP as a framework which centralises interaction and dialogue between *all pillars* and stakeholders, emphasising their equally important roles. The theory suggests that when there is greater parity across *pillars* in the responsibility for and influence on clinical research and evidence production processes, evidence-to-practice transfer is aided. Although it should arguably remain practitioners' role as those who expertly 'apply' the evidence in practice, the nature of this may be radically changed when evidence is produced via these approaches.

6. Discussion

6.1. Evidencing a Need for Change

This thesis has brought together seven papers which, though diverse in methodology and individual research aims, have been synthesised collectively to answer the thesis-level research questions. In response to the primary question, they highlight two critical ways in which clinical research can be enhanced to facilitate EBP in SLT (i.e. co-producing research priorities and leveraging of RCD). Applying a grounded theory approach to identify key common proponents of the papers has enabled a more nuanced analysis of the core themes, signalling how these proposed research enhancements are of a type omitted from and largely

incompatible with conventional understandings of EBP. This detailed exploration has also examined how these two approaches can facilitate a more equity-oriented EBP, providing insight into the second research question. In the process, critical issues with the conventional framing of EBP that the research questions were based upon have been raised, and it no longer appears a sufficient concept to anchor the findings. Drawing on the arguments made throughout this thesis and the synthesis produced, a conceptual framework summarising the key concerns with EBP and the research process it involves (and does not involve) is presented in Figure 1. This intends to expose how EBP, and EBP in SLT, is a mediator of inequity and thus presents a barrier to social justice. This signals the need for a novel and radical dismantling and reassembling of EBP.

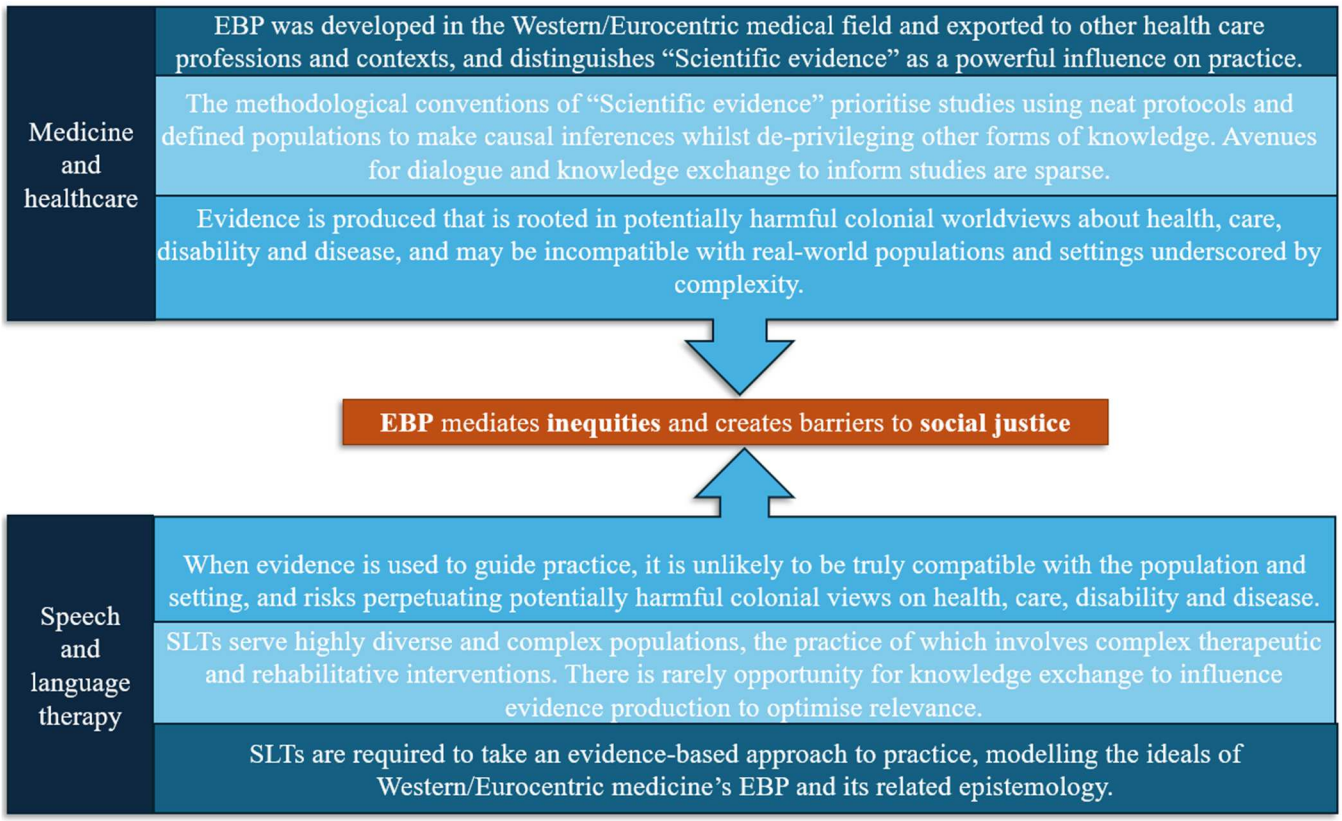

Figure 1. Conventional EBP is a mediator of inequity in medicine and healthcare broadly, and speech and language therapy specifically.

Based on this analysis, a new framework is warranted which represents epistemic pluralism and positions the EBP *pillars* not as three independent forms of evidence requiring integration by the SLT, but as *pillars of evidence producers* who, through dialogic pathways— including the two approaches compiled in this thesis (co-producing research priorities and leveraging RCD)— can collectively create new types of evidence. Evidence of this kind, in principle, should be equity-oriented, and be more seamlessly and meaningfully applied in clinical practice. Furthering the project of pluralism within EBP, and aligning with the notion of dialogue and equity, a framework which embeds the utilisation of learning from the lived experiences of the evidence production and application processes (from all perspectives), should be considered. This can be embodied as *praxis* rather than practice, describing incorporation of knowledge from critical reflection by all stakeholders, to aid learning about successful and unsuccessful approaches and decision-making, and guide iterative enhancements (Higgs, McAllister and Whiteford, 2009).

Based on the grounded theory and elaborations provided above, Figure 2 presents a potential framework for this, coined *Equity-oriented Dialogic Evidence-Based Praxis* (ED-EBP). Unlike EBP, ED-EBP focuses on dual but related aspects of (1) evidence production and (2) evidence application, processes of which are mediated by key components of dialogue, praxis and equity. Using the ED-EBP framework, the proposed 'ways' of enhancing research to facilitate EBP (i.e. collaborative research priority-setting projects and leveraging RCD) are conceptualised as 'dialogic pathways', integral to evidence production. Subsequently, the evidence produced which utilises these pathways, in principle, has greater potential to be equity oriented and meaningful, and thus applied. Maintaining the focus on equity, in ED-EBP, practitioner and service user are equally-positioned to consume this evidence, just as they are to influence it, emphasised by additional bidirectional pathways representing

dialogue and praxis. ED-EBP describes a radical reimagining of dynamic and iterative processes of evidence production and application, across stakeholders, which strives to achieve equity in health, health care and health systems, for all. In conducting this exploration and producing a new conceptual framework, both thesis-level research questions are more adequately addressed.

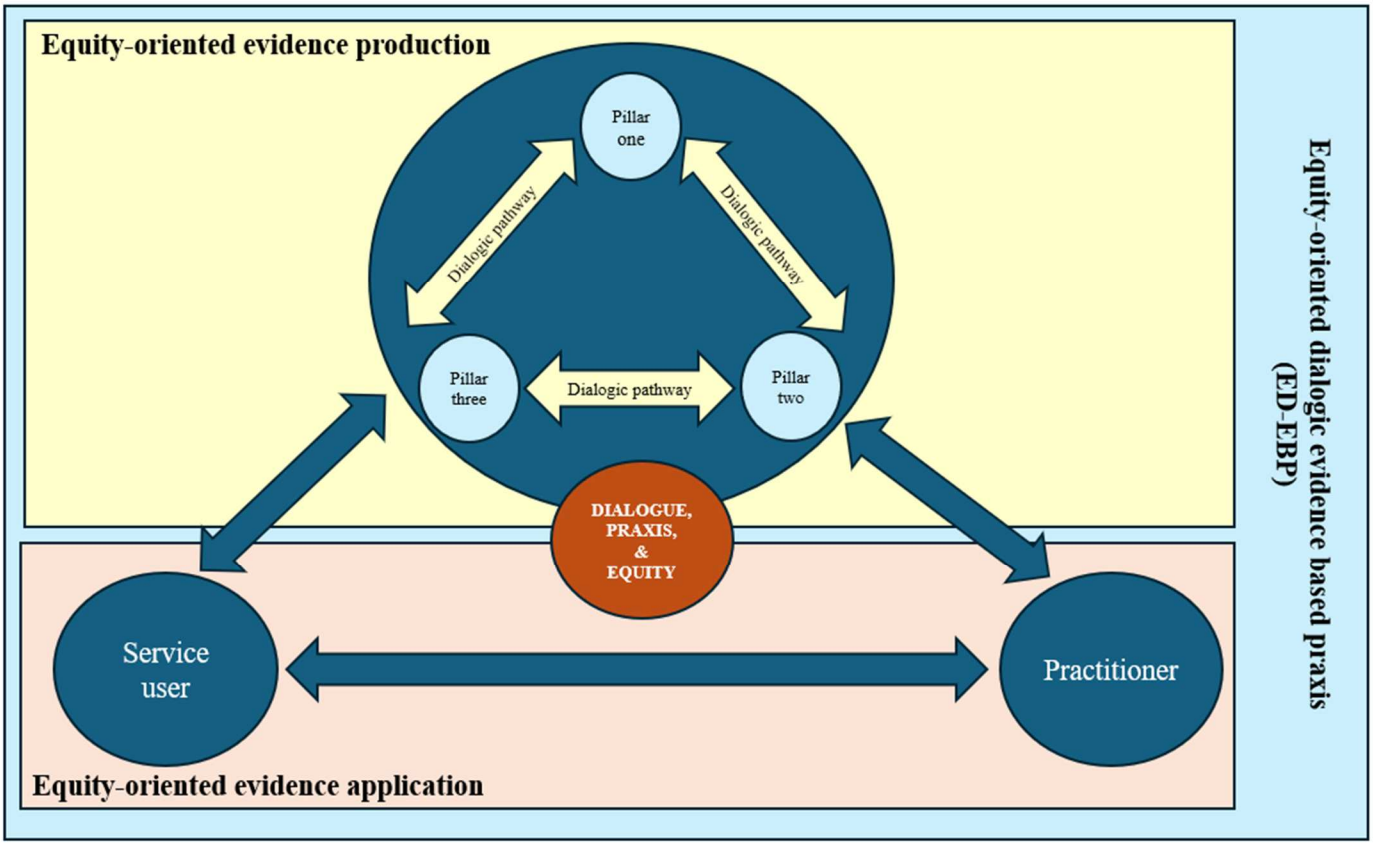

Figure 2. Model of Equity-oriented Dialogic Evidence-Based Praxis (ED-EBP)

6.2. Equity-oriented Dialogic Evidence-Based Practice (ED-EBP): pursuing social justice

Conceptually, ED-EBP offers a route of actualisation for epistemological justice in the health professions, and in particular a decolonial reimagining of speech and language therapy (Pillay and Kathard, 2015; Cohen-Fournier, Brass and Kirmayer, 2021; Nair, Brea and Yu, 2024).

Through expanding the scope of EBP to ED-EBP, traditional evidence hierarchies and boundaries of robustness are transcended. In turn, ED-EBP presents a new frontier legitimising knowledge of all kinds, enabling contextually and culturally relevant evidence and models of health and healthcare to be shaped, embraced, and reshaped. In tandem, ED-EBP resists the dominant world views and neocolonial rhetoric to blindly adopt Eurocentric models of medicine across countries, contexts and other healthcare professions. Deeply aligned to the pursuit of decolonising health (Gatt, 2023), a framework embodying epistemic pluralism— captured in ED-EBP via the endlessly heterogeneous ways in which evidence, or knowledge, is created and recognised as valuable for application — paves the way for health professions to evolve and adapt to the contemporary, global landscape whilst centring equity.

All have the right to health (Office of the United Nations High Commissioner for Human Rights and World Health Organization, 2000); and health equity is inextricably linked to social justice (Buettner-Schmidt and Lobo, 2012). ED-EBP — offering a route for equity-centred health care practice — can thereby be operationalised in the pursuit of social justice. Through emphasising equity-oriented evidence production processes within ED-EBP, this thesis establishes specific contributions of speech and language therapy practitioners, researchers and service users, to this effort.

6.3. A Process Already in Action

Though a novel concept, ED-EBP resonates with some contemporary discourse. Particularly in nursing, *praxis* has been discussed (Peart and MacKinnon, 2018) for its potential to advance social justice, through the development of *emancipatory nursing praxis theory* (Walter, 2017; Velasco and Reed, 2023). More recently, discussions of *praxis* have been observed in SLT also, including alignment with projects of decolonising the profession and

enabling social justice. For example, Privette (2023) outlines a tutorial on developing SLT *critical praxis*. This focuses on the role of SLTs as educators and advocates, via the application of two critical theories as a part of "liberatory practice" (Privette, 2023, p. 688). Nair, Brea and Yu (2024) draw on this in their subsequent critique of historically produced conventions in the profession, outlining key areas for action which includes the need for applying decolonial theories in SLT research, and relatedly, SLT praxis. These works thereby emphasise how ED-EBP may already partially be in action.

Similarly, other potential 'dialogic pathways' can be identified. Whilst used in a conceptually novel manner in this thesis, I describe dialogic pathways here as any systematic and embedded process whereby knowledge is exchanged across evidence producers in ways which resist conventional power dynamics, and centre equity and social justice. As such, research employing tools such as life history narrative (Reid and Okoko, 2023) may be understood as a dialogic pathway. Life history narrative is a qualitative inquiry method which, by its nature, "requires dialogue between researcher and participant" (Kathard, 2001, p.53). The method has been applied in the SLT context specifically for its privileging of service user voice, its transformative capacities and the challenge it inherently poses to the status-quo of both positivistic notions of research, and of conventional attitudes (see, e.g. Kathard, 2001 for its application in the SLT area of stammering).

Another potential dialogic pathway is embedded organisational partnerships of clinicians and academics. In the UK, the NIHR has invested in these partnerships, such as through funding the development of 'clinical-academics' whose identities straddle two pillars of knowledge producers (Harris, Grafton and Cooke, 2020; Henshall *et al.*, 2021; Newington, Alexander and Wells, 2022; Aries *et al.*, 2025). The NIHR has also invested in infrastructure to support collaborations between local universities and service providers which aim to foster the

creation of applied health research, through similar means (Rycroft-Malone *et al.*, 2011). Moreover, again the UK, the NIHR stipulates PPI— another dialogic pathway— as a requirement in grant proposals and project execution (National Institute for Health and Care Research, no date) and the organisation have ring-fenced funding for studies addressing topics highlighted in co-produced research priorities (National Institute for Health and Care Research, 2022). Additionally, in practice guidance production, RCD is being increasingly recognised for its value (National Institute for Health and Care Excellence, 2022). Therefore, there is some indication that such dialogic pathways are becoming to an extent, accepted.

Finally, the routine dialogue between the service user and clinician should not be underestimated as a dialogic pathway for evidence production, as well as evidence application (thereby the process can be transposed across either section of the model). Shared decision-making (SDM) about treatment, which includes discussing the evidence base with service users, is already embedded in many health professionals' scope of practice, and required in most clinical situations (Montori *et al.*, 2023; van der Horst *et al.*, 2023). Though, there are reported barriers to implementing SDM, including clinician skill and confidence, and organisational factors such as having a quiet room available to have the necessary conversations (Waddell *et al.*, 2021). Nonetheless, SDM as a professional concept provides a legitimised space for operationalising ED-EBP in existing practices.

6.4. Limitations of the Proposed Framework

Revisiting the two specific ways of enhancing clinical research this thesis has involved (i.e. collaborative research priority-setting projects and utilisation of RCD)— referred to now as dialogic pathways— it is pertinent to reflect on their limitations, as well as some of the conflicts they present for the theory itself, and the framework overall.

6.4.1. The first dialogic pathway: co-produced research priorities

Importantly, at present, the real-world impact of collaborative research priority-setting projects is questionable. At best, such projects have influenced the allocation of research funding, but to date, there is no evidence of direct causation to either enhancements in clinical practice or the betterment of service users' lives, beyond those of the individuals who were personally involved in the work (Staley *et al.*, 2020). As such, it is arguable that this can only be cautiously considered as an effective dialogic pathway. Furthermore, the evidence from Staley *et al.,* emphasising how service users involved in the projects benefitted from the process must be scrutinised through an equity-lens. In doing so, it is possible to see how this risks deepening divides and creating inequities, when considering who are either (a) most likely to be included and excluded, and (b) the voices most likely to be heard or not heard, when involved.

Additionally, though through this dialogic pathway research funders may be persuaded to distribute finances to areas identified as priorities, the power imbalances partly addressed through the collaborative process are not guaranteed in the associated production of the evidence. There is a risk that academic researchers who acquire funding for priority projects then execute the research purely via conventional processes (for example, via an RCT which then fails to, e.g. include a representative population and examine feasible interventions). In turn, this potentially may perpetuate the issues that were intended to be addressed. Therefore, with these factors in mind, the proposed dialogic pathway of collaborative research priority-setting projects requires further evaluation as to the extent to which it leads to the production of equity-oriented evidence for practice, within the framework of ED-EBP.

6.4.2. The second dialogic pathway: utilisation of RCD

Similarly, RCD has specific limitations. Inherently, such data pertains only to people who *access* health care and omits representation of those who face the most severe barriers to access. These populations are likely to experience health inequalities, and are commonly those who are in multiple ways already on the margins of society (Harari and Lee, 2021). Carrying this risk, this dialogic pathway may contend with being equity-oriented, and thus the goals of ED-EBP. Furthermore, collection and use of RCD itself can also often conflict with the epistemological notions of ED-EBP: indeed, RCD may often be reflection of a positivistic and a biomedical model of health and care. It may be argued that ultimately a clinician quantifying a service user's health or disability status with a score, contributing to RCD, would still appear in conflict with much of the debates around disability and social justice in SLT (Nair, Farah and Cushing, 2023).

Pragmatic scholars are developing a new discourse around quantitative methodologies, specifically use of big data (of which RCD is a common source), which go some way to reconcile these contentions. The 'QuantCrit' approach (Gillborn, Warmington and Demack, 2018), premised upon Critical Race Theory, offers one way for understanding how research using RCD can be understood and used appropriately *for* social justice. For example, within the QuantCrit framework, "experiential knowledge of people of color and other 'outsider' groups" (Gillborn, Warmington and Demack, 2018, p. 173) is sought to inform big data research processes, and therefore appears to sit harmoniously with the idea of ED-EBP. Thus, RCD as a dialogic pathway is not necessarily to be disregarded. Yet, even with the potential to operate as a dialogic pathway, it remains to be seen whether the use of RCD in this way truly facilitates the production of equity-oriented evidence that is relevant for practice.

6.4.3. Validating ED-EBP

ED-EBP as a broad concept warrants further interrogation and elaboration. Though there is resonance with movements already in progress, this framework has emerged from the synthesis of a highly selective array of studies from my research career and thereby should be considered a reflective and conceptual starting point for further consideration. Specifically, and as emphasised, the two dialogic pathways discussed in the thesis require further testing about the extent to which they really *do* influence the production of meaningful, equity-oriented evidence. Furthermore, there is some consideration required as to what is 'comfortable' within the limits ED-EBP, particularly around how dialogic pathways such as co-produced research priorities and RCD may influence clinical research conventions, such as the conduct of RCTs which, as discussed in Section 1, present a challenge for equity-oriented EBP. Finally, it is necessary to ascertain whether there are fewer barriers to the implementation of ED-EBP-derived evidence, compared with that from conventional approaches.

6.5. Implications for Research, Education, and Practice

6.5.1. Research

Though the adoption of several critical research processes signal movement towards the principles of ED-EBP, as discussed earlier, for these to be wholly realised there remains an onus on academic researchers to competently act upon these requirements and opportunities, but also to engage in them critically, beyond steps to 'tick off' in pursuit of funding. This likely requires substantially greater critical conversations among academic researchers on not only how to operationalise the pathways, but also on understanding their purpose.

More broadly, though the disruption to various processes of inequity in health and research is receiving traction, there likely remain many researchers who uphold the ideals that ED-EBP contradicts and/or who remain complicit in enforcing Eurocentric or Westernised worldviews onto their research and communities. For ED-EBP to be realised, penetration and disruption of researchers' fundamental beliefs will likely involve re-education and critical self-reflection to challenge and change what might be deeply entrenched philosophical standpoints and approaches to research, in order to make way for allyship and advocacy (Keynejad *et al.*, 2023). Globally, the SLT profession has made some headway in this regard. For example, a recent scoping review of the use of indigenous methodologies in SLT revealed "small pockets" of research (9 studies) existed (Kohere-Smiler *et al.*, 2025, p.72). Solutions may include embedding training within PhD programmes, or as continued professional development for researchers.

Moreover, there is likely a much more significant transformation required within the traditional structures and gatekeepers of research who can act as conduits for change and sites for influence beyond individuals (or else, sustain as processes of inequality). Some scholarship has emerged in this regard, demanding action from academic journals (Trahar *et al.*, 2019), publishing practices (Khan, 2022) and research funding mechanisms (Besson, 2022), yet there remains space for improvement. Lastly, in response to the potential limitations discussed above, another important next step for research endeavours specifically would be for robust examinations of the impact of dialogic pathways, with notable attention to the implementability of the resulting evidence in practice, and its impact on those on the receiving end, particularly through the lens of equity.

6.5.2. Education

A starting point for this transformation is education, particularly early research education of SLTs and researchers entering the field of health from other disciplines. An important implication is to consider how EBP and research are taught and debated with students. Based on my experiences as an educator of SLT students, and interactions with colleagues teaching similar courses across the UK, whilst critical thinking and critical appraisal are common components of curricula (an observation also supported by Pagnamenta and Joffe, 2018), this largely remains operative in the 'traditional' paradigms as the tools often cited to support the development of these skills (such as the Critical Appraisal Skills Programme, no date) are moulded *to* them. Resonating with other examples discussed, the teaching of more liberatory and decolonial methodologies within research education will also likely be required, as per recommendations outlined by Nair, Brea and Yu (2024). In terms of teaching about the value of RCD, currently this may be even less of a focus. Indeed, research has unveiled that service evaluation and audit (being clinically-driven projects which often make use of RCD) were the least common topics taught to SLT students (Pagnamenta and Joffe, 2018).

There is a clear opportunity to enrich health professions and SLT curricula as part of the wider aim of disrupting processes of inequity associated with EBP. This would be supported, for example, by educators' own critical self-reflection and professional development. This resonates with my ongoing research on a tool to support health care educators to critically reflect on their teaching and learning practices— including about research— to promote inclusivity and equity (Bangera, Pais and Chadd, 2025). Another example of how to foster ED-EBP in education is greater critical engagement by educational institutions and educators with the project of decolonising the SLT curriculum, centred on broadening the sphere of understanding of knowledge and knowledge production (Pillay and Kathard, 2015; Koch,

Pool and Heymans, 2025). Continuing these efforts and incorporating teaching about ED-EBP provides suitable grounding for significant shifts in educational practice.

6.5.3. Practice

Primarily, clinicians should be afforded time to critically engage with ED-EBP. This may be via several avenues: enhancing practitioner competence in utilising RCD would be valuable (Butler-Henderson *et al.*, 2020) to promote its use especially for producing and augmenting new forms of research that are equity-oriented. Routine partnerships between practitioners and academic researchers would be useful, though a shift would be needed towards promoting a shared responsibility for all to critically engage in evidence production (not just 'research interested' practitioners). A critical advancement to align with ED-EBP would be to also systematically widen partnerships to address its tripartite requirements, i.e. the service user as an equally valued evidence producer. Though there is emerging alignment of the clinician and the academic, ED-EBP signals that service user representatives should have parity in the creation of evidence.

Another critical implication to realise ED-EBP is for practitioners to engage in reflexive practice that embeds recognition of, and appropriate action in response to, both practitioner and service user positionality and socially relevant circumstances. One approach to this receiving attention is what is coined variably, but generally as "culturally responsive practice" (see Hyter and Salas-Provence, 2019, for their book entitled as such). Whilst some progress has been made in this arena (see Handtke, Schilgen and Mösko, 2019 for examples of strategies supporting culturally appropriate healthcare), evaluations of SLTs' perspectives globally illustrate that more needs to be done (see examples from various global contexts from Brewer and McCann, 2021; Hoang, 2022; Hudnall, 2022; Almutairi, 2025). In a new

chapter Abrahams *et al.* (2025) pose a different perspective on tackling a similar issue, but rather make a case for clinicians to adopt *pluriversality* in their practice, which broadly captures the need for SLTs to continually challenge assumptions and dominant perspectives in each clinical scenario. Importantly, the authors also provide a framework for "engaging with pluriversality" in practice (Abrahams *et al.*, 2025, p.25). These practice models align with the ethos of ED-EBP, and their wider adoption would likely support its application.

6.5.4. A multi-system approach to change

Central to ED-EBP is the recognition of current power imbalances in evidence production—a central process of inequity. Therefore, the suggested next steps for education and practice are futile without radical change to the systems that gatekeep traditional paradigms and approaches to research and practice contexts, and this is likely the biggest hurdle to facilitating ED-EBP. Organisational responses to and understandings of what it means to be 'evidence-based' will be required. In the UK, the National Health Service (NHS) emphasises evidence-based service design and practice (Academy of Medical Royal Colleges, 2024; NHS England, no date), thus is arguably a critical agent of change. Positively, some work is emerging which exemplifies the possibility of change within these structures, but in line with ED-EBP. For example, echoing many of the points raised in this thesis regarding epistemic plurality and the need to address power imbalances, Lokugamage *et al.* (2022) critically review NHS maternity services and identify clear sites of and opportunities for what they term as decolonising action, within the sometimes-rigid organisational limitations.

The new NHS ten-year health plan (NHS, 2025)— of which "social justice runs through" (p. 74)— provides a ripe policy context for enacting radical change in health care delivery and its underpinning frameworks. Aligning with some of the arguments presented here, the plan

introduces neighbourhood-based care models to respond to specific population needs and preferences, and calls for integrated RCD systems with an enhanced ability to use RCD to improve practice (NHS, 2025). Future efforts across all sectors relevant for research, education and practice, must now focus on mobilising the changes recommended, including those in this thesis, to fully realise ED-EBP.

7. Conclusion

This thesis has presented the essential context for understanding the scope and impact of seven previously published papers. Each paper not only offers new insights itself but has been synthesised in a way which contributes new knowledge through the development of a grounded theory. The publications individually, and the theory collectively, respond directly to two thesis-level research questions. Specifically, I have conceptualised two ‘dialogic pathways’ which can enhance clinical research and evidence production processes. These are considered vis-à-vis their responsiveness to SLTs’ need to ensure their practice is evidence-based, as well as equity-oriented. Finally, I have outlined specific and impactful ways in which this work can be carried forward to realise equity-oriented, evidence-informed aspirations in SLT, and health studies more broadly.

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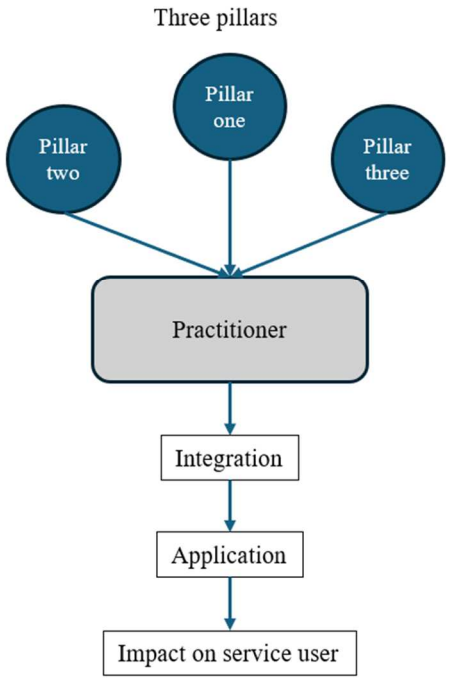
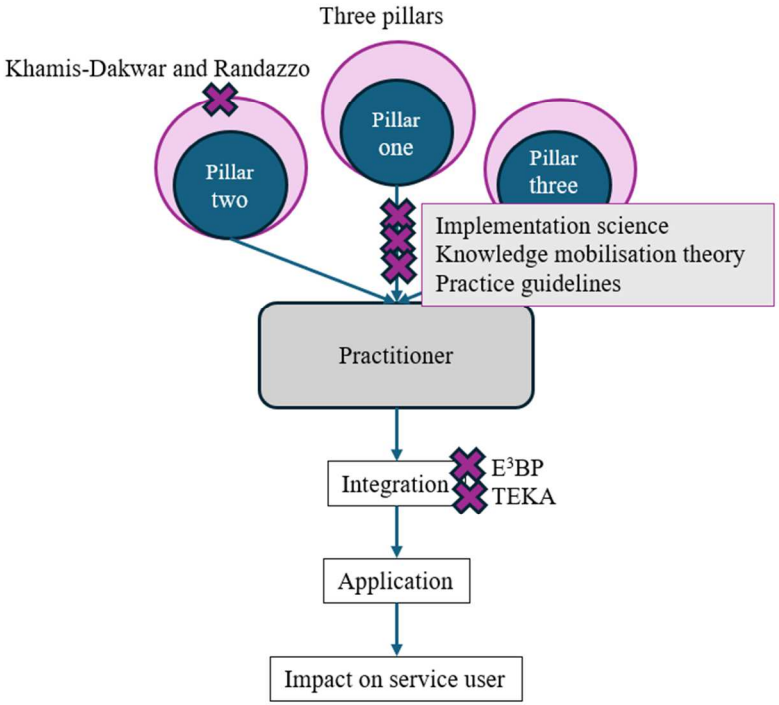
Appendices

Appendix (1): EBP and sites of intervention

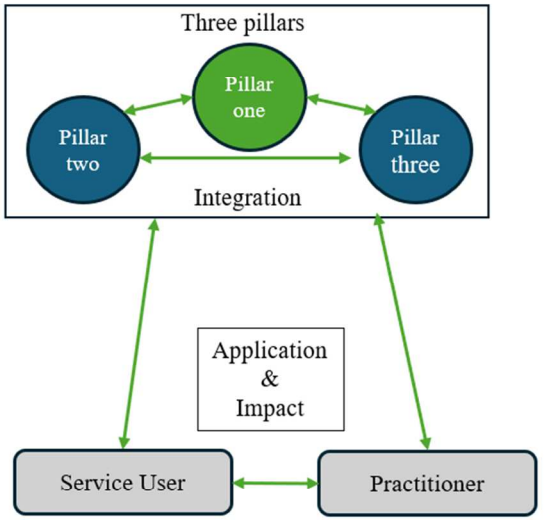
1.1. Conventional EBP



1.2. Sites of existing interventions to enhance EBP



1.3. Sites for novel intervention to enhance EBP



Summary of Models presented in Appendix 1:

1.1. Outlines the processes involved in conventional EBP, centred on the practitioner being required to integrate evidence from the three pillars, and apply it to support the service user.

1.2. Highlights sites of existing interventions, including methodological enhancements and modified EBP models, which have been introduced in the thesis. Pink crosses emphasise the sites that the interventions target. The three pink concentric circles surrounding the pillars reflect the expanded forms of evidence incorporated in the pillars, as articulated by Khamis-Dakwar and Randazzo (2021).

1.3. Emphasises alternative intervention options for enhancing EBP. Highlighted in green, the processes involved in *pillar one* themselves are a target for intervention. Earlier integration of the pillars, reflected in the green double-headed arrows, indicate a potential mechanism for this in terms of producing evidence, as well as it's wider application to and within service users and practitioners.

Appendix (2): Open coding framework and mapping across papers

Papers						
a	**b**	**c**	**d**	**e**	**f**	**g**
Paucity of research	Paucity of research	Taking holistic stance	Taking holistic stance	Paucity of research	Inequities and inequalities in care	Challenging conventional research notions
Partnership working	Acknowledging contentions between research and practice	Paucity of research	Paucity of research	Inequities and inequalities in care	Addressing issues with evidence-based practice or providing quality services	Paucity of research
Diversity in research governance	Partnership working	Partnership working	Partnership working	Acknowledging contentions between research and practice	Taking holistic stance	Evidence-based practice/ quality service
Uncertainties in clinical practice	Utilising clinical expertise	Lived experience / 'End users'	Improvements to research	Addressing issues with evidence-based practice or providing quality services	Utilising clinical expertise	Utilising clinical expertise
Learning from lived experience / 'End users'	Using consensus methods	Individualised support for inclusion	Individualised support for inclusion	Partnership working	Paucity of research	Inequities and inequalities in care
Individualised support for inclusion	Individualised support for inclusion	Distribution of expertise/power across stakeholders	Using consensus methods	Learning from lived experience / 'End users'	Learning from lived experience / 'End users'	Taking holistic stance

Continual methodological improvement	Co-production of methods/design	Acknowledging contentions between research and practice	Learning from lived experience / 'End users'	Diversity in research governance		Co-production of methods/design
Using consensus methods	Distribution of expertise/power across stakeholders	Raising voice of marginalised	Importance of clinician-patient relationship	Using consensus methods		Partnership working
Taking holistic stance	Diversity in research governance	Interaction of practice with research/service funding	Continual methodological improvement	Taking holistic stance		Distribution of expertise/power across stakeholders
Acknowledging contentions between research and practice	Taking holistic stance	Addressing issues with evidence-based practice or providing quality services	Utilising clinical expertise	Utilising clinical expertise		Acknowledging contentions between research and practice
Need for inclusion of diverse stakeholders at early stages of research	Integration of perspectives	Unrepresentative sample	Need for inclusion of diverse stakeholders at early stages of research	Unrepresentative sample		
Interaction of practice with research/service funding	Learning from lived experience / 'End users'	Integration of perspectives	Distribution of expertise/power across stakeholders	Challenging conventional research notions		
Addressing issues with evidence-based practice or providing quality services	Need for inclusion of diverse stakeholders at		Transformative participation	Interaction of practice with research/service funding		

	early stages of research					
Unrepresentative sample	Lack of diversity in service users		Challenging conventional research notions	Continual methodological improvement		
	Raising voice of marginalised		Addressing issues with evidence-based practice or providing quality services	Co-production of methods/design		
	Addressing issues with evidence-based practice or providing quality services					
	Unrepresentative sample					

Appendix (3): Axial code descriptions

Axial codes	Description	Clustered open codes
Dialogue between a diversity of perspectives throughout the stages of research	This axis summarises a group of codes that relate to the mechanisms mentioned across the papers which pertain to how stakeholders beyond 'researchers' were either involved, or considered to 'should have been' involved in optimising the relevance of research.	Partnership working Diversity in research governance Learning from lived experience / 'End users' Unrepresentative sample Integration of perspectives Need for inclusion of diverse stakeholders at early stages of research
Critique of conventional research practices and EBP	This axis captures a set of codes which relate to the challenges with EBP and conventional research methods mentioned in the papers, and the specific mechanisms involved, as well as some facilitators for overcoming them.	Paucity of research Uncertainties in clinical practice Acknowledging contentions between research and practice Interaction of practice with research/service funding Addressing issues with evidence-based practice or providing quality services Challenging conventional research notions Continual methodological improvement
Disrupting conventional power and equity imbalances	This axis represents mechanisms that were identified to help or hinder the distribution of power, or address other inequalities, in evidence production.	Using consensus methods Taking holistic stance Co-production of methods/design Distribution of expertise/power across stakeholders Raising voice of marginalised Individualised support for inclusion Importance of clinician-patient relationship Utilising clinical expertise Transformative participation Inequities and inequalities in care

Appendix (4): Linkages between open codes, axial codes and selective codes