

RESEARCH REPORT

Understanding capacity for implementing new interventions: A qualitative study of speech and language therapy services for children with speech sound disorder

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Abstract

Background: Many speech sound disorder (SSD) interventions with a long-term evidence base are 'new' to clinical practice, and the role of services in supporting or constraining capacity for practice change is underexplored. Innovations from implementation science may offer solutions to this research–practice gap but have not previously been applied to SSD.

Aim: To explain variation in speech and language therapy service capacity to implement new SSD interventions.

Methods & Procedures: We conducted an intensive, case-based qualitative study with 42 speech and language therapists (SLTs) in three NHS services ($n = 39$) and private practice ($n = 3$) in Scotland. We explored therapists' diverse experiences of SSD practice change through individual interviews ($n = 28$) or self-generated paired ($n = 2$) or focus groups ($n = 3$). A theoretical framework (Normalization Process Theory) helped us understand how the service context contributed to the way therapists engaged with different practice changes.

Outcomes & Results: We identified six types ('cases') of practice change, two of which involved the new SSD interventions. We focus on these two cases ('Transforming' and 'Venturing') and use Normalization Process Theory's Cognitive participation construct to explain implementation (or not) of new SSD interventions in routine practice. Therapists were becoming aware of the new interventions through knowledge brokers, professional networks and an intervention database. In the Transforming case, new SSD interventions for selected children were becoming part of local routine practice. Transforming was the result of a favourable service structure, a sustained and supported 'push' that made implementation of the new interventions a service priority, and considerable collective time to think about doing it. 'Venturing' happened where

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the new SSD interventions were not a service priority. It involved individual or informal groups of therapists trying out or using one or more of the new interventions with selected children within the constraints of their service context.

Conclusions & implications: New, evidence-based SSD interventions may be challenging to implement in routine practice because they have in common a need for therapists who understand applied linguistics and can be flexible with service delivery. Appreciating what it really takes to do routine intervention differently is vital for managers and services who have to make decisions about priorities for implementation, along with realistic plans for resourcing and supporting it.

KEYWORDS

implementation science, practice change, speech sound disorder

WHAT THIS PAPER ADDS

What is already known on the subject

- Many SSD interventions have an evidence base but are not widely adopted into routine clinical practice. Addressing this is not just about individual therapists or education/training, as workplace pressures and service delivery models make it difficult to change practice.

What this paper adds to the existing knowledge

- This paper applies innovations from implementation science to help explain how what is going on in services can support or constrain capacity for implementing evidence-based SSD interventions.

What are the potential or actual clinical implications of this work?

- Service managers and therapists will have a clearer idea of the time and support they may realistically have to invest for new SSD interventions to be used routinely.

INTRODUCTION

Internationally, many speech sound disorder (SSD) interventions with a long-term evidence base are not routinely part of clinical practice (UK: Joffe and Pring, 2008; Hegarty et al., 2018; USA: Brumbaugh and Smit, 2013; Australia: McLeod and Baker, 2014). A traditional, eclectic approach to intervention persists (McLeod and Baker, 2014; Roulstone et al., 2015; Furlong et al., 2021), meaning there is ‘a research–practice gap’ (Hegarty et al., 2018). Addressing this is not straightforward, because potential for practice change is constrained by factors including workplace pressures and service delivery models (Furlong et al., 2018). McLeod and Baker (2014) and Hegarty et al. (2021) argued

that ‘innovations emerging from the field of implementation science’ could offer solutions, as:

there is a need to better understand the day-to-day challenges and competing demands on SLPs’ time to provide highest standards of practice with limited resources. We also need to identify and adopt implementation strategies that better translate empirical knowledge into action. (McLeod and Baker, 2014: 526)

Implementation science has been growing since a landmark review of UK health research funding highlighted the need to improve NHS capacity for implementing new

interventions (Cooksey, 2006). Implementation scientists investigate what it takes to get evidence-based interventions into routine use in clinical practice, typically by tracking implementation of a specified intervention in one or more contexts. They take a ‘thing’ (which has been shown to work through effectiveness research) and look at ‘the stuff we do’ to try to help people in different places ‘do the thing’ well (Curran, 2020). As implementation research is rooted in the messy real world of practice, judicious use of theoretical frameworks is recommended to allow practical knowledge ‘to emerge out of seeming chaos’ (Damschroder, 2020).

Application of implementation science in speech and language therapy is growing rapidly, with a recent scoping review identifying 21 concept papers and 61 empirical studies (Douglas et al., 2022). Most of the empirical studies related to medical settings—such as inpatient hospitals—and to adult populations, mainly people with aphasia. None focused on populations with speech disorder and nearly half (26/61) did not report using a theoretical framework. In terms of strategies to support implementation, there was an overreliance on education and training, and on targeting individual practice change rather than addressing organizational barriers (Douglas et al., 2022). This points to a need for high-quality implementation research at the SSD service level.

We used an innovative implementation science approach to explore practice change in routine speech and language therapy services in Scotland for children with SSD. In this paper, we focus on the routine use (or not) of ‘new’ SSD interventions. We demonstrate how Normalization Process Theory (NPT) (Box 1), a theoretical framework used extensively in implementation science, helped explain what was going on in services to make routine use more or less possible.

Our findings will give the profession—including speech and language therapy managers—a better understanding of the contextual conditions that create different possibilities for practice change and what support might realistically be needed to build capacity for implementing new SSD interventions. This is also likely to strike a chord with therapists who have experienced sudden disruption to services and rapid practice change as a consequence of the COVID-19 pandemic and are looking to rebuild better.

Purpose

We aimed to explain variation in speech and language therapy service capacity to implement new SSD interventions.

Our research question was: In what ways have therapists changed their use of SSD interventions in routine practice, and what has made this possible?

Normalization Process Theory (NPT)

NPT was developed out of secondary analysis of qualitative data from healthcare settings (May & Finch, 2009) to fill a sociological gap by making visible the individual and collective work that people do in different contexts to accomplish implementation (May, 2013).

Four core constructs explain necessary aspects of implementation work. ‘Coherence’ is the work to make sense of the inner workings of the practice change (e.g., an intervention); ‘Cognitive participation’ is the work to get everyone who needs to be involved on board; ‘Collective action’ is how people work together to make it happen; and ‘Reflexive monitoring’ is the process of working out how worthwhile it all is.

In this paper, we focus on Cognitive participation (relational work), which has four subconstructs:

- *Initiation* is about key people driving the practice change so that it becomes a ‘thing’ in people’s minds.
- *Enrolment* is about (re)organizing in a way that allows people to rethink their routine practice to accommodate the ‘thing’.
- *Legitimation* is about building certainty among people that this is the ‘right way’ to go, the ‘right thing’ to be involved in and contributing to.
- *Activation* is about staying on the case—keeping the ‘thing’ in people’s minds and thinking about how it can continue, even as staff or settings change.

METHODS

We used the Standards for Reporting Qualitative Research when preparing this paper (O’Brien et al., 2014).

Qualitative approach

To answer our research question, we conducted a case-based sociological study anchored by critical realism. ‘Intensive’ case-based designs are ideally suited to exploring implementation in routine practice as they consider what people do, together, in a small number of cases, to produce a certain change (Sayer, 2010). As a meta-theoretical framework, critical realism also incorporates understanding of the role of context in producing change; it acknowledges not only that people have ‘agency’ to

reflect on and change their world (here referring to SSD practice), but that their agency is shaped and constrained, over time, by the social structure and culture of that world (here referring to services and the profession) (Archer, 1995).

Reflexivity

A.N. is a speech and language therapist (SLT) with historical clinical experience in Scotland; this included children with SSD and participating in the Metaphon intervention field trials. She published and edited *Speech & Language Therapy in Practice* magazine for 14 years before moving into research to develop her interest in how people do their work. She reported for the magazine on child speech training courses run by Caroline Bowen and Sharynne McLeod, so was familiar with the gap between the literature and clinical practice as an international problem. Hearing things ‘on the grapevine’ and having contacts helped with site selection and access, and previous experience was invaluable in noticing and following up mundane details in therapists’ accounts. As seasoned health researchers with a background in sociology, M.M. and B.W. provided a constant ‘outsider’ challenge to taken-for-granted aspects of speech and language therapy, while two recently retired senior therapists provided ‘insider’ reflections.

Context

The study is based in children’s services in Scotland. These are governed at a policy level by a wellbeing framework, Getting it Right for Every Child (GIRFEC). Its principles of early intervention, universal services and multi-agency working across organization boundaries have flexibility for local implementation (Coles et al., 2016). At the time of data collection, the Ready to Act plan for allied health professionals working with children and young people in Scotland was in its early stages (The Scottish Government, 2016). We assumed that practice changes would have occurred, and that these would be patterned across therapists and services.

Sampling strategy

Community generalist SLTs have actual connections as members of teams and services and through personal and professional networks. We aimed to construct a maximum diversity sample in relation to the research question to enable cross-case comparison. We therefore approached

three of the 14 regional NHS boards in Scotland where we had anecdotal reason to believe that SSD practice change might be happening differently, and private practitioners (although numbers are small in Scotland).

We wanted to talk to therapists who routinely had responsibility for children with SSD, and to their managers. We suggested therapists consider themselves eligible if children with SSD made up at least 20% of their caseload.

Demographic information was used to inform sampling decisions, such as incorporating people at different career stages or who had trained at different institutions. We stopped sampling when we judged information power to be adequate (Malterud et al., 2016).

Ethical issues

The study received a favourable ethical opinion from Stirling University’s School of Health Sciences Ethics Committee on 19 November 2014 (Ref: SREC 14/15—Paper No. 15—Version 1). Managers in each participating NHS service and the Association of Speech & Language Therapists in Independent Practice were happy for their staff/members to be approached. The three participating NHS services gave R&D Management Approval by 31 March 2015 and issued Letters of Access.

The recruitment process for NHS therapists was initiated via study information sessions by A.N. at staff meetings ($n = 13$), and private practitioners were recruited via email. We customized the Research Study Information for managers and therapists, and framed it around the question: What does it take to change your practice? Participants gave written consent and completed an optional questionnaire which provided demographic information to inform sampling decisions.

To avoid assuming the presence and make-up of causal groups (i.e., people who, together, could bring about practice change) (Sayer, 2010), we gave therapists the opportunity to take part as individuals or as self-organized pairs or focus groups. We maintained confidentiality in this process by handling expression of interest individually, but including an optional form for therapists to sign if they had agreed amongst themselves that they would prefer to take part together. For participants’ convenience—and preferences around confidentiality—A.N. offered any place, time or mode of contact.

Participation

A total of 42 therapists participated out of 56 volunteers from an estimated 88 who were potentially eligible. At the time of participation, 19/42 were based in ‘Blaeshire’,

11/42 in 'Staneshire', 9/42 in 'Cloutshire' and 3/42 in private practice. Among therapists in leadership roles across the three NHS services, those in Staneshire were less likely to volunteer, for reasons that are unclear.

The individual interviews ($n = 28$) included one by telephone. Only one NHS participant chose to be interviewed at home and outside of working hours. Four participants, all in Cloutshire, chose to have paired interviews ($n = 2$) and 10, all in Blaeshire, to take part as self-generated focus groups ($n = 3$). Average time was 78 min (range = 48–112 min).

The three NHS services had a variety of structural similarities, differences and challenges at the time of data collection (Table 1). Although terminology differed, each community service was organized geographically, with the area split into 'divisions'; within these, therapists could be further organized into geographical 'hubs' responsible for providing generalist services (including specialist SSD intervention) to the local population. In the UK, posts are graded as band 5 (newly qualified/developing experience in the clinical area), band 6 (specialist, which can include specializing in general community roles), band 7 (advanced clinical practice with a leadership role, e.g., at hub level) and band 8 (service lead or consultant clinical with a leadership role). Our NHS participants comprised band 6s, along with band 5s who judged themselves to have sufficient clinical experience for the study's purpose ($n = 20$), band 7s ($n = 13$) and band 8s ($n = 6$). The sample included both full-time ($n = 29$) and part-time ($n = 13$) workers.

Data collection and processing

Data collection was between May 2015 and February 2016. A.N. conducted and audio-recorded all research encounters on an Olympus DM-670 digital voice recorder, transferring the recordings to a computer as soon as possible. Electronic data was held on a secure, password-protected university computer and managed within NVivo 10, Excel and Word.

The topic guide was drawn from the critical realist conceptual framework for the study (Archer, 1995). It outlined areas of interest (e.g., ideas about individual and collective agency; reasons for individual/collective action; time) and heuristic prompts for questions (e.g., who (or where) did the idea for the change come from; what did you have to do to put it into practice).

A.N. conducted interviews and focus groups in a responsive manner, encouraging in-depth narrative around the specific practice change(s) that participants chose to discuss (Rapley, 2012). To get a cumulative understanding of the role of the service context in shaping and

constraining practice change over time, she probed for comparative detail when different connections and relationships to services emerged (Smith & Elger, 2014) (e.g., people who had held different roles; worked with different client groups; worked elsewhere; had time away such as for maternity leave; had friends in other services).

A.N. transcribed all encounters to a fine level of detail, including pauses, emphasis, humour/tone, and developed a style guide for consistency. She anonymized all participants, services, teams and places, which helped plot relationships between them. The NHS services have made-up pseudonyms Blaeshire (B), Cloutshire (C) and Staneshire (S), and participant quotes are presented by the relevant service initial (or P for private practice) and a number.

Data analysis

We aimed to understand variation in speech and language therapy service capacity to implement new SSD interventions. We used a qualitative realist approach to configure 'cases' (types) of practice change within and across services. This meant analysis was an iterative process using a variety of responsive 'moves'—analytic strategies and ways of reasoning—to connect and categorize data (Maxwell, 2012), while 'zig-zagging' between empirical data and theory (Emmel, 2013).

Connecting data was particularly useful for understanding how the context related to practice change outcomes; for example, two participants talked about being on research placements while they were students, some had been—separately—at a training event, and several had worked in more than one service. We used 'retroduction' as a way of reasoning (Danermark et al., 2002). This meant that we constructed chronologies of events and looked back systematically to work out what had made it routinely possible (or not) for services to offer broad categories of intervention, which included the 'new' interventions, traditional intervention, a pathway approach and group intervention.

'Zig-zagging' between theory and data (Emmel, 2013) meant that, as judged relevant at different stages, we used sociological theories to question the data and make sense of the research scene. NPT's 'Cognitive participation' construct was particularly helpful for exploring how the service context contributed to therapists engaging with practice changes (Table 2).

A key analytic move was writing ethno-dramatic monologues, a form of play script based on data (Saldana, 2011). These short narratives were grounded in the word choices, phrases and reasoning of participants, but incorporated A.N.'s interpretation of how stories about practice change

TABLE 1 NHS services summary at the time of data collection

	Blaeshire	Clootshire	Stanshire
Geographical spread	From other urban area to accessible rural	From other urban area to remote rural	From large urban area to remote rural
Stability of service structure	Established and relatively stable structure of an integrated service with geographical hubs for paediatric community work	Emerging and reconfigured structure, with the geographical divisions operating relatively independently	Emerging structure with reconfiguration in progress to harmonize geographical divisions and implement a geographical hub structure
Professional leadership	Professional leads, hub team leads, planning group	Divisional leads (also operate as care group leads and meet as a planning group)	Professional lead, divisional leads (making up a planning group)
Spectrum of generalist/specialist responsibility	All paediatric community therapists are highly generalist	Most community therapists are paediatric mainstream but some mixed posts (i.e., with adults) in remoter areas	Paediatric community posts are becoming more generalist, but historical variation in how posts are organized and banded (graded) in different divisions persists
Main staffing issue	Maternity leave	Vacancies	Downward pressure on banding (grading); some loss of higher banded posts
Approaches to practice development at the service level	Joint assessment Peer facilitation Journal clubs Hub projects SSD initiative	Boom and bust/long time to fill posts Staff meetings used (e.g., peer trios) Shadowing Protected learning time	Working groups Clinical networks (each therapist can join one only) Band 5 (entry level) projects
Specific investment in SSD intervention	Coming to the end of a 6-year initiative to implement new SSD interventions	n.a. (or informal)	Clinical network for SSD Parent group pathway for SSD

TABLE 2 Our questions for exploring Cognitive participation.

Cognitive participation	Whose heads are [or are not] in what practice change?
1. Initiation	Who is driving what practice change forward [or not] and getting everything in place [or not] to make it happen and keep happening [or not]?
2. Enrolment	What collective rethinking is going on [or not] to allow [or not] what practice change to happen and keep happening [or not]?
3. Legitimation	Who is [or is not] investing what in what practice change so that everyone believes [or does not] that it is the right thing to do and keep doing [or not]?
4. Activation	Who is [or is not] doing what to ensure everyone who needs to be involved 'stays on the case' [or does not]?

had come about and were being sustained. Configuring 'cases' (i.e., different types of practice change) enabled further reflection on what it would take to generate similar practice change in a different service.

We used a variety of strategies to maintain a critical stance. A.N. constantly returned to underpinning questions, including: What forces are maintaining or transforming this practice? and Where might I be wrong? Throughout interviews and analysis, she tested out the developing ideas about different types of practice change, to see if 'the results really do apply to those individuals actually studied' (Sayer, 2010: 165). This 'corroboration' could come, for example, through noticing where particular things were present, salient, neutral or absent in different service contexts. Further rigour was achieved through critical feedback from M.M., B.W. and the two retired therapists.

RESULTS

Our findings are in six sections. We start by identifying the implementation 'thing' of interest: a group of new SSD impairment interventions introduced into a context of traditional practice. We then briefly introduce the six cases (types) of practice change we identified across our whole dataset, focusing on the two cases (Transforming and Venturing) which featured implementation of the new interventions. We go on to describe why we are using two of the NHS services (Blaeshire and Staneshire) to illustrate those two cases, and how we are supporting this with NPT's Cognitive participation construct. The next

three sections consider the Transforming case in Blaeshire, the Venturing case in Staneshire, and (briefly) the other cases of practice change most salient in Cloutshire and private practice. We conclude with key reflections on the new SSD interventions and conditions for practice change.

Traditional and 'new' SSD interventions

Participants described numerous practice changes in relation to what they called a 'traditional' approach to SSD intervention. Traditional intervention was an eclectic mix of what they referred to as sound-by-sound, minimal pairs, Colour Coding, Metaphon, phonological awareness, and a Stackhouse & Wells psycholinguistic approach. In this paper, we report specifically on the implementation (or not) in routine practice of one or more SSD interventions which have a history in the peer-reviewed literature but are considered 'new' in clinical practice. These included interventions named by participants (e.g., Multiple Oppositions, Stimulability, Core Vocabulary, Cycles) and more complex, linguistically driven approaches to target selection under the umbrella of a Complexity approach (which participants referred to in a variety of ways including Maximal Oppositions, Empty Set, later developing sounds and clusters first, sonority sequencing principle, implicational laws). It was unusual for participants to mention an intervention developer by name. (For a compendium of these approaches, including their provenance, see Bowen (2015); and for strength of evidence, see systematic reviews, e.g., Wren et al. (2018)).

TABLE 3 Configured cases of practice change.

Practice change 'case'	Description
Transforming	A range of the 'new' SSD interventions for selected children becoming part of local routine practice
Venturing	Individual or informal groups of therapists trying out or using interventions with selected children that are not part of local routine practice, including one or more of the 'new' SSD interventions
Redistributing ^a	Negotiated periods of intensive intervention for selected children becoming part of local routine practice
Personalizing ^a	Highly personalized intervention becoming part of local routine practice
Delegating ^a	Therapists trying to equip non-therapists (therapy partners) to deliver specialist intervention becoming part of local routine practice
Refining ^a	Individual or informal groups of therapists routinely making ongoing adjustments in an effort to improve intervention

Note: ^aFor further details, see Nicoll (2017).

'Cases' of practice change

Because we asked participants about *any* practice change(s) they wished to discuss, only some referred to these 'new' interventions. The six 'cases' of practice change that we configured (Table 3) were based on the whole dataset as discussed by Nicoll (2017). In this paper we therefore mention four cases of practice change (Redistributing, Delegating, Personalizing, Refining) where applicable, but have focused on the two cases (Transforming, Venturing) which involved routine NHS use of one or more of the new interventions.

Transforming (i.e., 'new' interventions becoming part of local routine practice) depends on whole service change. It only featured in Blaeshire, where a range of new interventions were now in routine use to a greater or lesser extent across the service. Venturing (i.e., individual or informal groups of therapists trying out or using one or more of the new interventions) is possible with or without service support. Venturing was most salient in Staneshire.

To help explain this pattern, we will use the four subconstructs of NPT's 'Cognitive participation' when reporting the findings. Using brackets and italicized text, we will highlight where [*Initiation*], [*Enrolment*], [*Legitimation*] and [*Activation*] were in play in the service, enabling a Transforming trajectory. Similarly, we will use brackets and crossed-out italicized text to highlight where [*Initiation*], [*Enrolment*], [*Legitimation*] and [*Activation*] were constrained, meaning that, while Venturing may have been possible, Transforming was not.

The Transforming case in Blaeshire

Blaeshire was approaching the end of a sustained initiative [*Activation*] 'to move a whole staff group' [B7] to manage SSD intervention more effectively and efficiently through using a range of new interventions.

Participants traced the start of the SSD initiative back to a 'highly respected' member of staff who had self-funded training in a range of child speech interventions. She advised the leadership team that some of these were very different from routine practice and made the case for the service doing something about it [*Initiation*]. The leadership team selected three other experienced members of staff to attend the same training. Although these therapists had not requested or perceived a need for SSD training, they returned feeling a responsibility to act [*Enrolment*].

Even though I'd spent years doing phonology therapy, to me it was like it wasn't even phonology, it was like totally something different. [B3]

These three therapists found the volume of information overwhelming. They asked for time to agree key changes and try them out in their own practice before cascading the learning to other staff through in-service training [*Initiation*]. The reading, discussion and preparation time—for example to individualize materials for children—was considerable.

I was thinking, 'If I get any more disordered kids, I won't have time to see them' [laughs] ... at points I was nearly thinking, 'This is too much, I'm just going to have to abandon this.' [B3]

It made a difference that the leadership team attended the in-service training and, if they had an SSD caseload, implemented new interventions in their own practice [*Legitimation*]. A consultant SLT provided support, for example assisting [B3] to compare her decision-making for a new intervention with what it would have been before [*Enrolment*].



the sort of thing that really made the difference was the fact that the managers were really pro [the practice change]. They attended the same [in-service] training, so that was another big plus, because they heard the same information at the same time. On our recommendation they then purchased—for every clinic base—two textbooks ... and, you know, they were then used, and the expectation was that we would do reading. [B15]

Those driving local implementation of the new interventions [*Initiation*] came to realize that the process of facilitating change across the whole staff group needed a much longer timescale and more support than they had anticipated [*Enrolment*].

We are continually having to think about what's the best way to influence change in the team, and think of it from that point of view, and think about activities that really make sense, or examples—case studies—that will get the buy in that we're saying you need to give you the motivation to devote the time to it and just try it out. So yeah, from that point of view, it's made us think quite a lot about it and realize the time it takes. Not for everybody, but most people need a lot of time and a lot of, not mistakes, but unsuccessful experiences, along with the successful ones, before they make the changes for good. [B8]

Facilitation involved gradually transferring responsibility for implementation to the local hubs. [B16] reflected that the service level was about raising awareness of the 'theory and evidence base', the hub level was about considering implementation processes and deciding what to do 'as a team', and the individual therapist level was dependent on the cases that came up. In common with other participants, [B16] acknowledged that dosage was a challenging aspect of implementation, which could be partly addressed by a careful combination of therapists, support practitioners and—where they are able—parents. Blaeshire staff were also evaluating what they were learning through experience about necessary versus recommended dosage:

There's no magic formula. And there never was. It's not that different to traditional therapy in the sense of some children do have ten weeks of [names a new intervention] and

you put them on consolidation, and others have twenty [laughs] because that's what they need. To get it. [B16]

By luck rather than design, a planned whole staff workshop was replaced by a reading list and activities to customize and do during ring-fenced time at hub level. This opened therapists' eyes to the challenges of implementation fidelity and the need to set aside time for working it out collectively, for example by reading, making crib sheets and discussing. To murmurs of agreement, [B20] remarked that learning socially rather than in isolation had made her reflect on what she might have been doing previously:

Are you reading it, are you processing it, are you understanding, and implementing it, properly, to be able to say that what you're doing is genuinely evidence based? Or have you just kind of read it and then you do what you wanted anyway! [laughs]

In another focus group, [B1] touched on the advantages of seeing how colleagues implement changes.

When we read the book or an assessment, I might interpret it different from the way [B9] has interpreted it. And because you never watch, really, each other's practice, you don't know if you're doing the same thing, or if you're doing the right thing. Actually, when I was sitting next to [B21], [we] were doing totally different things! And I think we were both doing different things from [B9]! [laughter]

Hubs tackled and experienced implementation differently. While implementing the new interventions was 'stressful' and induced uncomfortable feelings like 'fear' and 'panic', the most enthusiastic hub was observed to be driven by believing it was the right thing to do [*Legitimation*].

They found it difficult, but there was no question about whether they were going to do it or not; they were doing it [B11]

A strong thread was that the 'right' thing to do was connected to what action therapists could take to bring about the biggest change for children in the shortest amount of time. Therapists had different views about the extent to which the new interventions achieved this. [B19], for



example, had concluded the right thing was to start with the new 'tools' and bring in traditional tools if necessary:

I've been told the new stuff is what's going to change these kids more quickly: it's more efficient, it's more clinically effective, it's better for the NHS, it's better for the child—great—so that's what I need to be doing. But recently I've been finding it's not always working that way. But it definitely makes sense. I am seeing the fruits of it. Not all the time, but more to the stuff previously.

All Blaeshire participants emphasized the multifaceted and long-term way the initiative was 'pushed' [*Activation*]. This focus group exchange was typical:

It's just something that was pushed within the department and then you were followed up and you were asked about it in your PDP (personal development planning) and, you know, peer supervision, and the [hubs], it was always quite pushed [B1]

I think a lot of it came out of our journal clubs as well, didn't it, because we were all looking at evidence in lots of different areas ... and it all kind of tied in at the same time. [B12]

The leadership team perspective showed why this initiative was so 'pushed'. From their own clinical experience, the leadership team perceived a 'sea change' moment where there was 'a genuine change in thinking' around the internal workings of interventions [B10]. While the linguistic theory was intellectually challenging, they felt it had to be addressed [*Legitimation*], because:

we're the only ones that kind of bridge that gap between trying to understand the sort of neuroscience or whatever of language, and actually do something practical about it. [B7]

This set up further expectations that students would have the opportunity to see the new interventions in practice and use them [*Activation*]. This involved giving students preparatory reading and putting aside time for conversation and reflection.

For me that's probably one of the biggest shifts that, yes, we've got to help the staff move on, but we have a big responsibility with the students to kind of really change their thinking, to get them on the right page for starting practice too. [B2]

Why Staneshire generated venturing rather than transforming

In Staneshire, there was a service focus on SSD intervention, but it was on providing traditional intervention in a different way [*Legitimation*]. Therapists had spent considerable time and energy organizing and delivering workshops where groups of parents were provided with a relevant single sound pack and advised how to use a traditional approach with their children (Delegating case, Table 3). This standardized pathway was part of a strategy to harmonize the service structure and make it more equitable for therapists as well as clients, as its geographical divisions had been managed and developed in very different ways. It was also intended to address strategic priorities:

the big push ... is to get everyone involved, and all this promotional work and the change in the service to be more proactive and looking more at all the sort of things that can be done through self-management. [S7]

As well as teams organizing the workshops, Staneshire had service-wide special interest networks focused on client groups, including one for SSD and one for language. Although both provided a forum where new interventions could be discussed, the SSD network had focused on standardizing developmental norms for use across Staneshire [*Enrolment*].

We meet every three months or so. With all the development work that's been going on, it's not been a priority for a lot of people, so numbers have been quite low, but we kind of keep in contact by email as well. Some of the girls have been trying the [names a new intervention] approach but I don't know much about that, so I think people are just sort of trying some of these things and then sort of reporting back on them. [S9]

No one we spoke to could recall how the new intervention that [S9] referred to had entered practice, but a number of therapists in one division were now trying it out. Protected non-therapy time at a clinic base and the ability to put resources on a shared drive raised awareness. This piqued [S12]'s interest, as she had a child with severe SSD on her caseload and a final-year student on placement.

So I said, why don't we have a go at doing this with this child? We can read up on it together, we can kind of explore it together and have a



go. It'll make an interesting case presentation for you, it'll be helpful for me. And so that's what we did.

Therapists using this new intervention were largely adapting it to the 'institutionalized' Staneshire dosage expectations (working in 6–8-week blocks of weekly therapy of around 30 minutes) [*Enrolment*]. One therapist was surprised that a colleague had offered the intervention over 18 weeks as it was 'so different to what everybody else was doing' [*Legitimation*].

Some Staneshire therapists discussed the responsibility they felt to find ways to improve outcomes by shortening the time children spent coming to therapy, but comments from more experienced colleagues could suggest this was unrealistic [*Legitimation*]. A service manager was keen to encourage the leadership team and longer serving staff to try out 'new ideas' from therapists 'newly out-of-college or in-from-a-new-area' and felt that they were open to this. However, one less experienced therapist had tried out a variety of new interventions with selected children, adapted to service expectations around dosage and caseload management, 'but I'm not really sure if I'm even meant to be doing it.' [*Activation*]. Asked why she had put considerable effort and her own time into reading and learning, she reflected:

I didn't necessarily feel that it was what my boss might be wanting me to spend my time on. So that's also why I do it at home because I almost feel it's a bit... it wouldn't be maybe what I should be doing at work? [S5]

Therapists felt more confident Venturing when they had identified other people doing similar things and could discuss implementation experiences with them. One new intervention reached Staneshire when members of the language network attended a study day organized by a national network that included a presentation by a credible knowledge broker. Although the 'very individual' nature of this intervention is 'the kind of therapy that they're really trying to encourage us away from at the moment' [*Initiation*], Venturing was still possible:

I think it was the combination of having lots of us there ... excited by what the speakers were saying, had a will to take it on, and to spread that amongst colleagues, and also you've got the power there when you've got [band] sevens there to really drive that ... and the fact that we made an action plan that day ... and then we put a date in the diary ... [to] meet up and look at what we've done and see what we

think at that point, is it worth continuing with and ... it's all very well setting yourself deadlines, but I'm not as good at meeting them but, if you've said, you're not going to let that person down Strength in numbers! [laughs] Safety in numbers! [S2]

Understanding practice change generated in Clotshire and private practice

As we have seen, in terms of practice change, NHS therapists were largely engaged in meeting the main expectations of their service, which did not necessarily include the new interventions [*Legitimation*]. Instead, there were initiatives to address waiting lists/times, caseload size/throughput, and a shift of resources to universal provision.

In one Clotshire division, the main priorities were universal services, service equity and promoting self-management. This made special arrangements for children with severe SSD less possible [*Enrolment*]. Even weekly intervention had become rare, and greater expectations were being placed on parents or other therapy partners to carry out work prescribed by the therapist (Delegating case, Table 3). Protected learning time had been used to view an intervention database (The Communication Trust, 2023) but therapists looked for suggestions they could incorporate easily into their eclectic, routine practice (Refining case, Table 3), because they took it for granted that anything which would need extra time could not be implemented [*Legitimation*].

There's been a few wee things, approaches outlined on that website that you take bits out of and you think, 'oh yeah, I can use that'. You know, little practical ideas.[C9]

In another Clotshire division, practice change was experienced as a more relational process. Closer working with each other, parents, and other healthcare and education professionals had enabled intensive 'bursts' of intervention to be offered rather than a traditional 'diluted' approach (Redistributing case, Table 3). However, an initiative for the staff group to discuss case scenarios and approaches to intervention faltered [*Enrolment*]:

what I would like is to have much more of that conversation round about it. Because we're still very much [laughs] in an era of, 'You shut the clinic door. And you do what you do. And nobody else sees it or knows it.' ... And I think people are still quite apprehensive and cau-

tious about exposing what they do. Yeah. And it's not that they lack in confidence, they're quite confident in what they do. [C4]

Practice change was also a highly relational experience for therapists in private practice. Rather than choosing to talk about new interventions, all three focused on how child and family-centred they felt able to be compared to working in the NHS (Personalizing case, Table 3). For [P1], this meant enhancing intervention protocols and incorporating other strategies through understanding the child and their environment better.

Using a patient-centred approach whereby the therapy is even more personalized just has that little bit more effect.

Key reflections on the new interventions and conditions for practice change

Taking part in the study was an opportunity for many to reflect on what 'practice change' was, where service priorities lay, and what might be missing.

At the end of the day, the bread and butter of our work is our clinical work. And sometimes we let that slide in terms of keeping up our skills and sharing practice and change. And, yeah, when you look at what we do discuss, and the practice change we do share, it's more on the service level and the pathway level, rather than 'we're trying this approach' with a child. [S1]

A recurrent theme was that the new interventions were 'new' to routine clinical practice; generally, therapists were not hearing colleagues talking about them or encountering them in clinical notes [*Initiation*]. Even when more recently qualified therapists were aware of the new interventions from a university lecture, they had never seen them in use on placements. This from [S8] was typical:

I remember actually on placement speaking to someone about it—an actual therapist, I think she's a band seven, or a band eight? And she had never heard of it either, so I suppose when you don't see a lot of people using it, the fear maybe is there, to be the first person to use it and to maybe not have much success with it.

Awareness of the new interventions was, however, growing. All NHS services were investing in practice development (Table 1) and had encouraged therapists to access a

database of evidenced interventions to support children's speech, language and communication (The Communication Trust, 2023). This was being promoted by the UK professional body to its members, directly and through networks such as Special Interest Groups [*Initiation*]. Another source of growing awareness was international knowledge broker Caroline Bowen, whose website, forum and SSD intervention courses were used and attended by therapists in the NHS and private practice [*Enrolment*]; indeed, therapists often referred to the new interventions collectively as 'the Caroline Bowen'. Even if the source was unclear, there seemed to be a general buzz around SSD, an area of practice that had for a long time been taken for granted. When a Clouthshire manager asked staff for topics of interest:

Phonological approaches were one of the things that people wanted to look at. Which surprised me, because I didn't think it would be. And that's really a first. [C7]

Where people had become aware of the new interventions, service expectations had a considerable impact in shaping and constraining what happened next [*Legitimation*]/[*Legitimation*]. Ethno-dramatic monologues on service expectations (Table 4), for example, show how expectation narratives were presenting therapists with different ideas about their role and priorities. The new interventions could only be a priority where the 'design' expectation was most salient.

The service influence on the trajectories of practice change was also apparent when we considered what made each case possible. Venturing relied on a culture of individual responsibility to provide more effective intervention within constraints determined or implied by the service. This limited therapists' agency to change logistical aspects of intervention such as length and frequency of sessions (dosage). It also gave therapists ambiguous signals about the value of exploring new interventions, as there was no realistic prospect of implementing them with fidelity. In contrast, Transforming depended on a culture of collective responsibility to provide more effective therapy. This included a belief and pride in the contribution that the profession's unique relationship with applied linguistics makes to effectiveness. It also depended on a culture that valued the role of facilitation in making and sustaining practice change [*Activation*].

DISCUSSION

Through rigorous qualitative research with 42 therapists in three NHS services and private practice in Scotland, we configured 'cases' of practice change to explain what

TABLE 4 Ethno-dramatic monologues on expectations [Legitimation].

'There will never be enough speech and language therapists to meet the need that's out there, but in any case communication is everyone's job. Parents, early years' practitioners and teachers have far more opportunities than we do to support children's speech and language development, but they're not walking round with all the knowledge we have. So we have to stop hiding behind the clinic door and do all we can to mainstream our knowledge and empower other people. Whether on social media, at drop-ins, parent groups, or through twilight sessions and in-service training for teachers, we need to **SHARE** simple key messages in creative ways that reach more people and make them as enthusiastic about communication as we are!'

'There will never be enough speech and language therapists to meet the need that's out there, but communication is everyone's job, not just ours. Every public service is under pressure to do more with less—I honestly don't know how schools manage with all they're asked to implement—and families have busy lives too. This makes it essential to work on good relationships and have some flexibility, so that together we can agree what the problem is and discuss what we each might bring to the table. So, whether we're sorting out clinic space, organising training for teachers, or keeping parents on board, we need to **NEGOTIATE** our contribution and spread the load so that, together, we make a difference.'

'There will never be enough speech and language therapists to meet the need that's out there. And, yes, communication is everyone's job, but we mustn't lose sight of the fact that some children depend on our unique skills. SSD is our bag, and for too long it's been the poor relation. It's time to stop kidding ourselves that all children with SSD need our specialist intervention, that any speech and language therapy is better than none, or that people can do phonological intervention after a couple of hours of training. Instead, we need to hone our skills and **DESIGN** our intervention so that we can work more effectively and efficiently with the children and families who really need us.'

it really takes to do routine intervention differently. The Transforming and Venturing cases show how service context contributes to the collective rethinking that leads to implementation (or not) of new SSD interventions. Knowledge brokers, professional networks and intervention databases raise awareness of new interventions, and Venturing (individual or informal groups of therapists trying them out) is possible with or without service support. However, Transforming (new interventions becoming part of local routine practice) depends on a sustained service 'push', which is challenging in the face of other service priorities and demands.

Rather than limiting our empirical investigation to implementation of a specific intervention, or investigating implementation as part of a clinical trial, we explored practice change that had already happened in routine settings. This approach builds on sociology's major methodological contribution to implementation science, because it recognizes practice change as a fundamentally social and situated process, dependent on

the mobilization of human, material, and organizational resources to change practice within settings that have pre-existing structures, historical patterns of relationships and routinized ways of working (Clarke et al., 2013: 2).

Using Curran's (2020) 'simple language' definition of implementation science, we started with implementation outcomes (i.e., experiences of practice change). This allowed us to consider what 'stuff' services had done to try

to help (or not) therapists make these changes. Through this, we identified the 'thing': SSD impairment interventions in the peer reviewed literature but new to clinical practice. Collectively, these interventions have an important commonality: to be implemented with fidelity, they need therapists who understand applied linguistics *and* can be flexible with service delivery.

We suggest that this approach allowed us to explore the implementation relationship between interventions, therapists and services, thus moving away from the limitations identified by Douglas et al. (2022). We have identified practical implementation strategies that go beyond education and training, that target a whole staff group rather than individual practice change, and that address organizational facilitators and barriers.

NPT was a particularly helpful theoretical framework for our purposes. As a sociological theory of practice, it directs empirical attention to how people get the work of implementation done under conditions of constraint (May, 2013). We previously explored how therapists work to create 'Coherence' in practice by making sense of what needs to be held constant or done differently as practice changes are introduced (Nicoll et al., 2021). Here, we focused on another NPT construct 'Cognitive participation'. This helped us make visible the work that people do with each other to drive and sustain practice changes; our findings suggest that, for these new SSD interventions, the time and organizational support needed should not be underestimated.

Cognitive participation should not be interpreted as a wholly cognitive activity, as implementation was emotionally as well as intellectually demanding. Previous

implementation studies identified that NPT does not account for the emotional work of implementation for individuals (Gallacher et al., 2011; Hall et al., 2016), while another reported that Cognitive participation was less informative than other NPT constructs in making sense of their data (McNaughton et al., 2020). Although these limitations were not our experience, it highlights the need for researchers to use theoretical frameworks flexibly and critically in relation to their particular study.

It is of course possible that Cognitive participation is a salient construct for implementation in a speech and language therapy context. Context is understood in implementation science as an interdependent combination of ‘necessary conditions’ and ‘active, driving forces’ that facilitate successful implementation (Nilsen & Bernhardsson, 2019). Most of the 12 dimensions of implementation context identified in Nilsen and Bernhardsson’s scoping review (2019) can be identified in the Blaeshire context for Transforming. ‘Necessary conditions’ included a pre-existing favourable service structure (hubs), service support (e.g., journal clubs for evidence-informed decision-making), service readiness to change (a perceived evidence–practice gap) and service culture (‘design’ expectations). ‘Active, driving forces’ included the physical environment (textbooks purchased for each base), time availability (ring-fenced), feedback (discussed in personal development planning), and not least harnessing social relations and support (a collective rather than an individual endeavour) and leadership (both service and SSD initiative).

Interestingly, Nilsen and Bernhardsson (2019) identified two relevant gaps in how implementation science frames ‘context’. The first is the temporal aspect, both how long implementation might take, and the role of timing in making it possible. Staneshire and Clotshire were grappling with structural change, leaving managers concerned about therapists doing too much. Although Venturing was possible, staff were collectively implementing other service priorities. Blaeshire, on the other hand, was coming to the end of a 6-year SSD intervention initiative, which was itself built on structural and cultural changes in the service begun around 15 years ago. This cumulative pattern and the influence of professional leadership on implementation is also apparent in a recent quality improvement project to increase intensity of SSD intervention for selected children in a Northern Ireland service (McFaul et al., 2022).

The second relevant contextual gap is the influence of ‘profession’, which Nilsen and Bernhardsson (2019) believe is a consequence of implementation scientists’ engagement with organizational theory rather than the sociology of professions. In a rare ‘outsider’ qualitative interview study ($n = 33$) to understand the work of SLTs in the

UK, Butler (2019) highlighted tension between experienced and less experienced therapists when knowledge derived from clinical practice and ‘evidence-based practice’ did not align, and we found such tension placed constraints on Venturing with new interventions. Butler also noted the ‘ceremonial’ nature of reflective practice meetings, and their crucial role in forging professional identity. The range of groups and networks available to therapists locally (Table 1) and nationally suggests that the profession recognizes the importance of Cognitive participation in practice development, yet many intervention practices remain ‘tacit’ (Morgan et al., 2019). Drawing on the Transforming case, we wonder if this mystique might be helpfully reduced by redirecting some of the time spent on meetings to support ‘reflective practice’ to meetings that support local implementation of evidenced interventions? This is more possible with greater availability and acceptability of video-conferencing as a result of the COVID-19 pandemic.

Metz et al. (2023) recently drew attention to other contextual determinants of implementation which focus on the connection between the values of a community and sustained practice change. Developing a collective mental model of the implementation initiative, building trusting relationships and connections, and setting clear expectations are congruent with Cognitive participation and chime with our Transforming case. Metz et al. (2023) also argue that it is important to uncover ‘shared stories’—as we sought to do with our ethno-dramatic monologues—because they can ‘serve as silent drivers of group behavior’ (10).

Strengths and limitations

To our knowledge, this is the first study to explore capacity for implementing new SSD interventions in routine practice. We used innovations from implementation science, including a theoretical framework, to understand the relationship between therapists, services and interventions. The intensive design meant that people with actual connections to each other were included. There was a high level of engagement and participants shared a wide variety of experiences of practice change. The ‘insider’ perspective of the main author was balanced by critical ‘outsider’ perspectives.

Limitations are largely in the silences. We did not seek the perspectives of other people with a stake in implementation, most notably children with SSD and their parents, but also speech and language therapy assistants and managers above the service. The small proportion of participants working in private practice limited the conclusions we could draw about its influence on

implementation, and the lack of a research–practice partnership relationship limits the opportunities to build on these findings with participating services. From a practical perspective, readers should be aware that our decision to focus on NPT’s Cognitive participation construct rather than Collective action means that we have only touched on the considerable reorganizing work that services also need to do to address dosage aspects of the new interventions.

CONCLUSIONS

Appreciating what it really takes to do routine intervention differently is vital for managers and services who have to make decisions about priorities for implementation. We hope this study provides evidence that will support more realistic plans for resourcing and supporting practice change.

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CONFLICT OF INTEREST DISCLOSURE

A.N. is a Fellow of the Royal College of Speech and Language Therapists. She was known to some of the participants.

DATA AVAILABILITY STATEMENT

The signed participant consent form included item 6: ‘I understand that at the end of the study anonymized transcripts will be donated to a secure archive for future use by researchers.’ This will be done when publications are complete. This paper builds on a thesis where further data are available: Nicoll A., Speech and language therapy in practice: a critical realist account of how and why speech and language therapists in community settings in

Scotland have changed their intervention for children with speech sound disorders. <http://hdl.handle.net/1893/27257>: University of Stirling; 2017.

CONSENT FOR PUBLICATION STATEMENT

The signed participant consent form included item 5: ‘I understand that anonymous direct quotations from my interview/focus group may be used in study publications and presentations.’

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